Meeting Date	**4th October 2018**	**Agenda Item**	**4a**
Report Title	**Medicines Management Update Report**		
Report Author	Senior Team and Clinical Director		
Report Sponsor	Judith Vincent, Clinical Director		
Presented by	Judith Vincent, Clinical Director		
Freedom of Information	Open		
Purpose of the Report	To provide the Quality and Safety Committee with an update on the Health Board's antimicrobial stewardship programme and progress against the new Welsh Government Antimicrobial Resistance (AMR) Improvement Goals.		
Key Issues	Antimicrobial resistance already imposes a significant burden of morbidity and mortality on the population of Wales through the failure of empiric antibiotic treatment of infections, and the spread of difficult-to-treat multi-drug resistant organisms. A Welsh AMR plan "Together for Health: Tackling antimicrobial resistance and improving antibiotic prescribing: A Delivery Plan for NHS Wales and its partners" published in 2016 identifies key areas for delivery to optimise prescribing practice in Wales. This must be achieved through improved antimicrobial stewardship in primary and secondary care working in collaboration with the All Wales Medicines Strategy Group (AWMSG) and 1000 Lives Plus.		
Specific Action Required ***(please ✓one only)***	**Information**	**Discussion**	**Assurance**	**Approval**
	√			
Recommendations	That the Quality and Safety Committee: • Note the contents of this paper. • Support and endorse the case for a Consultant Antimicrobial Pharmacist, to lead on, in conjunction with microbiology, on the expansion of the current antimicrobial stewardship programme.			

Medicines Management Update Report

1.0 Situation

To provide the Quality and Safety Committee with an update on the Health Board's antimicrobial stewardship programme and progress against the new Welsh Government Antimicrobial Resistance (AMR) Improvement Goals.

2.0 Background

Antimicrobial Resistance (AMR) is one of the greatest threats to human and animal health. O'Neill estimated that globally by 2050, 10 million or more deaths may be attributable to AMR if no action is taken, overshadowing other causes of death such as cancer and road traffic accidents'

Antimicrobial resistance already imposes a significant burden of morbidity and mortality on the population of Wales through the failure of empiric antibiotic treatment of infections, and the spread of difficult-to-treat multi-drug resistant organisms.

A Welsh AMR plan "Together for Health: Tackling antimicrobial resistance and improving antibiotic prescribing: A Delivery Plan for NHS Wales and its partners" published in 2016 identifies key areas for delivery to optimise prescribing practice in Wales. This must be achieved through improved antimicrobial stewardship in primary and secondary care working in collaboration with the All Wales Medicines Strategy Group (AWMSG) and 1000 Lives Plus.

Strong leadership is considered to be critical to achieving the necessary improvements. Health boards will be expected to mirror and feed into the national strategic leadership arrangements in place for HCAI and AMR in Wales, in particular working effectively across the NHS, hospital and communities to better understand the key drivers for infection in their patients and develop and implement a bespoke improvement plan that will deliver quantifiable change.

The organisation is failing to achieve its Tier 1 targets for *C.difficile* infection and currently has one of the highest rates of *C.difficile* in Wales (Table 1). This is on a background of one of the highest rate of primary care antibiotic prescribing in Wales and one of the highest rates in the UK. Regular secondary care antibiotic stewardship audits, focusing on key indicators such as length of course and IV to oral switch have shown only some improvement over the last three years.

Table 1: *C.difficile* rates by Health Board, April – Oct 18

	C. difficile	
	Current period number	Current period rate
Abertawe Bro Morgannwg UHB	131	42.21
Aneurin Bevan UHB	86	25.11
Betsi Cadwaladr UHB	111	27.21
Cardiff and Vale UHB	70	24.37
Cwm Taf UHB	36	20.60
Hywel Dda UHB	95	42.23
Powys THB	11	14.20
Velindre NHST	1	
Wales	541	29.64

The Welsh Government has also introduced new AMR Improvement Goals for 2018/2019:

Primary and Secondary Care:

- 5 % reduction in total volume of antibiotic prescribed

Secondary Care:

- Increase proportion of antibiotic usage within the WHO Access (narrow spectrum antibiotic) category to > 55% or to increase by 3% from baseline

Health Boards will be monitored on a regular (quarterly basis) against these targets, which will complement the existing National Prescribing indicators for Primary Care. This paper sets out the current position and what is required to ensure that the Health Board achieves these targets.

