



# A CITIZENS' JURY ON ANTIMICROBIAL STEWARDSHIP

Commissioned by the All Wales Medicines Strategy Group

Marcus Longley, Susan Thomas and Claire O'Neill, on behalf of the Jurors

Welsh Institute for Health and Social Care · University of South Wales

August 2016



# CONTENTS

BACKGROUND .....	2
THE ISSUE .....	2
STEERING GROUP AND PROJECT TEAM .....	2
RECRUITING THE JURY .....	3
Table 1: Attendance at each public meeting .....	3
Table 2: The jurors .....	4
THE JURY'S DELIBERATIONS .....	4
THIS REPORT .....	4
THE 'VERDICT' .....	5
SUBSTANTIAL AND URGENT ACTION IS NOW NEEDED BY US ALL.....	5
THE PROBLEM .....	5
TEN RECOMMENDATIONS .....	6
CONCLUSIONS.....	12
APPENDIX 1 .....	13

---

## BACKGROUND

---

### THE ISSUE

Antimicrobial resistance is a current and acknowledged global problem<sup>1</sup>. It is now being addressed by many countries as well as on a worldwide scale by the World Health Organisation<sup>2</sup>, and has been described as ‘one of the biggest health threats that mankind faces now and in the coming decades’<sup>3</sup>. The common objective is *antimicrobial stewardship*: ‘an organisational or healthcare-system-wide approach to promoting and monitoring judicious use of antimicrobials to preserve their future effectiveness’<sup>4</sup>.

A lot of attention is being given to the role of governments and health care providers, including health professionals. This was most recently reflected in a report commissioned by the UK Prime Minister from a team led by Jim O’Neill. In addition to calling for a global public awareness campaign, its recommendations<sup>5</sup> included: tackling the supply problem, improving diagnostic technology available for prescribers, and reducing the unnecessary use of antibiotics in agriculture.

In Wales the Minister for Health & Social Services in Wales launched a plan at the end of 2015 to tackle the threat of antibiotic resistance. The subsequent delivery plan outlined the intention to ‘avoid returning to an era when common infections and minor injuries could be life-threatening’, and this plan includes the aim to increase engagement with members of the public<sup>6</sup>.

To support this, and to advise the Minister, the All Wales Medicines Strategy Group (AWMSG) commissioned the Welsh Institute for Health and Social Care (WIHSC), University of South Wales, to organise and undertake a Citizens’ Jury to address how patients and the public can help healthcare professionals reduce inappropriate antibiotic prescribing. This is the first time that a Citizens’ Jury has been asked to decide what responsibilities we all, as patients and citizens, have to conserve our remaining antibiotics.

### STEERING GROUP AND PROJECT TEAM

A Citizens’ Jury Steering Group was established comprising representatives from AWMSG’s Patient and Public Interest Group (PAPIG) and its secretariat, and other individuals identified by the project lead Professor Marcus Longley, WIHSC. Their role was to ensure that the whole process was conducted rigorously. They approved the overall design and question, the recruitment method for jurors, and the programme and witnesses.

---

<sup>1</sup> ‘Antimicrobials’ and ‘antimicrobial medicines’ includes all anti-infective therapies, such as antibacterial, antiviral, antifungal, and antiparasitic medicines. This includes all formulations, such as oral, injectable and skin-based agents. ‘Antibiotics’, ‘antibiotic medicines’ or ‘antibacterials’, which are used to kill bacteria are one class of these broader antimicrobial therapies.

<sup>2</sup> World Health Organisation (2014) *Antimicrobial resistance: global report on surveillance*. Available at <http://www.who.int/drugresistance/documents/surveillancereport/en/> (accessed 14 July 2016)

<sup>3</sup> O’Neill J (2016) *Tackling drug-resistant infections globally: final report and recommendations*. Available at [http://amr-review.org/sites/default/files/160518\\_Final%20paper\\_with%20cover.pdf](http://amr-review.org/sites/default/files/160518_Final%20paper_with%20cover.pdf) (accessed 14 July 2016)

