

THE APUA INTERNATIONAL CHAPTER NETWORK

Founded in 1981, APUA's mission is to improve antibiotic access and use and contain antibiotic resistance worldwide. The global APUA chapter network of infectious disease experts supports country-based activities tailored to local needs and customs. The APUA network facilitates the exchange of objective, up-to-date scientific and clinical information among scientists, health care providers, consumers and policy makers worldwide. Headquartered in Boston, APUA has established affiliated chapters in 66 countries, including 29 in resource-poor countries.

APUA chapters serve to:

- Raise awareness about the problem of resistance within a country and about the dangers of incorrect antibiotic usage and faulty prescriptions;
- Communicate information on proper antibiotic usage;
- Foster related research and educational projects;
- Provide a multidisciplinary approach to interventions and foster scientifically sound solutions;
- Afford a local platform for input and feedback into global planning efforts;
- Provide international networking opportunities to enhance their knowledge and effectiveness at the country level;
- Work in partnership with Ministers of Health and public health organizations to improve antimicrobial use around the world.

2011 APUA CHAPTER SURVEY REPORT

In August 2010, APUA sent out invitations to participate in the APUA Chapter Survey to each chapter leader. The objective of this survey is to assess the antibiotic resistance issue worldwide and highlight the APUA chapter network's activities to improve antimicrobial access and effectiveness. The survey was designed by APUA staff and conducted through SurveyMonkey™. It elicited responses from 33 chapters, representing every region of the world. Survey findings were analyzed and compiled into the 2011 APUA Chapter Survey Report. The information gathered gives a global view of the nature of antibiotic resistance.

SELECT FINDINGS

Overall, the infectious diseases with the highest prevalence and of most concern to the chapters are acute respiratory infections, followed by tuberculosis and diarrheal diseases. Treatment of these diseases is complicated by antibiotic resistance, which stems from factors such as lack of surveillance of antibiotic use and resistance and lack of continuing medical education on antibiotic use for prescribers.

Several APUA chapters have focused their activities on addressing these deficiencies. Their work includes developing surveillance programs to track antibiotic resistance and training healthcare workers. In addition, chapters have conducted research projects, participated in conferences, and collaborated with other organizations.

This work has not been performed without obstacles though. Socio-cultural factors in some countries hamper the progress of the local staff. Chapters show a great interest in expanding their projects, but have also expressed a need for increased funding. With additional support, they are technically and logistically able to conduct more research projects, organize conferences, train clinicians and lab personnel, and design provider training programs on antibiotic use. Their skills and knowledge of antibiotic resistance issues in different contexts make them especially well suited for local investigation projects and multi-country research projects.

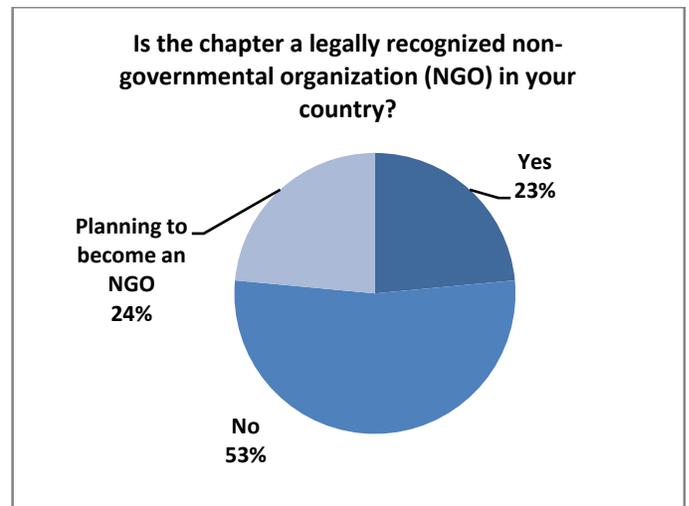
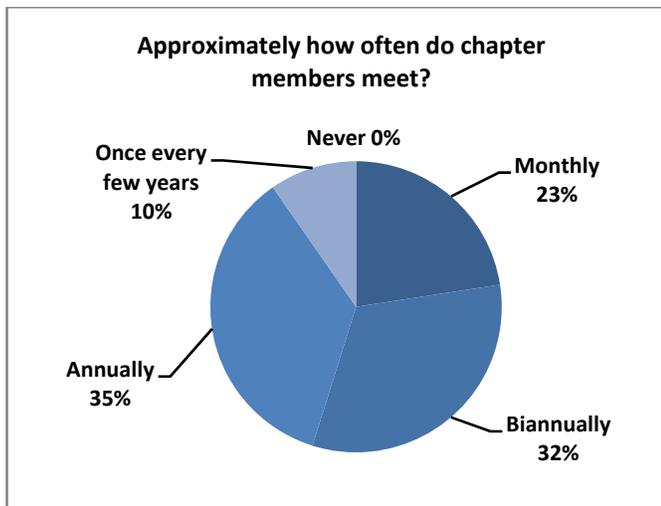
The information gathered through this survey will be used to better serve each of our chapters and to develop unique and in-depth chapter profiles on APUA's website, www.apua.org. The report illustrates the capabilities of the APUA chapter network to create change worldwide and reveals the potential for expanding their scope of work if new collaborative opportunities are made available.