3.0 Assessment

3.1. Current position in Primary Care

Data is only available for quarter 1 at present. Over 6% reduction in total antibiotic usage has been achieved but this is still a smaller reduction than the all-Wales average. The target for reduction in broad-spectrum (4Cs) antibiotics of 7% is not currently being achieved and is significantly below the Welsh averages achieved.

Primary Care– 5% reduction in total antibiotic usage – ACHIEVED in quarter 1

	2016–2017 Q1	2018–2019 Q1	% Change
Betsi Cadwaladr	310	275	-11.3%
Powys	262	233	-10.8%
Aneurin Bevan	309	278	-10.2%
Hywel Dda	309	288	-6.86%
Cardiff and Vale	282	263	-6.60%
Abertawe Bro Morgannwg	328	307	-6.15%
Cwm Taf	326	317	-2.60%
Wales	**308**	**283**	**-8.06%**

Table 2: Total antibacterial items per 1000 STAR-Pus

Primary Care- National prescribing indicators 4Cs – NOT ACHIEVED in quarter 1

Purpose: To encourage a reduction in variation and reduce overall prescribing of the 4C antimicrobials (co-amoxiclav, cephalosporins, fluoroquinolones and clindamycin).

Unit of measure: This antibacterial indicator is monitored using two measures which should be considered together:

1. 4C items per 1,000 patients
2. 4C items as a percentage of total antibacterial items

Target: Absolute measure ≤7% or a proportional reduction of 10% against a quarterly baseline of data from April 2016–March 2017

	2016–2017 Q1	2018–2019 Q1	% Change
Aneurin Bevan	13.8	10.8	-21.9%
Betsi Cadwaladr	18.3	15.1	-17.6%
Cardiff and Vale	12.1	10.4	-13.7%
Hywel Dda	19.5	17.0	-13.0%
Cwm Taf	21.1	19.2	-9.17%
Abertawe Bro Morgannwg	18.5	17.2	-7.00%
Powys	13.0	12.7	-2.53%
Wales	**16.7**	**14.4**	**-13.7%**

Table 3: 4C antimicrobial items per 1000 patients

	2016–2017 Q1	2018–2019 Q1	% Change
Aneurin Bevan	7.87	6.84	-13.2%
Cardiff and Vale	7.90	7.28	-7.84%
Betsi Cadwaladr	10.2	9.41	-7.35%
Hywel Dda	10.7	10.0	-7.33%
Cwm Taf	11.5	10.7	-7.02%
Abertawe Bro Morgannwg	9.92	9.80	-1.22%
Powys	8.28	9.01	8.81%
Wales	9.51	8.90	-6.42%

Table 4: 4C antimicrobial items as a percentage of total antibacterial items

3.2. Current position in Secondary Care

New restrictive antibiotic guidelines were introduced into secondary care in June 2018. Audit data shows very good compliance to these new guidelines, 97% of antibiotic prescriptions assessed were prescribed as per guidelines in September. Data is currently only available for quarter 1 (April to June) from Public Health Wales. This data shows that prior to the new guidelines the Health Board was failing to achieve both the 5% reduction in total usage (Figure 1) and the proportion of Access (narrow spectrum) antibiotics (Figure 2).

However, the change in guidelines has had an impact on both these targets for quarter 2. In-house data for quarter 2 shows that the Health Board is now achieving the 55% target for proportion of access (narrow spectrum antibiotics) (figure 3). As expected, overall usage has increased. This is a consequence of the new guidelines recommending combinations of narrow spectrum antibiotics in place of a single broad-spectrum agent. Whilst we are now using the appropriate antibiotics, this will make achieving the 5% reduction for this year challenging because of this change in our baseline.