<sup>4</sup> National Institute for Health and Care Excellence (NICE) (2015) *Antimicrobial stewardship: systems and processes for effective antimicrobial medicine use. NICE guidelines [NG15]*. Available at <https://www.nice.org.uk/guidance/NG15/chapter/1-Recommendations#all-antimicrobials> (accessed 14 July 2016)

<sup>5</sup> O’Neill J (2016) *Tackling drug-resistant infections globally: final report and recommendations*. Available at [http://amr-review.org/sites/default/files/160518\\_Final%20paper\\_with%20cover.pdf](http://amr-review.org/sites/default/files/160518_Final%20paper_with%20cover.pdf) (accessed 14 July 2016)

<sup>6</sup> Welsh Government & NHS Wales (2016) *Together for Health: Tackling antimicrobial resistance and improving antibiotic prescribing. A Delivery Plan for NHS Wales and its partners*. Welsh Government, Cardiff

The project team consisted of the following:

Commissioner: Dr Robert Bracchi, AWMSG

Project Lead and Facilitator: Professor Marcus Longley, WIHSC

Facilitators: Dr Claire O'Neill, Swansea University and Susan Thomas, WIHSC

Communications: Estelle Hitchon, Welsh Ambulance Services NHS Trust

Support Team: Lisa Griffiths, WIHSC and Marina McDonald, WIHSC

## RECRUITING THE JURY

Prospective jury members were recruited through initial contact by an independent company, Opinion Research Services (ORS), to include broad representation from across Wales. First stage recruitment commenced in May 2016, when ORS personnel advertised the Jury event by phone. This involved phone calls to a random selection of people offering information about the Citizens' Jury. If people were potentially interested in becoming jurors, an invitation was extended to attend the most convenient local briefing meeting of four held across Wales.

The second phase comprised public meetings at four sites across Wales. At each of these four afternoon and evening meetings, two of the project team met members of the public, who had been contacted and invited by ORS, to provide more detailed information than had been possible during the phone calls.

Each meeting lasted for an hour and included brief information about antibiotic/microbial resistance, the nature and role of a Citizens' Jury, as well as details of what to expect at the Citizens' Jury for Antimicrobial Resistance. By the end of each meeting, members of the public were asked to decide if they were willing and able to join a panel of 14 fellow citizens (the 'Citizens jury'), and could commit to spending four full days in Cardiff during July 2016.

The four meetings were held in Swansea, Caernarfon, Wrexham and Cardiff. Table 1 shows the number of people who attended each meeting

**Table 1: Attendance at each public meeting**

Location of meeting	Number of people attending
Swansea	20
Caernarfon	19
Wrexham	13
Cardiff	25
TOTAL	77

The next task was to select the final group of people who would be invited to attend the Jury. For this, pre-determined selection criteria were used to identify a spread of a wide range of people. The criteria included:

1. Geographical spread across Wales
2. Age range
3. Gender
4. Social background
5. Ethnicity
6. Long term illness or disability
7. Welsh speaker

All 14 members of the public who were invited to be a member of the Citizens' Jury accepted the invitation. Table 2 shows the final spread of members of the public who were invited to join the Citizens' Jury, according to the information they provided to ORS.

**Table 2: The jurors**

Place of residence	North East Wales	1
	North West Wales	2
	South East Wales	6
	South West Wales	5
Gender	Male	8
	Female	6
Age	18-29	5
	30-49	4
	50 and over	5
Socio-economic classification	AB	2
	C1	6
	C2	1
	DE	5
Ethnicity	White British	11
	Non-White British	3
Disability	Self-declared long-term illness or disability	4
Language	Self-declared Welsh speaker	2

## THE JURY'S DELIBERATIONS

The Citizens' Jury took place over four days at Cardiff City Hall, between July 5<sup>th</sup> and 8<sup>th</sup> 2016.

The question for the jury to consider was 'How should patients and the public contribute to anti-microbial stewardship, and what support should the NHS offer them?'

A three-day programme of information was provided, with the aim to enable the jury members to answer this question. During the three days a variety of 'expert witnesses' met with the jury members as a group and provided presentations as requested by the organisers and approved by a Steering Group. Day Four was set aside for reaching conclusions. The programme can be seen at Appendix 1.