APUA CHAPTER SURVEY PARTICIPANTS

<u>APUA Country Chapters:</u>		
APUA Abu Dhabi	APUA India	APUA Panama
APUA Argentina	APUA Indonesia	APUA Russia
APUA Australia	APUA Italy	APUA Senegal
APUA Austria	APUA Kenya	APUA South Africa
APUA Bulgaria	APUA Lebanon	APUA South Korea
APUA Croatia	APUA Mexico	APUA Spain
APUA Cuba	APUA Moldova	APUA Tanzania
APUA Ethiopia	APUA Mozambique	APUA Turkey
APUA Gambia	APUA Nepal	APUA Uganda
APUA Georgia	APUA Nicaragua	APUA Venezuela
APUA Honduras	APUA Pakistan	APUA Zambia

Response Count=33/65*
Response Rate=50.77%

APUA CHAPTER STRUCTURE

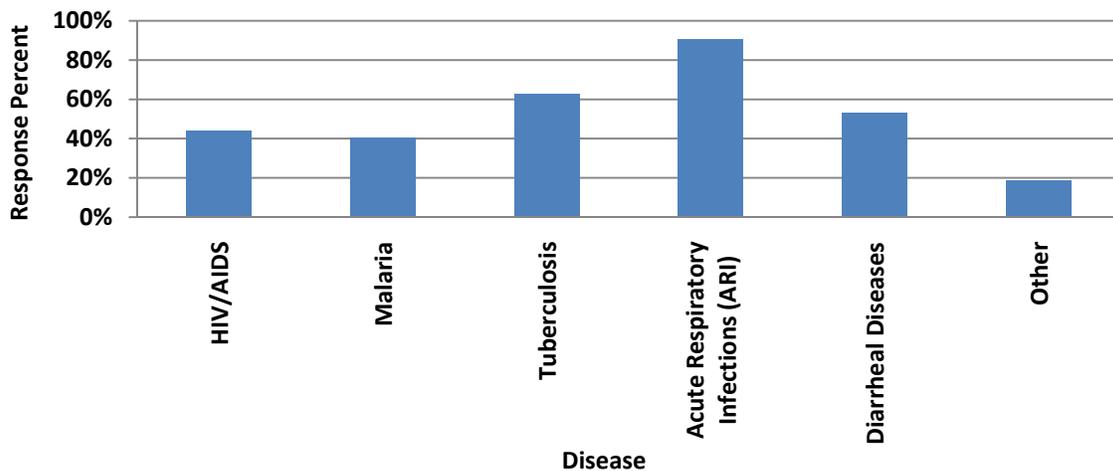


*APUA's newest chapter, APUA Ghana, was founded after this survey was administered. APUA now has 66 chapters.