Quarter 1

Secondary care- 5% reduction in total antibiotic usage – NOT ACHIEVED in quarter 1

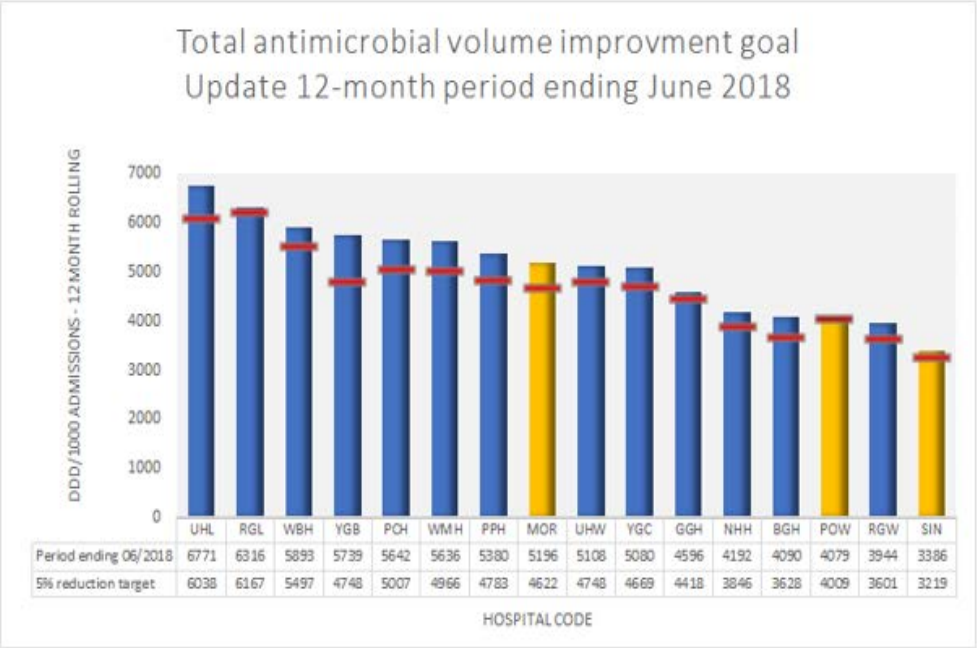


Figure 1: Total antimicrobial usage for acute sites in Wales and progress against meeting 5 % reduction targets (red lines)

Secondary Care- 55% Access Proportion- NOT ACHIEVED in quarter 1

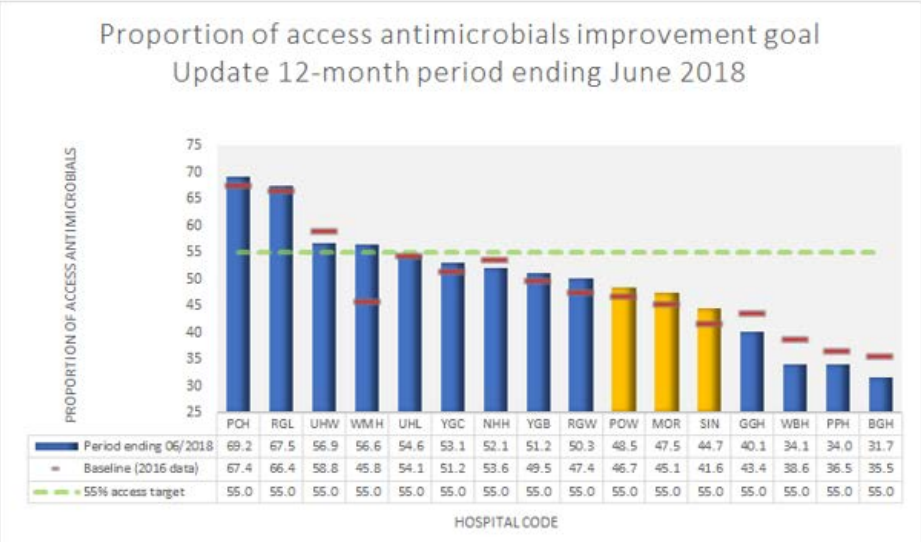


Figure 2: Proportion of ACCESS (narrow-spectrum) antimicrobials used by acute site and progress towards 55% target (red lines)