Time was built in to each presenter's session, to enable the jury members to ask questions and gain the information they needed. Each day started and finished with a closed session, assisted by facilitators, for jurors to reflect on the evidence received, and to discuss their thoughts and ideas. Daily diaries were kept by each jury member, to enable reflections to be captured for each day's work, and quotes from their diaries illustrate the Recommendations below.

The final day consisted entirely of facilitated discussion and decision making for the jury members, with the aim to produce recommendations that addressed the jury's question. When necessary, votes were held to ascertain the jurors' opinions.

## THIS REPORT

This report was drafted by Marcus Longley, Susan Thomas and Claire O'Neill, based on the jurors' decisions on the final day. It was then circulated to all jurors for their approval. This text has been agreed by them all.

### HOW SHOULD PATIENTS AND THE PUBLIC CONTRIBUTE TO ANTI-MICROBIAL STEWARDSHIP, AND HOW SHOULD THE NHS SUPPORT THEM?

The Jury was tasked with answering the following question:

*How should patients and the public contribute to anti-microbial stewardship, and what support should the NHS offer them?*

After deliberation, and reflecting on all the evidence which it received, the Jury concluded the following:

#### **SUBSTANTIAL AND URGENT ACTION IS NOW NEEDED BY US ALL**

The Jury was convinced of the need for urgent and substantial action now to counter the growing threat of antimicrobial resistance. There is a serious danger that we will lose our ability to fight common infections with antibiotics, returning us to the situation before the antibiotic era where daily activities and minor healthcare procedures were potentially life-threatening. This would be a grave threat to us and future generations, and an act of gross irresponsibility.

Action is now required by us all – the NHS cannot solve this problem by itself. We all need to minimise the risks of infection, and use other ways of coping with those infections which do not actually need antibiotics. Patients need to use their antibiotics as prescribed, and only when necessary. Prescribers need to work with their patients to support this, and to prescribe antibiotics only when necessary. The NHS has a role in supporting good practice; and as a society, we need to think about how to increase research and development into new antibiotics, and about how they are used in agriculture.

This is a huge challenge for mankind as a whole, and needs a global response. In Wales, as elsewhere, we must start to use antibiotics much more carefully if we are not to squander their marvellous ability to protect us from the risks of infection which are all around us, and save lives. This should be a major priority for us all – it is difficult to imagine any more important health issue.

#### **THE PROBLEM**

We definitely need more new antibiotics – there has been a wholly inadequate research effort in this area - but that alone will not solve the problem. Antibiotic resistance is a natural process, which will eventually overtake any new antibiotics. What we must do now is slow that process down, by using all antibiotics responsibly.

This means that we need to tackle the root causes of the problem. Four factors are contributing to the problem:

- Many citizens are not aware of the limitations of antibiotics, and of the dangers of resistance, and therefore sometimes expect them inappropriately – wanting antibiotics when other remedies

would be just as effective, for example, or assuming that there is no 'down-side' (for them, or for society generally) in the use of antibiotics

- The NHS does not always effectively help people to understand when antibiotics are *not* needed, and how to cope with infections without them – people then sometimes assume the worst and understandably panic when they cannot get convincing reassurance when they need it
- Consultations between prescribers and patients often start with unspoken expectations and unsubstantiated assumptions (on both sides), and too often result in inappropriate antibiotic prescriptions – doctors sometimes assume patients want an antibiotic when in fact they would be happy with reassurance; on other occasions, patients exaggerate symptoms in order to get the antibiotics they assume they need
- Patients do not always use their antibiotics appropriately when they have been prescribed – sometimes stopping them too soon, or sharing prescriptions with others

The recommendations below aim to tackle these problems, focusing in particular on what citizens and patients can do, and how the NHS can support them. They are intended to be practical, to get at the root causes of the problem, and to learn from previous efforts in this area. The focus is mainly on what happens in the community and in primary care, since the potential gains are greatest here.