STATUS OF ANTIBIOTIC RESISTANCE

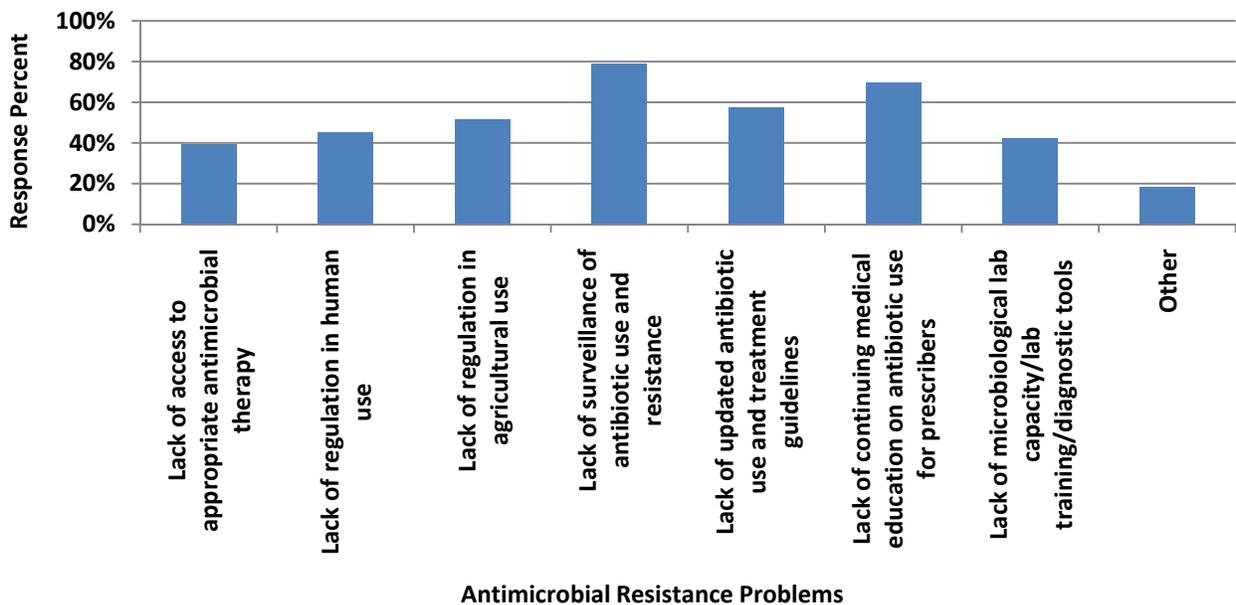
Most Prevalent Infectious Diseases

90.6% of respondents identified acute respiratory infections (ARI) as the infectious disease with the highest prevalence, followed by tuberculosis, diarrheal diseases, HIV/AIDS, and malaria. Other diseases of concern mentioned were Dengue (Nicaragua, Venezuela, Indonesia), Chagas (Argentina), Nosocomial Infections (Georgia), Leishmaniasis (Nepal), and Leptospirosis and Influenza (Honduras).



Factors Contributing to Antibiotic Resistance

78.8% of respondents identified “lack of surveillance of antibiotic use and resistance” as an urgent problem and 69.7% identified “lack of continuing medical education on antibiotic use for prescribers” as urgent. Specific antibiotic-resistant organisms of concern mentioned were *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Klebsiella spp.*, and ESBL-producing Enterobacteriaceae and *E.coli*.



APUA CHAPTER ACTIVITIES

APUA Chapter Priorities and Scope of Activities

Many chapters stated their priorities as raising awareness of antibiotic resistance as a major concern in their countries and advocating for the prudent use of antibiotics. To accomplish this, chapters are designing awareness campaigns targeting health care practitioners (about proper antibiotics prescribing practices) and the general public. They are also working to conduct research projects, establish surveillance systems, and train laboratories on methods of antimicrobial testing and detection of resistance. The implementation of policies and guidelines to regulate antibiotic use was also identified by many chapter leaders to be important. Goals for increased collaboration were common; chapters aim to accomplish this by holding forums to increase discussion among stakeholders as well as exchanging data with other institutions within and between countries.