Quarter 2

Secondary Care- 55% Access Proportion- ACHIEVED in quarter 2

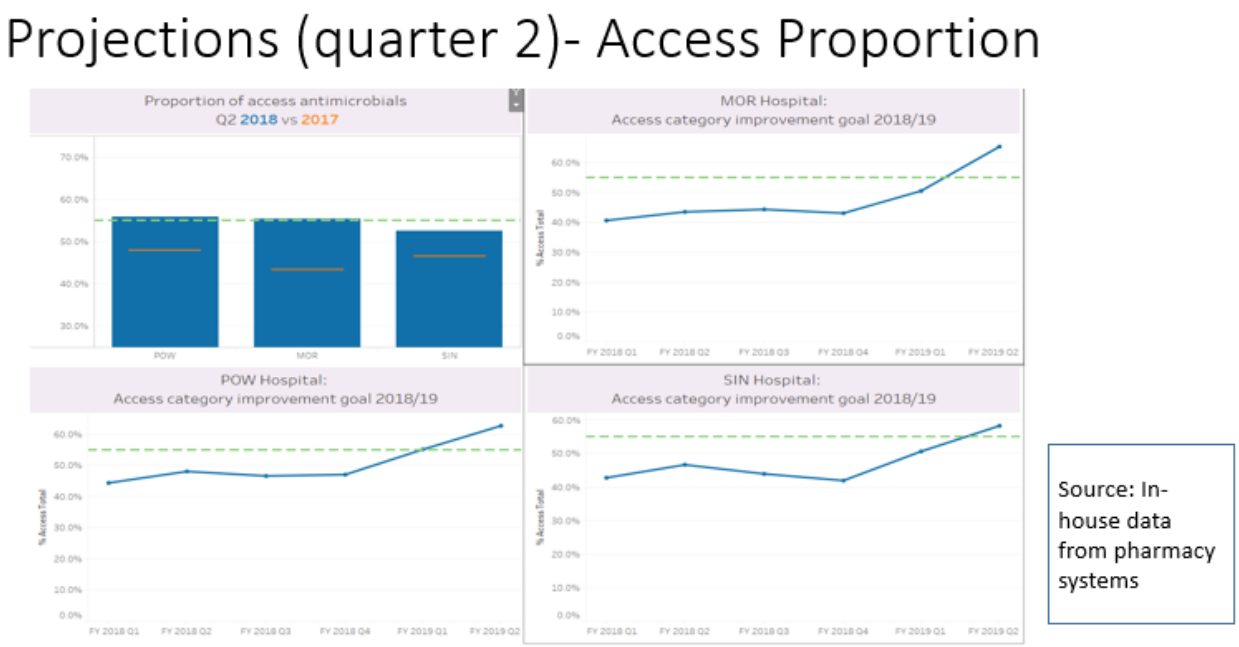
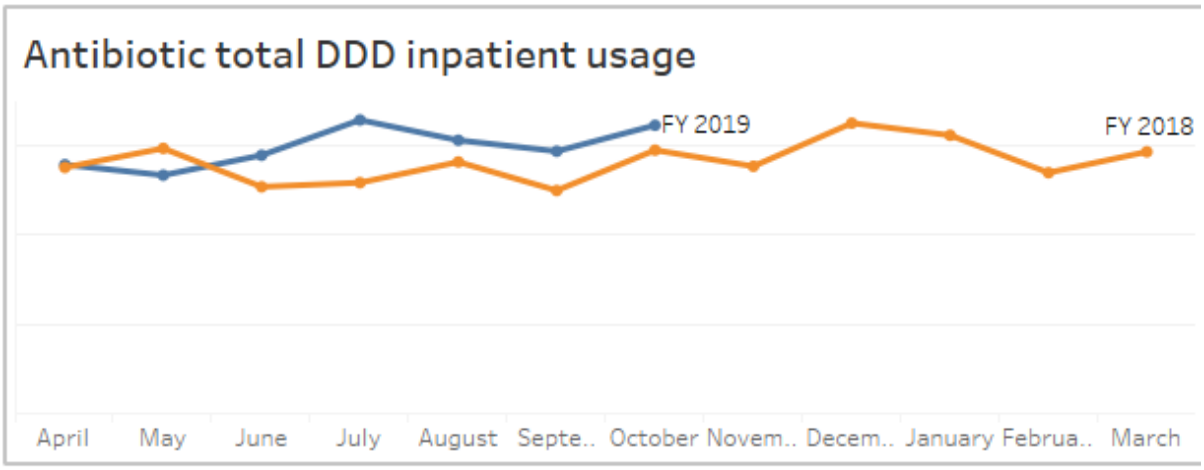