## TEN RECOMMENDATIONS

The recommendations reflect the seriousness of this issue and are intended to focus action on the four groups who, between them, can do most to tackle the question which the jury was posed:

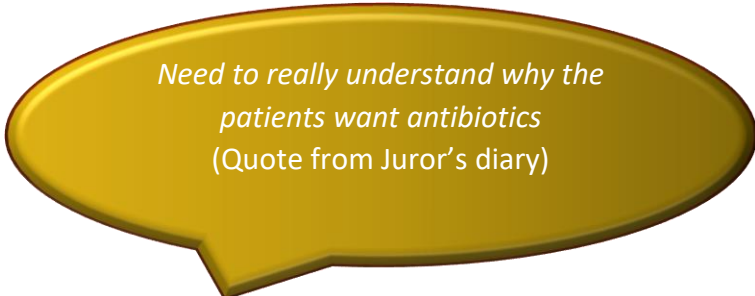
- ***citizens*** (in other words, all of us);
- ***patients*** (people who currently have symptoms and need some support);
- ***prescribers*** (all those people in primary care who can prescribe antibiotics – GPs, some nurses, pharmacists and others); and
- ***policy-makers*** (in the NHS and Welsh Government).

The recommendations are few in number, to maximise their impact, and based on the evidence presented to the jury.

## CITIZENS

### **Recommendation 1: A substantial and coordinated social marketing campaign should be conducted to change people's behaviour**

People need to expect and ask for antibiotics only when they are strictly necessary; and when they are prescribed, to use them appropriately. Previous attempts to change public behaviour in this regard have been largely ineffective. The jurors were concerned that public campaigns in this area had made little impact, thought that their scale had been too limited, and their narrow focus on 'education' as a way of changing behaviour was simplistic and misconceived.



*Need to really understand why the patients want antibiotics*  
(Quote from Juror's diary)



What is required is a 'social marketing' approach, which uses a combination of information, persuasion and dissuasion to change behaviour, drawing on insights from social psychology and behavioural

economics. It develops its approach by rapidly applying the lessons from a series of small tests of change, and aims to make the desired behaviours become the 'easy' behaviours.

*Hugely encouraged by the social marketing possibilities – the key is to change behaviour not just raise awareness. Real hope of having an impact on the problem now*  
(Quote from Juror's diary)

*Social marketing is of extreme importance*  
(Quote from Juror's diary)

*Antibiotics need to be replaced with something... Whatever that something is needs to be better – easier, cheaper, more fun etc etc*  
(Quote from Juror's diary)

This requires a substantial and sustained effort, led by people with expertise in this area. **It is most definitely not another 'health education' campaign.** They would work with a 'task force' drawn from Government, the NHS and other stakeholders which would be responsible for a coordinated effort to improve antimicrobial stewardship in Wales<sup>7</sup>.

**Recommendation 2: Provide specific education, information and advice in support of Recommendation 1 to target specific groups**

- **Children** – a range of age-specific educational inputs, integrated into the mainstream curriculum, so that children understand the limitations of antibiotics and how to conserve their effectiveness
- **Citizens and care-givers** (including parents, teachers, care workers and others) – practical advice on how to identify infections that might need antibiotics, and how to manage those which do not

*Are we failing to decrease antibiotic prescription/expectation because we aren't offering any alternatives – need to look into what feasible alternatives we can offer*  
(Quote from Juror's diary)

*Antibiotic Day is a perfect example of info and awareness campaigns that are out there and yet none of us had heard about it*  
(Quote from Juror's diary)

<sup>7</sup> Quotations are taken from the jurors' diaries to illustrate aspects of their discussion on these topics. They are quoted *verbatim*



*If GPs overestimate how much patients 'want'/demand antibiotic – do we have a duty as patients to be open about our expectations?*  
(Quote from Juror's diary)

It is important that this recommendation is implemented in support of, and informed by the social marketing campaign. Information and advice should be provided in a variety of ways to suit individual needs and preferences, and certainly should include the use of social media, high profile 'celebrity' campaigns, and digital 'self-assessment' packages and services. The impact of each should be evaluated, and future interventions improved.

