

Part VIII. Future directions for GARP

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Underlying the creation of the Global Antibiotic Resistance Partnership (GARP) as a global alliance was the recognition that antibiotic resistance is a global problem, that some of the tools needed to understand and manage it could be shared globally, but that actions to control it and to ensure access to antibiotics when they are needed must take place at the national level. South Africa is fortunate in having a well-developed cadre of health care professionals already addressing antibiotic use, evident from the wealth of programmes and information included in this report but, even so, resistance is a growing problem. In countries that lack a strong medical system, the challenges are even greater.

Even in South Africa, information is not generally known across sectors, e.g. there has been little awareness of the details of agricultural antibiotic use and resistance among hospital professionals and vice versa, and the knowledge base needed for policy making has large gaps. During this first stage, a GARP South Africa Working Group was established (see Part I), including the range of relevant sectors and interests, and the current situation was analysed, resulting in this report and a desire to follow on with policy recommendations.

In the second phase of GARP's global agenda, work will continue in the four GARP phase 1 countries (India, Kenya and Vietnam, in addition to South Africa), with the Working Groups leading in honing the recommendations and developing 'critical paths' for implementation. This includes commissioning demonstration projects and gap-filling research, where those are part of the critical paths. (The information generated in these small studies will either support or halt the continued progress of recommendations.)

At the same time, a new set of GARP countries will be identified, and work will begin to assess the existing information and ongoing programmes, and to recruit multidisciplinary Working Groups to lead these, as has been the case in GARP phase 1 countries. South Africa is a model for new GARP countries, because it has had relatively lesser direct involvement from the Center for Disease Dynamics, Economics & Policy (CDDEP) than have India and Kenya, and fewer resource inputs than Vietnam. GARP is sustainable only to the extent that work is conducted locally with minimal (but not zero) external funding.

The other force that will drive the continued existence and progress of GARP country efforts is the global network that is evolving. Over the past 3 years, connections have been made among the 4 Working Groups, and lessons have been shared among countries. We anticipate that this network will strengthen over the years, including the formal GARP country efforts, international organisations (especially the World Health Organization), groups like ReAct-Action on Antibiotic Resistance (<http://www.reactgroup.org/>), and the many individual programmes and researchers involved in antibiotic-related work.

The First Global Forum on Bacterial Infections: Balancing Treatment Access and Antibiotic Resistance (www.globalbacteria.org) will cap GARP phase 1. This major international scientific meeting for scientists, clinicians and policy makers from all over the world – mainly from low- and middle-income countries – takes place in New Delhi on 3 - 5 October 2011. At the Global Forum, the GARP Working Groups will discuss their recommendations and plans to move forward, as well as exchange information and ideas on

persistent challenges. The Global Forum is attracting policy makers as well as those of us who produce evidence toward policy change, as a step toward bringing these threads together.

Future directions

Finally, it is important to identify future challenges regarding antimicrobial resistance (AMR) in South Africa that must be addressed going forward. All the individual steps identified here build toward placing AMR on the public health policy agenda, stressing the health consequences of antibiotic resistance and its current and rising economic costs. The evidence provided through GARP should support a stepwise response that is co-ordinated and achievable, given the current South African realities. If this report and the GARP effort are to have any significance, they must be translated into policy changes that will conserve the usefulness of antimicrobials going forward into the future.

Some of the specific challenges and information needs are to:

- determine the true economic impact of antibiotic use and misuse and AMR on our population, a task that requires global collaboration on methods and local data
- conduct a careful analysis of the appropriateness of antibiotic-prescribing patterns in various health care delivery settings. This will be facilitated by developing ready mechanisms to access antibiotic-prescribing information via hospital and community pharmacies, health care funders and others, and providing incentives for data to be analysed.
- calculate the costs and benefits of vaccination v. antibiotics for infectious disease prevention, including the 'antibiotic-sparing' effect of a lesser infectious disease burden
- strengthen the current AMR surveillance systems and fix identified weaknesses. This involves adding surveillance capacity in regional, district and primary (including rural) health care facilities that are not currently represented in the system, which is dominated by academic centres and private pathology microbiology laboratories.
- pay greater attention to hospital-acquired infections, firstly determining the national prevalence and, secondly, tracking the incidence of these infections. Enhanced AMR surveillance of the most dangerous organisms is a priority.
- updates of standard treatment guidelines and the essential drugs list with relevant AMR data
- collaborate more closely, participate in joint research projects, and share data on antibiotic consumption, supply chain and resistance – clinicians and veterinarians – not just for AMR, but for a broader set of zoonotic diseases
- support the Infection Prevention and Control (IPC) programme through training, specialist registration with the South African Nursing Council, clear job descriptions and allocation of relevant responsibilities. We need to build and empower a cadre of current and future IPC practitioners.

It is envisaged that many of these challenges will form part of research activities that will be more clearly defined for eager young researchers in the AMR field. Together with the strong GARP South Africa Working Group, we will be able to advance the process systematically, working through these issues.