Sample Responses (See APUA's website, www.apua.org, for all chapter responses):

- **APUA South Africa:**
The South African Chapter of APUA will concentrate on communicating the nature and extent of antimicrobial resistance in the country to all stakeholders, but particularly the general public. We highlight evidence-based strategies for the prevention and containment of antibiotic resistance, investigate antibiotic use, assess risk factors, evaluate infection control policies and procedures, and ascertain pharmaco-economics in the context of antibiotic resistance within the public and private healthcare sectors.
- **APUA Spain:**
 1. Clinical consequences of changes in ecology and population biology of bacterial pathogens.
 2. Prudent use of antimicrobials agents: are we entering an era of infections with no effective antimicrobial agents?
 3. Prudent use of antimicrobial agents: not just for humans.
- **APUA Moldova:**
APUA Moldova aims to:
Study current policies and practices set up to control antimicrobial resistance in Moldova.
Facilitate data-exchanging among countries and regions for tracking antimicrobial resistance.
Assist with producing a consensus set of recommendations on how to control antimicrobial resistance at the community and country levels.
Educate health care workers and the public about antimicrobial resistance.
- **APUA Bulgaria:**
Antimicrobial resistance and rational antibiotic policies are introduced both in under-graduate and post-graduate education of students in medicine, dentistry and pharmacy. Consumers' education is performed with the help of mass-media and includes discussions on TV, radio, and printed information in newspapers and journals. [APUA Bulgaria has] participated in an Expert Committee with the Ministry of Health to create Antimicrobial Resistance Surveillance and Rational Antibiotic Use Policies, which resulted in the foundation of the reference laboratory on antimicrobial resistance and its work on the national surveillance program BulSTAR (www.bam-bg.net)*.
- **APUA Mexico:**
National Priorities:
Lack of regulation of antibiotics in human and agriculture use
Lack of surveillance programs on antibiotic use and resistance
Lack of microbiological lab capacity
- **APUA Senegal:**
Priorities:
Training for health workers on antibiotic prescription
Communication toward the population on prudent use of antibiotics
Struggle against the illegal market of antibiotics
- **APUA South Korea:**
Coordinating activities of diverse bodies such as government (Department of Health, NIH of Korea, FDA of Korea), academic societies, hospitals, pharmaceutical companies, medicine, and veterinary medicine.

APUA CHAPTER ACTIVITIES (continued)