## PATIENTS

**Recommendation 3: Before booking a GP appointment, people should be helped to assess whether or not they might need antibiotics, and to cope better with their symptoms when antibiotics are not needed**

The Jury were struck by the importance of patients having an informed understanding of their probable need for antibiotics *before* they see the prescriber, and being offered advice on how best to cope with their symptoms. This would have three benefits. First, people would be reminded of the need for responsible use of antibiotics. Second, some appointments simply would not be made, if people were able to assess their needs better, and were given reassurance, practical advice about symptom management, and clear instructions on what to do if their condition did not improve. In short, people would have to think twice before making an appointment. Finally, the time-constrained appointment could be much more productive, and focused on what the patient needed and expected, if patients were better prepared for it in advance. This would enable patient and prescriber to be more open with each other about what they hoped to get from the consultation.

*It strikes me that, as with drugs, sex education and global warming, a youth based education piece should be undertaken. If future mothers and fathers are educated early about what needs antibiotics and what does not this may stop the apparent 'insistence/ culture*  
(Quote from Juror's Diary)

*Today's main question for me was how do we engage the public – what can we do to incentivise people to take an active role in their health and also to rely less on Drs. Plus to reduce thinking about appointments as a transactional process where you feel like you've lost out if you don't come away with a prescription for something*  
(Quote from Juror's diary)

Various ways of providing this information and advice were presented. They included telephone- and internet-based systems, as well as face-to-face advice from a variety of professionals. Some could be introduced by individual practices; others would be better provided by groups of practices, or by the NHS as a whole. Each would require proper evaluation, and should be consistent with the pressures of busy general practice.

In general, the approaches should be informed by the results of the social marketing campaign set out in Recommendation 1 – what information and support do people really need, and what would actually make a difference to their behaviour.

*I feel communicating the risks of resistance is not enough to make people change their attitude towards antibiotics as they don't feel its directly relevant to them – should base it on the risks of side effects/harm vs benefit to the individual/their child*  
(Quote from Juror's diary)

#### **Recommendation 4: Deferred or post-dated prescriptions should be much more widely used**

Providing appropriate patients with prescriptions which are only dispensed if the condition does not otherwise improve are a useful element in encouraging appropriate use of antibiotics, and in the right circumstances, can reduce the use of antibiotics. They provide reassurance to the patient, and then 'give nature a chance' to affect her own cure. They should be used only where appropriate safeguards

are in place, but they should be available to all patients across Wales – rather than in the somewhat *ad hoc* fashion currently.

### **PRESCRIBERS**

#### **Recommendation 5: All primary care prescribers should be required to demonstrate their continuing competence and appropriate prescribing of antibiotics**

Jurors were concerned at the large variation in prescribing rates between different GP practices, at the difficulty in identifying optimal prescribing practice, and at the relative ineffectiveness of the influences available to the NHS to change prescribing. Until we can be confident that prescribers are all acting appropriately, the problem will not be resolved, and the public will be understandably sceptical about the value of any social marketing approach.

This requires several linked interventions. First, better data on prescribing should be routinely gathered and discussed. In particular, this should include a more granular understanding of the potential reasons for variation, so that 'poor' practice can be better identified. Second, all prescribers should

*If there is so much variation in how doctors act how can we expect patients to believe an awareness campaign?*

(Quote from Juror's Diary)

*We need an independent auditing body and publicised surgery performance. League tables promote competition and improvement. We heard a lot about not putting GPs noses out of joint but they need to be held accountable as they are paid from the public purse*

(Quote from Juror's Diary)

undergo regular training in antibiotic use and be able to demonstrate their current competence. Third, genuinely poor practice should not be tolerated, and those who cannot justify their practice should be made to change. The Jury was also keen that reliable diagnostic devices - which help identify those conditions which would benefit from antibiotics - should be available to all prescribers, as an aid to decision-making. They recognised that such devices are not a panacea, and should always be used to *inform* a clinical decision rather than dictate one. However, they do have a useful role to play, and should be made available in all prescribing settings once the technology is proven and the cost is reasonable.

*I think what I took most from today is that GPs are under an immense amount of pressure for a variety of reasons – and that as a result of this, any strategy that simply relies on putting more pressure on GPs (for example through targets, guidance etc) is likely to have limited success*  
(Quote from Juror's Diary)

*GPs are driven by having satisfied patients. ☆ What does having 'satisfied patients' mean?*  
(Quote from Juror's Diary)

*It seems interesting that doctors are not given rules etc or stronger guidelines*  
(Quote from Juror's Diary)

**Recommendation 6: The Chief Medical Officer for Wales should urgently draw prescribers' attention to their current practice**

While better data is being gathered (see Recommendation 5), the leader of the profession in Wales should ask prescribers urgently to review their current antibiotic prescribing practice, and for 'outliers' to satisfy themselves that they are prescribing properly. A similar initiative in England, with a clear appeal from a very senior medical figure, produced immediate results.

