

Global Antibiotic Resistance Partnership-Vietnam

Inaugural Meeting

September 4–5, 2009, Hanoi, Viet Nam



Introduction

The inaugural Global Antibiotic Resistance Partnership (GARP) workshop for Vietnam was held in Hanoi on September 4–5, 2009. More than 40 experts came together to inaugurate GARP-Vietnam, representing clinical care, microbiology, pharmacy, infection control, epidemiology, veterinary science, health economics, and health policy.

The objective of GARP-Vietnam is to develop the evidence base for action on antibiotic resistance in Vietnam and identify policies that will have the greatest impact in slowing the development and spread of resistance.

The Oxford University Clinical Research Unit and the National Institute of Infectious and Tropical Diseases (NIITD) are collaborating on the project with the U.S.-based nonprofit and nonpartisan research organization, Resources for the Future (RFF), with direction from the GARP-Vietnam National Working Group (NWG). Nguyen Van Kinh, Director of the NIITD, chairs the NWG. GARP is an initiative of RFF funded by the Bill & Melinda Gates Foundation and operates in five countries: China, Kenya, India, and South Africa, and Vietnam.

The aim of the inaugural meeting was to bring stakeholders together, review the goals of GARP-Vietnam, share information and experiences, and define the next steps for GARP-Vietnam. Ultimately, policies that can have major impact, attuned to conditions in Vietnam, will emerge.

Antibiotic Resistance

Antibiotic resistance is already widespread in Vietnam. Some examples from the Hospital for Tropical Diseases in Ho Chi Minh City presented at the meeting include:

- *Streptococcus pneumoniae*: in 2008, 80 percent of blood culture and cerebrospinal fluid (CSF) isolates were penicillin resistant.
- *Salmonella typhi*: 80 percent are resistant to fluoroquinolones. The prevalence of multidrug-resistant *S. typhi* declined steadily up to 2006, but has been increasing since.
- Bacteria with extended spectrum beta-lactamases (ESBL): in 2008, about 30 percent of all Enterobacteriaceae produced ESBL.
- More than 80 percent of healthy individuals in a south Vietnam community carried gentamicin-resistant bacteria in their gut.

Despite these snapshots, the morbidity, mortality, and financial costs of antibiotic resistance have not been quantified. Estimates of this burden—which represents the human and economic costs—are needed to persuade policymakers that resistance requires national action.

Antibiotic Resistance Surveillance

The problem of antimicrobial resistance has received relatively little attention in many developing countries and has remained hidden largely because of poor surveillance for resistant microbes. In Vietnam, the Swedish International Development Agency (SIDA) and the Ministry of Health supported a resistance surveillance project for 10 years, known as the Antimicrobial Sensitivity Testing Study (ASTS). Hospitals from all parts of Vietnam participated in ASTS, producing yearly reports. The impact of these reports, and the project as a whole, is not yet known. Discussion at the meeting suggested that a proper evaluation of this project could be instructive for future surveillance.

Though the MoH acknowledges the importance of surveillance for antibiotic resistance, no budget is currently allocated for this activity. GARP-Vietnam may assist in defining the attributes of a good surveillance system: a clear statement of objectives, measures of success, requisite improvements in

the capacity and quality of existing microbiology services, the development of Vietnamese language standard procedures, and the establishment of a quality assurance system. Discussion also suggested that a similar scheme to monitor antimicrobial resistance in animals be considered.

Antibiotic Use in Humans

Researchers involved with a community-based study reported that 78 percent of antibiotics were purchased in private pharmacies without prescriptions. Of the participants, 67 percent consulted the pharmacist about which antibiotic to use and 11 percent decided themselves; yet only 27 percent of the pharmacy staff demonstrated correct knowledge of antibiotic use and resistance. The sale of antibiotics without a prescription is not allowed, so there is clearly a failure to enforce regulations. The study did, however, demonstrate that practices could be changed in the short term by training pharmacists and doctors in appropriate indications for antibiotic use.

The reasons for irrational antibiotic prescribing are the same as in other countries: perceived expectations of patients, time constraints, lack of knowledge, lack of diagnostic capability, and financial benefits for the prescriber. A major challenge is to identify and modify incentives for inappropriate prescribing.