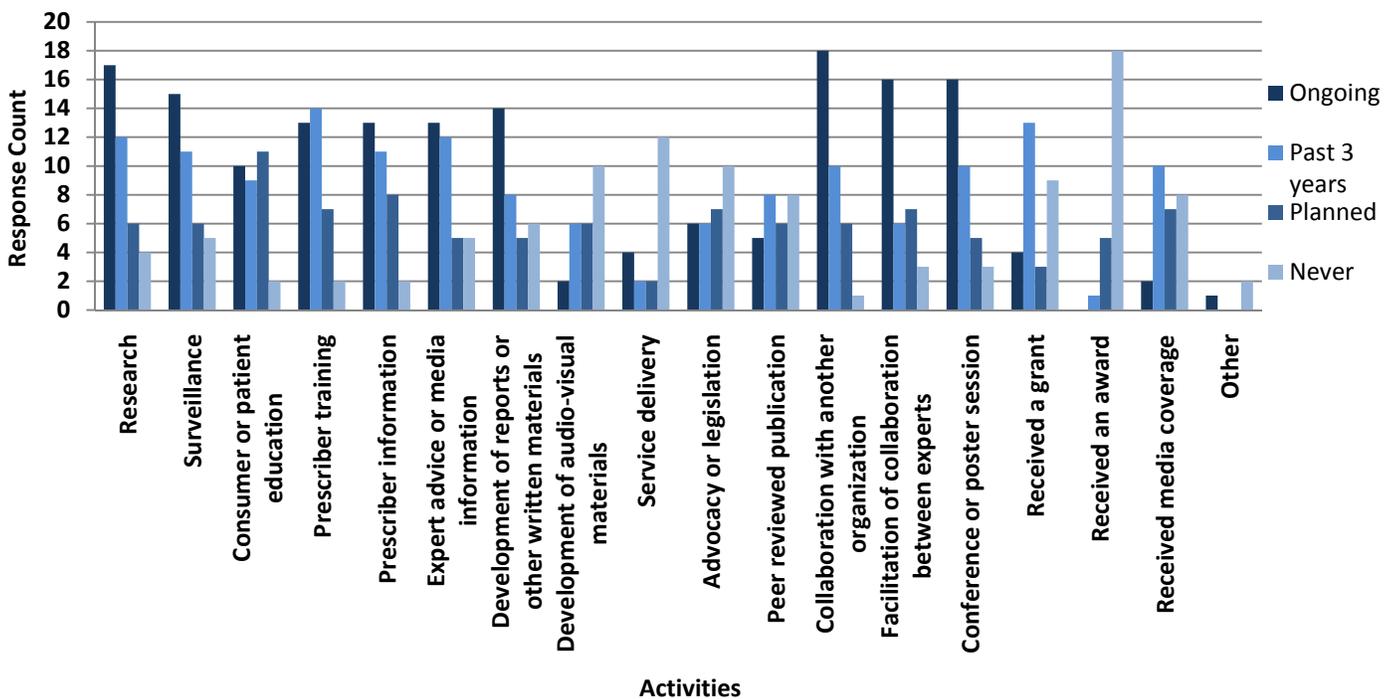
Current and Planned Activities

Common ongoing activities include “collaboration with another organization,” “research,” “facilitation of collaboration between experts,” “conference or poster session,” and “surveillance.”

Within the past three years, many countries have participated in “prescriber training,” “received a grant,” “research,” “surveillance,” and “expert advice or media information.”

Top planned activities include “consumer or patient education,” “prescriber information,” “prescriber training,” “facilitation of collaboration between experts,” and “media coverage.”

Activities most often marked as never performed include “received an award,” “service delivery,” “development of audio-visual materials,” “advocacy or legislation,” and “received a grant.”



Impactful Projects

APUA chapters have engaged in a wide range of activities related to research, policy, and education. For example, APUA India has worked with the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) and the Clinical Research Society. APUA Georgia has developed antibiotic treatment guidelines. Others have collaborated with national authorities on regulations and surveillance systems.

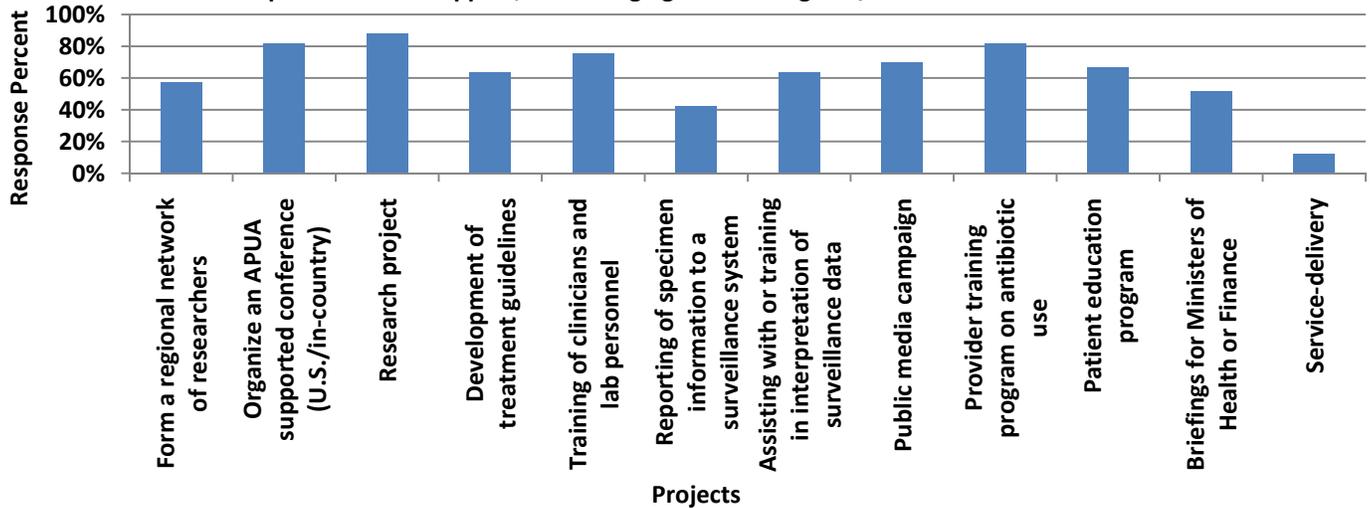
Educating health practitioners and the public has also been a focus; the chapters have contributed to workshops, academic courses, awareness campaigns, health fairs, and conferences. APUA Indonesia has collaborated with the Ministry of Health to assess and train health practitioners at 20 teaching hospitals in the prudent use of antibiotics. Many have also produced newsletters and websites and engaged the media to disseminate this information to the public.

