



# AMR Track Summary ICIUM2011

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# Lessons learnt

- The spread and impact of antimicrobial resistance meets the definitions of a global pandemic. AMR is everybody's business
- Tackling antimicrobial resistance requires coordinated interdisciplinary action at a global/national/local scale (1,2,3,4)
- Globally, there are insufficient data on antimicrobial use, prevalence of resistance and the burden/harm due to AMR esp. LMICs. There is a need for improvement and standardization of methods for collecting and analyzing data. (1,4,5)
- There is a discrepancy between the needs of society and the current business model of pharmaceutical companies (market failure).



# Lessons learnt

- Initial national “Champion group” for AMR advocacy and containment activities needs to act as a catalytic agent and then step back in order to ensure ownership and sense of involvement by all stakeholders.
- Mixed model of bottom-up approach targeting individual behaviour change and top-down approach targeting policy and advocacy helps achieve success. Information alone does not change behaviour; behaviour change methodologies are needed. Effectiveness of interventions depends on continuous and sustained actions.
- Effects of policy change in one country can not be generalised to other countries.
- AMR containment efforts including infection prevention and control are insufficient in resource constraint settings. This is mainly due to inadequate local capacity and little AMR advocacy



# Lessons learnt

- Antibiotic prescribing can be improved if embedded with regular quality assurance (3,4). MTP and DTC models are working and have long term possibilities for sustaining more rational antibiotic use. Multidisciplinary teams including pharmacist is important to improve antibiotic use (3,4,5).
- National and local guidelines are important as a base for all efforts. (2,3,4). Antibiotic stewardship program including some sort of pre and post authorization (audit) is effective.
- Multi-faceted interventions are needed for decreasing inappropriate antibiotic use. (2,4,5). Even in countries with low prescribing, there is significant inappropriate antibiotic prescribing. Interventional strategies to decrease inappropriate antibiotic prescribing have to be tailor made to the context (public, private, hospital, community, etc)
- The limited data available show that AMR has huge economic impact for both individuals and national health sectors (2,3,4,5)



# Lessons learnt

- AM use is highly contextualised, with specific characteristics related to patients and communities, the condition and perceived severity of disease, public or private setting, seasonality, economic factors etc.
- AMR follows AM exposure, with defined lag periods. Systematic surveillance of levels of AM use in societies can predict emergence of AMR, and are therefore an important tool in fighting AMR. Methods need development, validation and replication.
- Methodologies for studying AM use need to be developed further. There are limitations to the complexity of methods that can be applied in surveillance studies,
- Social science / qualitative methods, have an important place in studying beliefs when using AMs in managing diseases.



# Policy recommendations

- Foster and sustain political commitment and advocacy locally, nationally and globally (1-5)
- WHO to institute an office with dedicated funding and expertise to support member states in activities to contain bacterial resistance incl. improving antibiotic use and infection control.
- Raise awareness and improve education at societal and professional levels regarding prevention of infections and appropriate management of common illnesses. (1-5)
- Open discussion on the role of the International Health Regulations for tackling AMR.
- Improve collaboration between the public sector and the pharmaceutical industry to facilitate innovation and appropriate use of antimicrobials.



# Policy recommendations

- Reform educational curricula to include AMR, Infection prevention and control, and RUM at an appropriate level for all health professionals (under graduate, post graduate and continuous education).
- Develop or review national guidelines and antibiotic policies.
- Monitor the effects of any policy change not only short term but on a longer term basis.
- Use results from research in bringing relevant policy changes (local, national, international).
- Involve various stakeholders including civil society to generate widespread advocacy and coalition-building for AMR containment including infection prevention and control (2-4).



# Policy recommendations

- Multidisciplinary teams should be in place in all hospitals. These teams should utilize the national guidelines that each country should have and encourage development and implementation of local guidelines/ treatment algorithms / clinical pathways.
- Human, material and financial resources should be in place to ensure microbiological diagnostic capacity. Mechanisms for quality assurance (e.g. National reference centers) for AMR should be strengthened/established.
- Simultaneous surveillance of antibiotic use and resistance at local level with adequate human resources should be in place. National network of local systems should be established.
- Infection prevention and control should be in place in each health care facility.
- Explore and implement policies to encourage ethical behaviours throughout the antibiotic chain (monitoring pharmaceutical promotion, code of conducts for health professionals etc).



# Policy recommendations

- Promote increased knowledge and awareness among the public about common conditions and their treatment
- Contextualize and implement Standard Treatment Guidelines and Treatment Algorithms
- Ensure that surveillance and monitoring of prescriptions should be part of the quality assurance process
- Improve the engagement with various stakeholders such as prescribers, dispensers and consumers, policy makers
- Implement continuous professional development for all concerned stakeholders



# Policy recommendations

- Policies aimed at restriction of behaviours should take into account that they may restrict access to AMs, but inappropriate access should be seen as poor access. Restrictive policies may target certain AMs (e.g. broad spectrum AMs), and not others (balancing access versus restricting).
- Studies of AM use should inform the design of community interventions to reduce inappropriate AM use.
- More funding for research efforts and more technical support is key in effectively fighting AMR.
- Research design and implementation should involve relevant stakeholders and relevant policy makers, in order that the consequent action research is more sustainable.



# Research gaps

- Development and standardization of methods for various aspects of AMR, e.g., country-level multisectoral situation analysis tool, assessing cost and benefits of interventions and burden. (1-5)
- Generate data to enable priority setting for contextualized sustainable interventions
- How can access to antibiotics and restriction of their use be balanced, in particular in LMICs?
- More data is urgently needed, especially from LMICs, on AMR's effect on morbidity, mortality and cost increase and diversion both at individual and societal level in order to influence policy makers and health providers to support AM stewardship and AMR containment (2-5).



# Research gaps

- How to use information technology in order to support AMR containment activities.
- Qualitative research is needed to know the reasons for success and failure of policy implementations. Furthermore, how can we translate findings from qualitative research into effective interventions including behaviour change. (2-5)
- What is the influence of poor quality (counterfeit/sub standard) of antibiotics and antibiotic waste on resistance in humans and in the environment?
- How to investigate power dynamics and relationships in policy formation and implementation?



# Research gaps

- What is the influence of community use and hospitals use of antibiotics on resistance and other harms (mortality/length of stay etc)?
- How to change prescribing behavior? Studies on communication between patient-doctor and contextualization (with respect to social norms, traditional behaviour and managing behavior) are needed
- Motivations of behaviour regarding AM use. What is the contributions of different components in community awareness raising programmes to reducing inappropriate use of AMs.
- Temporal association between use and resistance at all levels of the health sector incl. causality and reverse causality.

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