Antibiotic Use in Animals

Agriculture, including aquaculture, is an increasingly important industry in Vietnam and one in which antibiotics are extensively used as growth promoters as well as for prophylaxis and treatment of infections. Of all pharmaceutical products used in the animal sector, 70 percent are antibiotics. Since Vietnam joined the World Trade Organization (WTO), regulation of antibiotic use in animals has increased and certain antibiotics have been banned. However, surveillance for antibiotic residues in meat and fish reveal frequent breaches of animal health and trade regulations regarding the use of antibiotics.

Infection Control

Experience from the Netherlands and elsewhere has demonstrated the value of infection control in reducing the spread of resistant pathogens. In Vietnam, increasing attention is being paid to infection control but the situation remains far from optimal. Effective infection control is difficult in over-crowded and poorly resourced health care settings. However, a presentation of the experiences of the Bach Mai hospital infection-control team was encouraging—with the right leadership and resourcing, change can occur.

Legal Framework for Antibiotic Registration and Use in Vietnam

All drugs produced and distributed in Vietnam for prevention, treatment, and health promotion must be registered. Registration lasts for five years, after which drugs must be reregistered. A recent (September 2009) statute lays out rules for ensuring quality in the manufacturing, distribution, and dispensing of drugs, including antibiotics. Only about 5% of private pharmacies and one-third of hospital pharmacies met Good Pharmacy Practice (GPP), as defined in the statute, according to a report on more than 9,000 facilities examined in 37 provinces and cities. According to the law, the pharmacies that do not meet GPP standards will not be allowed to sell prescription drugs, including antibiotics, and will be restricted to sales of over-the-counter drugs only. The MoH has issued several other regulations for antibiotics used for human and animal health, but in many cases are not enforced.

Role of Professional Societies

Private-sector health care is growing rapidly. Vietnam's membership in the WTO and Association of Southeast Asian Nations requires that Vietnam license health care workers, including a requirement for Continuing Medical Education (CME). The availability of CME courses is currently insufficient to meet the expected demand, opening opportunities for professional societies to offer CME courses. Societies focusing on infectious diseases, microbiology, and pharmacy could use this avenue to deliver messages about antibiotic use and resistance. Currently, there exists no medical microbiology society in Vietnam.

Suggested Actions

The meeting was interactive and resulted in many useful suggestions, including:

- the need for national surveillance of both antibiotic resistance and antibiotic use in humans and animals;
- improved knowledge and awareness of prescribers, pharmacists, and drug sellers;
- comprehensive, authoritative, and up-to-date prescribing guidelines;
- improved quality of microbiology laboratories and the services they deliver;
- national standard operating procedures for resistance testing;
- a rebalancing of financial incentives in favor of rational antibiotic prescribing; and
- professional advocacy to increase awareness and stimulate local and national action.

Short-Term Actions Decided upon by the National Working Group

The Vietnam National Working Group met following the larger meeting. It will direct development of a road map for the GARP-Vietnam project that details short- and medium-term objectives and a timetabled action plan. The following are key aspects:

1. An advocacy plan will be developed to get the required attention from the government. A potential medium-term aim is to persuade the Government to establish a national program to combat antimicrobial resistance.
2. A country situation analysis will be developed early in the project, to set the context for policy solutions and opportunities for dealing with antibiotic resistance. The profile will build on the workshop presentations and will compile information on antibiotic usage patterns, antibiotic resistance patterns, and on the health system in Vietnam.
3. Small working groups will be convened to discuss the following themes: developing a model for antibiotic consumption and resistance surveillance; measuring the burden of antibiotic resistance in Vietnam; mapping incentive structures for prescribing of antibiotics; and mapping the regulatory environment for antibiotic registration and use.
4. An evaluation of the ASTS project will be commissioned.
5. Data on national antibiotic sales, import, export, and production for humans and animals will be acquired and analyzed.
6. International standards for resistance testing will be translated into Vietnamese, adapted to the local situation, and made freely available online.

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