Figure 3: Projections of proportion of Access (narrow spectrum) antibiotics for quarter 2 and progress against achieving 55% target (green dashed line)

Secondary care- 5% reduction in total antibiotic usage – NOT ACHIEVED in quarter 2



27,523	29,653	25,357	25,820	28,136	24,943	29,457	27,652	32,477	31,119	26,937	29,272
27,830	26,654	28,885	32,830	30,563	29,333	32,240					

Figure 4: Projections of total antibiotic usage for ABMU in-patients for quarter 2, compared to the last financial year

3.2. Next Steps

Improving antimicrobial stewardship requires a combination of interventions to promote a change in attitudes, beliefs and behaviours associated with antibiotic use. To date, much of the focus has been on the development of guidelines, systems and processes to support improved antimicrobial stewardship.

The next step will be to focus on the attitudes and beliefs around antibiotic prescribing. This will be more challenging and will require more specialist input at a prescriber level to identify and challenge prescribing cultures.

The reduction in prescribing rates in primary care seen in quarter 1 will need to be sustained and built-upon. Increased input by Specialists (microbiologists and antimicrobial pharmacists), at practice / cluster / locality level is increasingly being introduced by Welsh Health Boards, as a means of influencing and changing historical prescribing practice and achieving behavioural change. An increase in the level of Specialist resource available in ABMU would be required to implement this successfully.

Secondary care now have robust guidelines in place, promoting the right antibiotic agents and achieving good compliance to these guidelines. We now need to further develop the strategy to ensuring the appropriateness of the decision to treat, achieving consistent review of all antibiotic prescriptions at 48-72 hours (including switch to oral) and ensuring all prescriptions are stopped as soon as clinically appropriate. For this to be achieved increased specialist input (Microbiologist and Antimicrobial Pharmacists) at a ward / speciality level is required to promote discussions / challenge current prescribing practices and effect behavioural change.

A sustained awareness campaign of “start smart then focus” is also required, including the switching to oral as soon as possible. Planned introduction of doctor-led start smart then focusnational audits will assist in raising awareness amongst junior medical staff and should form part of the audit programme within each speciality. However, achieving on-going recruitment of junior doctors and engagement from Consultant champions will be challenging.

Microbiology are currently trying to recruit additional Consultant Microbiologists. If successful, this will provide additional resource to allow more direct specialist input at ward/ speciality level via additional MDT ward rounds and attendance at speciality educational forums. Increased antimicrobial pharmacist resource will also be required to support this.

The organisation and the team of antimicrobial pharmacists across both primary and secondary care would benefit from the appointment of a, Consultant Antimicrobial Pharmacist to provide strategic leadership. This new appointment would provide:

- Give strategic direction to the current team and divert resources to the most effective interventions possible
- Map, plan and deliver new antimicrobial stewardship activities across both sectors
- Give direct specialist clinical advice to pharmacists and clinicians, referring more complex cases to Microbiology as needed
- Release resource from within the current team to allow more ward / practice based activities
- Support Consultant Microbiologists in increasing specialist input at ward/practice level in order to influence prescribing practices
- Input into the National AMR programme and scope and introduce best practice from other areas

This senior post will also act as a role model and mentor for the wider pharmacist workforce,further empowering and supporting ward pharmacists through education and training and ward-level support to monitor and challenge whenever necessary sub-optimal antibiotic prescribing on a daily basis.

