**2019-B-06**

Amend policies HP-3300.1.13.1, HP-3300.1.13.2, and HP-3300.1.13.3 as follows:

~~HP-3300.1.13.1~~

~~AAPA believes that PAs should be aware of antimicrobial resistance in their clinical practice. AAPA strongly recommends that PAs educate their patients regarding antimicrobial resistance, including the prudent use of antibiotics and the importance of preventive measures (e.g. pneumococcal vaccine), and not accommodate patient demands or expectations for unneeded antibiotics.~~

*~~[Adopted 1999, amended 2004, 2009, reaffirmed 2014]~~*

# ~~HP-3300.1.13.2~~

~~Antimicrobial Resistance   
(Adopted 1999, amended 2009, reaffirmed 2004, 2014)~~

# ~~Antimicrobial Resistance (Adopted 1999, amended 2009, reaffirmed 2004, 2014)~~

**~~Executive Summary of Policy Contained in this Paper~~**

~~Summaries will lack rationale and background information, and may lose nuance of policy.~~

~~You are highly encouraged to read the entire paper.~~

* ~~AAPA believes that antimicrobial resistance is a significant and continuing issue for medical practice.~~
* ~~AAPA should work strategically with other organizations to educate medical providers, administrators and students about the issue of antimicrobial resistance and the need to limit the inappropriate use of antimicrobial use as a means of slowing evolution of antimicrobial resistance.~~
* ~~PAs should understand the natural course of infectious diseases and the appropriate use of antimicrobial therapies.~~
* ~~Whenever possible, cultures should be used to guide decision-making for antimicrobial use.~~
* ~~A thorough knowledge would include antibiotic/food interactions and potential hidden sources of antibiotics.~~
* ~~PAs should seek out the latest available data on local and/or regional resistance trends as part of their vigilance.~~

# ~~Introduction~~

~~At the turn of the century, infectious diseases were the leading cause of death in the United States. Tuberculosis, infectious diarrheal diseases, and pneumonia accounted for 30 percent of all deaths and kept life expectancy at about 47 years.(1) Several factors helped reduce the mortality rate from these infectious diseases. Public policy and individual efforts placed a higher priority on hygiene and sanitation services which improved the quality of life. Government actions vastly improved food and water supplies. After World War II, the industrial production of penicillin was introduced.(2)(3) Within a few short years after the introduction of antibiotics to modern medicine, the first resistant bacteria to penicillin were discovered. Since then many different antimicrobial agents have been discovered and brought onto the market. Each new antibiotic creates a selective pressure that quickly leads to bacteria that survive the various mechanisms of microbial destruction. (4)(5)(6)(7) These pressures and the natural process of evolution combine to allow bacteria to adapt.(5) As a result, some previously well controlled bacterial diseases (i.e. tuberculosis, staphylococcal infections,~~ *~~S. pneumoniae~~*~~, enterococci, pseudomonal infections and~~ *~~Salmonella~~*~~) have appeared in drug resistant forms in recent years.(2)(4)(6)(8) International travel also promotes the spread of drug-resistant strains.(7)(9) As we look to this coming century, the appropriate use of antimicrobials may be one of the most important challenges to the health of our patients.(5)(6)(7)(9)~~

**~~Misuse of Antimicrobial Agents~~**

~~Misuse and overuse of antimicrobial agents have exacerbated problems associated with resistant microbes.(5)(7) Inappropriate antibiotic prescription by clinicians treating patients is a major source of overuse. Patient and care-giver expectations result in inappropriate demand for antibiotic and antiviral medications. In some developing countries, antimicrobial agents are available without a prescription. All these and the ease of international travel further complicate emerging infectious diseases.(6)(7) Animal husbandry use have led directly to drug resistant pathogens.(9) Antimicrobials are fed to animals in an effort to promote their growth and prevent infection which has contributed significantly to the emergence of drug-resistant organisms. (6)(10)(11)(12)~~

**~~Drug Resistant Organisms~~**

~~Drug resistance continues to be a serious public health problem. (3)(13) The list of drug resistant pathogens is growing much faster than our ability to identify agents effective in their treatment. Drug resistant pseudomonal infections, vancomycin-resistant enterococcus (VRE) and even vancomycin resistance~~ *~~Staphylococcus aureus~~* ~~are three common nosocomial infections. (7)(13)(14) Drug resistant strains of tuberculosis, Methicillin-Resistant~~ *~~Staphylococcus aureus~~*~~,~~ *~~Neisseria gonorrhoeae~~* ~~and~~ *~~Streptococcus pneumoniae~~* ~~are significant community acquired infections. (7)(11)(13)~~

~~The problem of drug resistance is multifactorial. Solutions will require coordinated efforts of clinicians, microbiologists, researchers, the pharmaceutical industry, public health personnel, and our patients. Programs to improve antimicrobial use must be implemented to help preserve the effectiveness of current drugs since few new effective antimicrobial agents are being introduced. (5)(9)(11)(13)~~

**~~Conclusions~~**

~~The CDC has pooled strategies to try and decrease the pressures toward greater microbial resistance. There are four main components to the CDC plan that includes proper hygiene to prevent infections in the first place, diagnose the specific infectious agents before initiating appropriate antimicrobial therapy and then prevent the spread of infectious microbes by hand washing and isolating pathogens. (15) These are the elements of antimicrobial strategy to decrease the burden of disease while lowering the selective pressures toward resistant pathogens. There are specific recommendations for most every clinical practice setting, but especially for hospitals and long term care facilities.~~

~~PAs should understand the natural course of infectious diseases and the appropriate use of antimicrobial therapies. Whenever possible, cultures should be used to guide decision-making. A thorough knowledge would include antibiotic/food interactions and potential hidden sources of antibiotics. PAs should seek out the latest available data on local and/or regional resistance trends as part of their vigilance.~~

**~~References~~**

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~~HP-3300.1.13.3~~

~~AAPA encourages the development and dissemination of educational programs on antimicrobial resistance for PAs and PA students. Such programs should address the scope of the problem, contributing causes, specific local issues, and the role each individual can play in controlling and preventing further antimicrobial resistance.~~

*~~[Adopted 1999, amended 2004, reaffirmed 2009, 2014]~~*

AAPA believes that PAs should be aware of antimicrobial STEWARDSHIP AND resistance in their clinical practice THROUGH DETECTION AND CONTAINMENT OF RESISTANT PATHOGENS AND PROPER ANTIBIOTIC USE. THIS INVOLVES CONTINUOUS EDUCATION FOR PAS AND PA STUDENTS ON ADVANCING TECHNOLOGIES. THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) AND THE INFECTIOUS DISEASES SOCIETY OF AMERICA (IDSA) PRODUCE A NUMBER OF DOCUMENTS DESCRIBING THESE ISSUES AND HOW CLINICIANS CAN RESPOND. PAS MUST RECOGNIZE THAT THE ISSUE EXTENDS BEYOND THE CLINICAL ARENA AND THAT ANTIMICROBIAL USE IN FARMING PLAYS A SIGNIFICANT ROLE IN RESISTANT BACTERIAL PATHOGEN IN HUMAN DISEASE. FURTHERMORE, THE AAPA BELIEVES THAT FURTHER RESEARCH AND DEVELOPMENT IS ESSENTIAL COMBATTING THIS PROBLEM.

Submitted by

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