PATTERNS OF ANTIBIOTIC USE FOR UPPER RESPIRATORY INFECTIONS (URIs) AMONG COMMUNITY MEMBERS, PHYSICIANS, DRUG SELLERS

AND

THE INVOLEMENT OF CIVIL SOCIETY IN URI GUIDELINE DEVELOPMENT



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Thesis Title : Patterns of Antibiotic Use for Upper Respiratory Infections (URIs) Among Community Members, Physicians, Drug Sellers & The Involvement of Civil Society in URI Guideline Development By : Miss Siritree Suttajit Program : Doctor of Philosophy in Public Health (Health System Development), College of Public Health Dissertation Advisor : Professor Chitr Sitthi-amorn, M.D., M.Sc., Ph.D. Dissertation Co-Advisor: Associate Professor Dennis Ross-Degnan, Sc.D. Accepted by the College of Public Health, Chulalongkorn University, Bangkok, Thailand in Partial Fulfillment of the Requirements for the Doctoral Degree blut LiThi - amm, Dean of the College of Public Health (Professor Chitr Sitthi-amorn, M.D., M.Sc., Ph.D.) DOCTORAL COMMITTEE Solheche Paulle , Chairperson (Associate Professor Sathirakorn Pongpanich, M.A., Ph.D.) Bhit Sith - amon, Thesis Advisor (Professor Chitr Sitthi-amorn, M.D., M.Sc., Ph.D.) Dennis Ron Degran, Thesis Co-Advisor (Associate Professor Dennis Ross-Degnan, Sc.D.) (Associate Professor Sauwakon Ratanawijitrasin, Ph.D.) Duanghp Hongsamort, Member

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SIRITREE SUTTAJIT: PATTERNS OF ANTIBIOTIC USE FOR UPPER RESPIRATORY INFECTIONS (URIs) AMONG COMMUNITY MEMBERS, PHYSICIANS, DRUG SELLERS & THE INVOLVEMENT OF CIVIL SOCIETY IN URI GUIDELINE DEVELOPMENT.

DISSERTATION ADVISOR: PROFESSOR CHITR SITTHI-AMORN, M.D., M.Sc., Ph.D., DISSERTATION CO-ADVISOR: ASSOCIATE PROFESSOR DENNIS ROSS-DEGNAN, Sc.D., 196 pp. ISBN: 974-9599-65-9

Inappropriate treatment with antibiotics for upper respiratory tract infections (URIs) contributes to increasing risk of antibiotic resistance and to waste of scarce resources. The objectives of this study were:

1) to measure patterns of antibiotic use for treatment of adult (age ≥18) with URIs among community members, drug sellers and health center physicians; and 2) to develop local URI management guidelines, by involving civil society in the guideline development process. It is hope that the implementation of the guideline will reduce unnecessary antibiotic treatment at the community level. Two Bangkok slums were purposively selected as the study areas.

The results revealed that URIs constitute a significant problem in the communities. More than 80% of URI cases were of likely viral origin. The pattern of health seeking behaviors were similar between patients with presumed bacterial and viral URIs. This lead to unnecessary use of health facility. In addition, physicians, drug sellers, and community members did not distinguish between patient with presumed viral or bacterial URIs in term of the antibiotic prescription pattern.

Community members, especially the elderly, poor, low educated and uninsured persons, tended to have misconception about URI treatment and antibiotic use. Patients most frequently initiated treatment at home, then sought treatment at drug stores or clinical settings. However, they tended to conform to the advice of health care providers about antibiotic use. Patients who self-prescribed were less likely to get antibiotic than prescriptions given by drug sellers/ physicians. Thus, regardless of type of infection and point of care, only 3% of self-medication at home and 24% of self-prescribed at drug stores included an antibiotic. On the other hand, 65% of patients seeking advice from drug sellers and 65% of those visiting a clinic received an antibiotic.

At the health centers, 60% of viral and 89% of bacterial URI patients were prescribed an antibiotic. Compliance with the national treatment guideline was 36.4% for treatment of viral URIs and only 1.7% for treatment of bacterial URIs. Among viral URI patients, those who were young, male, and self-paying were more likely to receive antibiotics; part-time physicians were more likely to prescribe antibiotics for these patients. Among patients with bacterial URIs, those who paid for drugs by themselves were more likely to receive antibiotics compared to patients covered by the national health insurance plan.

At the drug stores, without asking proper questions and giving adequate information on drugs use, antibiotics were dispensed for simulated common cold case for 66%. A question of 'Sore throat?' asked by drug sellers significantly predicts their dispensing of antibiotics. Most drug dispensed came in 'Yachud' form included dipyrone or steroids in the package.

Attempt to develop a local URI management recommendation with a consensus of all stakeholders was not presently achieved. However, a separate recommendation for community members and Health Center physicians were developed with an involvement of the 'civil society' at each setting. The Recommendations focused on the differential diagnosis of viral and bacterial URIs and promote more on appropriate self-treatment at home for viral URIs.

To establish a strong civil society to address health and drug issues in community, a strategy to promote the concept of health as a public problem is needed. This will guide the development of civic consciousness, identification of prime movers/ organization, and network of communication to address the problem. Regular internal and external review process may ensure the effectiveness of the formed civil society.

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ACRONYMS

ABT : Antibiotic

BI : Behavior Involvement subscale

BMA : Bangkok Metropolitan Administration

CHLC : Chance Health Locus of Control

CHV : Community Health Volunteer

CI : Confidence Interval

DPF : Duang Prateep Foundation (NGO)

FGD : Focus Group Discussion

GAS, GABHS : Group A β-hemolytic Streptococcus

IF : Information subscale

IHLC : Internal Health Locus of Control

KHOS : Krantz Health Opinion Survey

MDRTB : Multi Drug-Resistant Tuberculosis

MHLC : Multi-dimensional Health Locus of Control

MOPH : Ministry of Public Health

NGO : Non-Government Organization

OPD : Out-Patient Department

OR : Odds Ratio

QAT : Question-Advice-Treatment

SCM : Simulated Client Method

URIs : Upper Respiratory Tract Infections