

BACKGROUND DOCUMENT

ANTI-MICROBIAL RESISTANCE - AN URGENT GLOBAL CONCERN

INTRODUCTION

Recognition of the significance of antimicrobial resistance (AMR) has been around almost as long as antimicrobials themselves. Wide scale use of penicillin began in 1943. Alexander Fleming noted in his 1945 Nobel lecture the inevitability of resistance and the first case in a patient was recorded in 1947.

But the world has been slow to recognize the scale of the problem and to act on it as drug after drug encounters resistance and too few alternative treatments are coming forward. For example, past decades have seen the loss of sulphonamides, penicillins and ciprofloxacin as treatments for gonorrhoea. Cephalosporins are now part of the standard regimen but are being eroded by reductions in susceptibility, with no obvious 'next' drug. Much modern surgery would be impossible if infections cannot be treated. Cancer chemotherapy and organ transplantation – which suppresses the patient's immune system – would no longer be viable. Effective treatment of many diseases such as tuberculosis would no longer be possible. This is now a real risk, as bacteria continue to develop resistance while the flow of new antibiotics has diminished.

The dramatic rises in international travel in the last decades, and of increased cross-border migration, spreads resistant bacteria from regions where they are frequent - particularly countries, where antibiotic use is generally heavy and infection control relatively weak. In addition there are growing concerns about the indiscriminate use of antibiotics in the production of food, livestock and marine products and the potential this represents, inter alia, for increasing susceptibility to resistance in humans.

Currently, in both the human health and agricultural sectors, regulations surrounding access to and use of antibiotics are weak. This allows antibiotics to be overused and misused through self-prescribing, over-the-counter access and health practitioners and hospitals prescribing for inappropriate indications.

ISSUES FOR DISCUSSION

The purpose of the public meeting and roundtable is to consider what actions nation states, and the international community, should take to address the health risks posed by the development of AMR. The national context is to review initiatives on AMR that are being taken around the world. The meetings will pay particular attention to identifying the challenges faced by low and middle income countries in addressing AMR while facilitating access to essential life-saving medicines. What do countries need to do? And what needs to be done at global level and by whom to support them?

The following six milestones have been suggested by the Global Antibiotic Resistance Partnership as the way forward for the control of AMR:

1. Reduce the need for antibiotics by improving public health through immunization and sanitation measures.
2. Rationalize antibiotic use in hospitals through infection control measures (healthcare-worker hygiene and sterilisation of surfaces and equipment), antibiotic stewardship and laboratory surveillance for antibiotic resistance for clinical guidance and for public policy.
3. Reduce antibiotic use in agriculture by phasing out antibiotics for growth promotion in animals, reducing antibiotic use for prophylaxis and restricting dispensing of antibiotics to veterinarian prescriptions.
4. Reduce unnecessary antibiotic use in the community by changing incentives and through regulation. Such community use includes over-the-counter antibiotic sale, self-prescription and healthcare provider prescription.
5. Invest in new vaccines, antibiotics, diagnostics, and novel approaches to reducing resistance.
6. Ensure political commitment to meet threat of antibiotic resistance.

GLOBAL POLICY ON AMR

The problem has always been that sensible as measures such as these are, and although there have been some successes in particular countries, it has proved difficult for a number of reasons to mobilize political support and leadership across the human health, animal health, pharmaceutical manufacturing, food and trade sectors, to bring about the fundamental changes that are needed if antibiotics in particular are to be used responsibly and their sustainable use maximized. All countries face this problem but developing countries particularly so because their regulatory regimes are less effective, and their need for antibiotics greater in the absence of other supportive measures to reduce the underlying spread of infection. Therefore new thinking is required about how to operationalize control measures, particularly in developing countries.

There have been several WHO Resolutions on antimicrobial use since 1998¹ as well as statements from other international organisations and scientific bodies including the European Union². The latest draft resolution passed by the WHO Executive Board in January 2014 requests WHO amongst other things to explore options for a high level initiative with the UN Secretary-General and develop a draft global action plan to present to the World Health Assembly in 2015. But as WHO itself has noted in spite of a “broad international consensus on the key areas for action and the specific measures that need to be taken” there is a “lack of general worldwide determination to tackle AMR”³. The resolutions to date have not had the desired effect. The issue of AMR has also not gained much attention in the context of the Post2015 and Sustainable Development Goals discussions, even though many of the proposed goals would depend on long term availability of antimicrobials.

Because of this lack of determined action many have suggested a convention or treaty should be developed to bolster political commitment and provide the essential framework for concerted international action. For example last year’s UK Five Year Antimicrobial Resistance Strategy called for consideration of “the need for a future international treaty to protect special medicines like antibiotics”⁴. One possibility would be for WHO to undertake such a task making use of its authority to adopt conventions and building on the experiences with the Framework Convention on Tobacco Control. But because the problem is pressing such a process would need high level political support beyond Ministries of Health, involving agriculture in particular. Strong UN involvement may therefore be essential, building on the work of the WHO Global Task Force on Antimicrobial Resistance and the tripartite collaboration between the WHO, FAO and the OIE.

1 1998 WHA 51.17 Emerging and other communicable diseases: antimicrobial resistance; 2001 WHA 54.11 WHO medicines strategy; 2001 WHA 54.14 Global health security: epidemic alert and response; 2005 WHA 58.27 Improving the containment of antimicrobial resistance; 2007 WHA 60.16 Rational use of medicines; 2007 WHA 60.20 Better medicines for children.

2 E.g. Communication from the Commission to the European Parliament and the Council. Action plan against the rising threats from Antimicrobial Resistance. COM (2011) 748. European Commission, 2011.

3 The evolving threat of antimicrobial resistance. Options for action. World Health Organization, 2012.

4 UK Five Year Antimicrobial Resistance Strategy, 2013 to 2018. Department of Health, 2013.