APUA CHAPTER ACTIVITIES (continued)

Feasible Future Projects

The projects most often identified as feasible with additional support were research projects (estimated cost commonly marked as in the US\$50,000-100,000 range), an APUA supported conference (~US\$3,000-5,000), and a provider training program on antibiotic use (estimated cost varies depending on type of program).

What types of specific chapter projects is the chapter technically and logistically able to conduct if provided with support, i.e. through grant funding and/or APUA consultation?

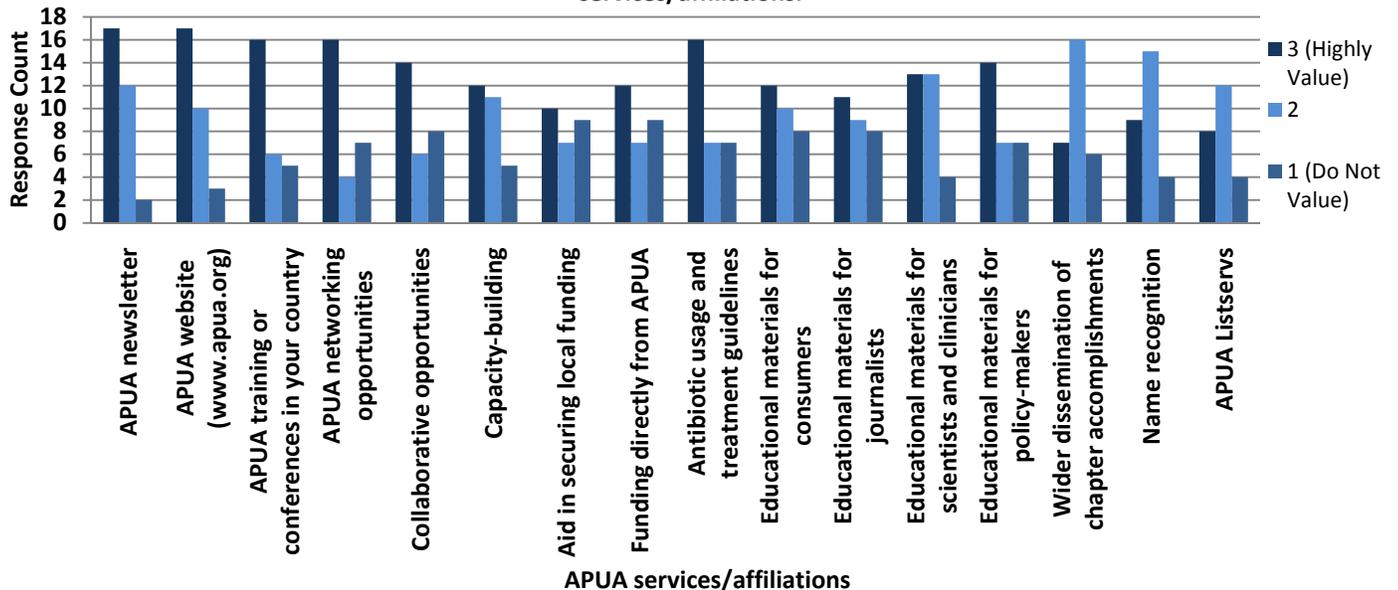


APUA CHAPTER SERVICES

APUA Chapters Services

53.1% of respondents highly value the APUA newsletter and website. Other highly valued APUA services/affiliations were antibiotic usage and treatment guidelines, APUA training or conferences in your country, and APUA networking opportunities. Most often marked "do not value" were aid in securing local funding, funding directly from APUA, collaborative opportunities, educational materials for consumers, and educational materials for journalists.