*I found it surprising to hear just how common inappropriate prescribing can be*  
(Quote from Juror's Diary)

*Revelations that doctors are not part of the NHS has rocked me and raised more questions. Are they a law to themselves?*  
(Quote from Juror's Diary)

### **Recommendation 7: All antibiotics should only be available as Prescription-only Medicines**

Currently, it is possible in the UK to obtain certain limited categories of antibiotic directly from a pharmacist, via the internet, without a prescription. Although various measures are taken to try to ensure that they are only dispensed appropriately, the jurors felt that the current system was open to abuse. Its principal merit – making it easier for patients to obtain certain antibiotics – was not sufficient to counteract the risk that antibiotics would be used inappropriately. In future, all antibiotics should require a prescription, with the associated procedural safeguards.

### **Recommendation 8: A 'levy' on antibiotics should be imposed to remind prescribers of their value and to raise additional funds for research and social marketing**

Most antibiotics are relatively cheap, and jurors felt that this contributed to prescribers' over-willingness to use them. Equally, the need for much more research into new classes of antibiotics was clear. Jurors felt that a 'levy' on all prescribed antibiotics might focus attention on both problems, in that it would raise their cost to prescribers, and would also raise additional funds for R&D and for the social marketing campaign (see Recommendation 1). Although the need to stimulate research on antibiotics is a major problem beyond the scope of such a levy - and is being addressed internationally - a levy on these medicines would have useful motivational and symbolic value within Wales.

### **Recommendation 9: The use of antibiotics in agriculture needs further attention**

A substantial proportion of total antibiotic use is for animal husbandry. Although this was not a major focus of the jury's deliberations, there was nevertheless considerable concern among the jurors that this scale of usage could undermine efforts at human antimicrobial stewardship. It should therefore be critically examined.

### **Recommendation 10: There should be a public debate about whether prescription charges should be introduced for antibiotics**

This was the only recommendation where the jurors were not unanimous. In fact, they were split 7:7 on whether prescription charges for antibiotics were desirable. Those in favour thought that a financial penalty would encourage people to value antibiotics more, and to ask for them only when necessary. Those against thought it unfair, probably ineffective (most people would be exempt from prescription charges anyway), and possibly dangerous if it meant that people with serious infections delayed seeking help. There was agreement that it would be useful if the arguments were to be debated publically, since this topic is still widely discussed across Wales.

## CONCLUSIONS

The Jurors believe that these ten recommendations face up to the scale of the challenge which we now face. They are evidence-based, address the top priority issues, and are designed to answer the question which the Citizens Jury were given. While they are *necessary*, they are not *sufficient*, and the Jury has indicated areas where other stakeholders also need to be doing more.

*I'm impressed by the commitment we have shown as a group of Welsh citizens!!*  
(Quote from Juror's Diary)

required, and the emphasis in Recommendation 1 on a social marketing approach could make a big difference. This is a challenge which all of us – citizens, patients, prescribers and policy-makers - need to face together, as part of a world-wide effort to preserve the effectiveness of antibiotics for future generations.

*Whatever responses to this problem are considered, they need to be pursued in an evidence-based fashion. Simply rolling out changes without the proper trials risks losing goodwill and wasting time and money*  
(Quote from Juror's Diary)

Above all, the Jury was struck by the relative lack of progress in anti-microbial stewardship over many years. They were convinced that new approaches are now

*What I most took from today is that the problem of antibiotic resistance is cultural and structural more than it is scientific/technical*  
(Quote from Juror's Diary)

*There is no easy solution no one stop easy fix. All we can really do is make a start (a very little drop in what is a very deep ocean) and try to put into action a few ideas that maybe can be a first step in a massive change of behaviour that is needed*  
(Quote from Juror's Diary)



# **CITIZENS JURY ON ANTIMICROBIAL STEWARDSHIP**

*commissioned by the All Wales Medicines Strategy Group*

Tuesday 5<sup>th</sup> – Friday 8<sup>th</sup> July 2016

Cardiff City Hall  
Cathays Park, Cardiff CF10 3ND

## **PROGRAMME**

### **THE QUESTION**

How should patients and the public contribute to anti-microbial stewardship, and what support should the NHS offer them?