3.3. Resource

There are currently three antimicrobial pharmacists working a total of 2.4 wte and covering the five acute sites. In primary care there is a 0.6 wte antimicrobial pharmacist working across the Health Board and a 0.5 wte working within Bridgend locality.

Post-boundary change, there will be two antimicrobial pharmacists working a total of 1.8 wte covering four acute sites. In primary care there will be one antimicrobial pharmacist working 0.6wte. Strategic input of the POW posts will be lost and will impact on the resource available.

Current microbiology resource is 5.6 wte Consultant microbiologists. The department is currently trying to recruit further posts.

As described above there are now opportunities for an advanced practice / Consultant pharmacist to take a strategic lead on the stewardship programme. This individual will also act as a first point of contact for ward pharmacist and clinicians requiring advice on antimicrobials. Progressing the stewardship programme, in order to achieve reduction in overall antibiotic usage, will require integrated working with Microbiology and additional resource will be essential to allow more ward / practice based activity.

3.4. Financial savings

Based on the antibiotic spend for the last financial year, achieving the 5% reduction in total antibiotic usage for primary and secondary care, would release total savings of £194,469. This is broken down to delivery unit in table 5. As outlined within this paper, achieving these savings will be challenging within secondary care for this financial year, however investment in additional resource will provide additional capacity to focus further on the targets and associated financial savings for both primary and secondary care.

Early analysis shows that the financial spend has been unaffected by the introduction of the new guidelines.

These direct savings on antimicrobial spend will be in addition to any savings achieved through reductions in Health Care acquired Infections e.g. *C.difficile* through improved antimicrobial stewardship.

Table 5: Projected financial savings, if the 5% reduction targets are achieved

Delivery Unit	**Projected financial saving**
Morriston	£50,599
Singleton	£23,792
Neath Port Talbot	£2,837
Princess of Wales	£18,380
Primary Care	£98,860
TOTAL	**£194,469**

Recommendations

That the Quality and Safety Committee:

- Note the contents of this paper.
- Support and endorse the case for a Consultant Antimicrobial Pharmacist, to lead on, in conjunction with microbiology, on the expansion of the current antimicrobial stewardship programme.

Governance and Assurance							
Link to corporate objectives *(please ✓)*	Promoting and enabling healthier communities	Delivering excellent patient outcomes, experience and access	Demonstrating value and sustainability	Securing a fully engaged skilled workforce	Embedding effective governance and partnerships		
		√	√	√	√		
Link to Health and Care Standards *(please ✓)*	Staying Healthy	Safe Care	Effective Care	Dignified Care	Timely Care	Individual Care	Staff and Resources
		√	√		√		

Quality, Safety and Patient Experience

Ensuring that the Health Board make fully informed decisions is dependent on the quality and accuracy of the information presented and considered by those making decisions. Informed decisions are more likely to impact favourably on the quality, safety and experience of patients and staff.

Financial Implications

There are some financial implications contained within this report. However, specific impact, where relevant, will have been considered within the Finance and Business Partners Report to the Board.

Legal Implications (including equality and diversity assessment)

There are no legal implications contained within this report. However, specific impact, where relevant, will have been considered within individual schemes.

Staffing Implications

Within the Pharmacy Transformational programme, there are workstreams, which will advise on the future shape and role of the pharmacy workforce within the organisation.

Long Term Implications (including the impact of the Well-being of Future Generations (Wales) Act 2015)

There are no direct implications on the Well-being of Future Generations (Wales) Act. However, the specific updates in this report will be subject to full impact against the act where necessary.

Report History	None
Appendices	None