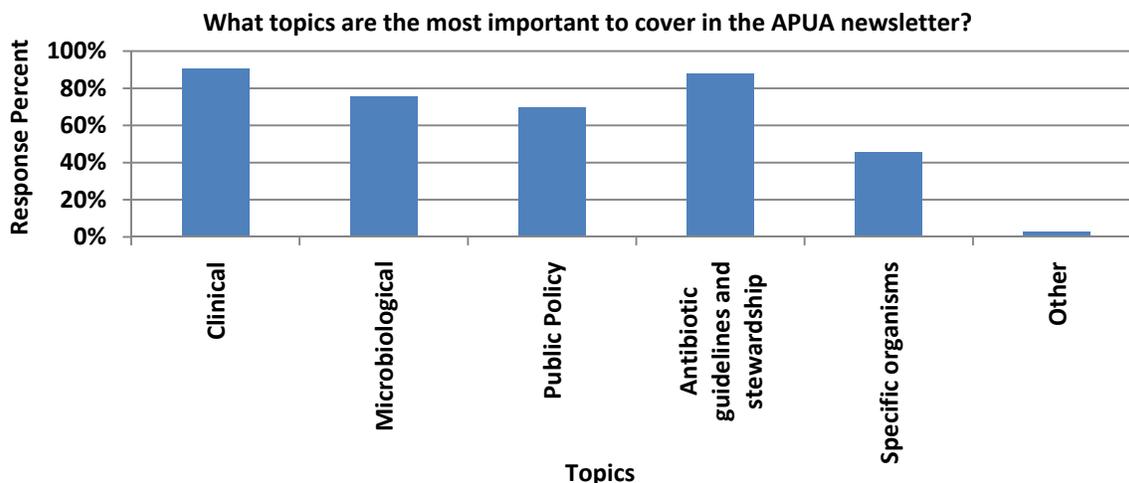
Please tell us what you value most about APUA membership by ranking the following APUA services/affiliations.



APUA CHAPTER SERVICES (continued)

APUA Newsletter

Chapters believe it is most important to cover clinical topics and antibiotic guidelines and stewardship in the APUA Newsletter.



Suggestions to Improve the APUA Chapter Network

- Improve media presence
- Hold an APUA conference
- Promote regional meetings among chapters in neighboring countries
- Increased technical and financial support (e.g. for meetings, an annual seminary for physicians in rural areas, newsletters)
- Initiate a multicenter study about emerging resistance around the world
- Hold more meetings at related national events (about Infectious diseases, Microbiology, Veterinary, Pharmacy) and international ones like ICAAC
- Support for the creation of a national task force on antimicrobial resistance, local research projects, continuing medical education and surveillance training programs
- More efforts focusing on public education
- Provide more information on interventions and how to respond to multiple-drug resistant organisms
- Promote publications and news from the chapters
- Assistance in updating chapter websites
- Greater involvement of local chapters with international APUA projects and increased collaborative projects between chapters.
- Send mailings in multiple languages (French is specifically requested)
- More support during a chapter's formative stages

Comments/Concerns

- Chapter leaders and executive committee members have numerous other responsibilities aside from APUA and those responsibilities may have priority, so the APUA head office should be understanding of this.
- Progress may be hampered by many sociocultural factors.

ACKNOWLEDGEMENTS

The Alliance for the Prudent Use of Antibiotics (APUA) wishes to acknowledge the following people for their time and dedication to the preparation of the 2011 APUA Chapter Survey and Report:

Kathleen Young, APUA, Executive Director

Aníbal Sosa, M.D., APUA, Director of the APUA International Chapter Programs

Amadea Britton, APUA, Global Public Health Intern

Melanie Tam, APUA, Global Public Health Intern

APUA is also grateful to the members of the following APUA Chapters for taking the time to share their input on this survey:

APUA Abu Dhabi

APUA Argentina

APUA Australia

APUA Austria

APUA Bulgaria

APUA Croatia

APUA Cuba

APUA Ethiopia

APUA Gambia

APUA Georgia

APUA Honduras

APUA India

APUA Indonesia

APUA Italy

APUA Kenya

APUA Lebanon

APUA Mexico

APUA Moldova

APUA Mozambique

APUA Nepal

APUA Nicaragua

APUA Pakistan

APUA Panama

APUA Russia

APUA Senegal

APUA South Africa

APUA South Korea

APUA Spain

APUA Tanzania

APUA Turkey

APUA Uganda

APUA Venezuela

APUA Zambia

Please see chapter profiles on the APUA website, www.apua.org, for information about the chapter leaders.