**DAY 1 – TUESDAY 5<sup>TH</sup> JULY ROOM E**

Time	Session no.	Session title	Content	Contributors
9.30am	-	COFFEE <i>IN PRIVATE</i>		
10.00am	1.1	WELCOME SESSION FOR JURORS <i>IN PRIVATE</i>		<i>Facilitators</i>
12.00pm	1.2	INTRODUCTION FROM DEPUTY CMO	Short introduction as to why this is important, and to thank jurors	<i>Dr Chris Jones, Deputy Chief Medical Officer for Wales</i>
12.15pm	-	LUNCH <i>IN PRIVATE</i>		
1.00pm	1.3	INTRODUCTION TO AFTERNOON SESSION		<i>Prof Marcus Longley</i>
1.15pm	1.4	INTRODUCTION TO MICROBIOLOGY OF BACTERIA, VIRUSES, AND THE USE OF ANTIBIOTICS	The basic science, including the difference between various types of micro-organism and their ubiquity; the relationship between bacterial presence and clinical presentation; how antibiotics work; the nature of 'resistance', how it arises and spreads; the global burden of resistance	<i>Dr Robin Howe, Public Health Wales</i>
2.15pm	-	BREAK <i>IN PRIVATE</i>		
2.30pm	1.5	TECHNOLOGY AND OTHER CONTEXTUAL FACTORS	The potential of other technologies to enhance AMS - especially point of care tests. The role of agriculture. Infection, control, and surveillance and the public health perspective.	<i>Prof John Watkins, Public Health Wales</i>
3.00pm	1.6	ROLE OF PHARMACEUTICAL COMPANIES AND R&D	Issues in the development of new antibiotics, and prospects for new generations of antibiotics; views of the industry on patient and public responsibilities	<i>Dr Rebecca Lumsden, Head of Science Policy, ABPI</i>
3.30pm	1.7	SOCIOLOGICAL PERSPECTIVE	Examining the issues of AMS in a broader sociological context	<i>Prof Roger Walker</i>
4.00pm	1.8	PLENARY	Q&A panel with witnesses from the afternoon session	<i>RH, JW, RL, RW</i>
4.30pm	1.9	<i>IN PRIVATE</i>	Private discussion with jury	<i>Facilitators</i>
5.00pm	-	CLOSE		

Video-recorded patient stories exemplifying relevant aspects of the topic will be shown throughout days 1-3

**DAY 2 – WEDNESDAY 6<sup>TH</sup> JULY ROOMS A AND B**

Time	Session no.	Session title	Content	Contributors
9.00am	-	COFFEE <i>IN PRIVATE</i>		
9.15am	2.1	<i>IN PRIVATE</i>	Private discussion with jury	<i>Facilitators</i>
10.00am	2.2	ACCESSING ANTIBIOTICS – PART I The Symptomatic Patient	Symptomatic patient behaviour and expectations towards antibiotics. What do we know about why patients consult? Behaviour of different patient groups?	<i>Prof Jonathan Richards and Dr Paul Myers, GPs</i>
11.30am	-	BREAK <i>IN PRIVATE</i>		
11.45am	2.3	ACCESSING ANTIBIOTICS – PART II Consultation with clinicians	Doctor-patient interactions. Why do doctors prescribe antibiotics? Behaviour of GPs/other prescribers. Explore scenarios of appropriate and inappropriate prescribing.	<i>Prof Jonathan Richards and Dr Paul Myers GPs</i>
12.45pm	-	LUNCH <i>IN PRIVATE</i>		
1.30pm	2.3 (cont.)	ACCESSING ANTIBIOTICS – PART II Consultation with clinicians	Doctor-patient interactions. Why do doctors prescribe antibiotics? Behaviour of GPs/other prescribers. Explore scenarios of appropriate and inappropriate prescribing.	<i>Prof Jonathan Richards and Dr Paul Myers GPs</i>
2.30pm	-	BREAK <i>IN PRIVATE</i>		
2.45pm	2.4	ACCESSING ANTIBIOTICS – PART III Post-consultation	Patient concordance with antibiotics. Delayed prescriptions. What impact does this have on antimicrobial resistance?	<i>Dr Tessa Lewis, GP</i>
3.45pm	2.5	<i>IN PRIVATE</i>	Private discussion with jury	<i>Facilitators</i>
4.15pm	-	CLOSE		

**Video-recorded patient stories** exemplifying relevant aspects of the topic will be shown throughout days 1-3

**DAY 3 – THURSDAY 7<sup>TH</sup> JULY ROOMS A AND B**

Time	Session no.	Session title	Content	Contributors
9.00am	-	COFFEE <i>IN PRIVATE</i>		
9.15am	3.1	<i>IN PRIVATE</i>	Private discussion with jury	<i>Facilitators</i>
10.00am	3.2	ANTIMICROBIAL STEWARDSHIP – PART I Public Awareness campaigns/ public education and information	What is currently being done to raise public awareness of Antimicrobial Stewardship in Wales/UK/Worldwide (e.g. Antibiotic awareness days) Public Health campaigns - what works and why? The potential of other approaches including social marketing	<i>Prof Roger Walker and Dr Patrick Ladbury, National Centre for Social Marketing</i>
11.30am	-	BREAK <i>IN PRIVATE</i>		
11.45am	3.3	ANTIMICROBIAL STEWARDSHIP – PART II Using local data more effectively	Using prescribing and resistance data, community-based data, alert systems. Should data be made public? What data is available and what can we do with it? e.g. <a href="https://openprescribing.net/">https://openprescribing.net/</a>	<i>Jamie Hayes/Prof Phil Routledge/Kath Haines, AWTTC</i>
12.45pm	-	LUNCH <i>IN PRIVATE</i>		
1.30pm	3.3 (cont.)	ANTIMICROBIAL STEWARDSHIP – PART II Using local data more effectively	Contd.	<i>Jamie Hayes/Prof Phil Routledge/Kath Haines, AWTTC</i>
2.30pm	-	BREAK <i>IN PRIVATE</i>		
2.45pm	3.4	ANTIMICROBIAL STEWARDSHIP – PART III Big ideas...	Radical solutions to antimicrobial resistance. What else can be done?	<i>Dr Robin Howe, Public Health Wales</i>
3.45pm	3.5	<i>IN PRIVATE</i>	Private discussion with jury, and moving towards conclusions	<i>Facilitators</i>
4.30pm	-	CLOSE		

Video-recorded patient stories exemplifying relevant aspects of the topic will be shown throughout days 1-3

**DAY 4 – FRIDAY 8<sup>TH</sup> JULY ROOM A**

Time	Session no.	Session title	Content	Contributors
8.45am	-	COFFEE <i>IN PRIVATE</i>		
9.00am	4.1	<i>IN PRIVATE</i>	Jury reflections and conclusions on the evidence presented	<i>Facilitators</i>
10.30am	-	BREAK <i>IN PRIVATE</i>		
10.45am	4.2	DRAWING CONCLUSIONS <i>IN PRIVATE</i>	What is the role of the public in antimicrobial stewardship? How do we engage the public? What should the public do?	<i>Facilitators</i>
TBC	4.3	PRESENTATION OF VERDICT(S)	Invite Minister for Health and Social Care (or representative from Welsh Gov)	<i>Jury</i>
1.30pm	-	LUNCH AND CLOSE		

Further information from:

Professor Marcus Longley  
 Director, Welsh Institute for Health and Social Care  
 University of South Wales  
 Pontypridd, CF37 1DL  
 01443 483070  
[marcus.longley@southwales.ac.uk](mailto:marcus.longley@southwales.ac.uk)





**Welsh Institute for Health and Social Care**

University of South Wales  
Lower Glyntaf Campus  
Pontypridd, CF37 1DL  
[www.wihsc.southwales.ac.uk](http://www.wihsc.southwales.ac.uk)  
01443 483070