Irrational Antibiotics Prescribing Behavior of Physicians in Taiwan



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OMICS International

World Congress on

Infectious diseases

August 10-12, 2015 London, UK

Imprudent antibiotics prescribing – Global concern







Antibiotic resistance—the need for global solutions (The Lancet Infectious Diseases Commission November 17, 2013 http://dx.doi.org/10.1016/S1473-3099(13)70318-9)

Introduction

- Irrational or Imprudent antibiotics prescribing
- Global concern
- Policy implications required
- Physicians behavior



REASONS ANTIBIOTIC PRESCRIBING GUIDELINES ARE NOT FOLLOWED



Belief that non-recommended agents may be more likely to cure an infection



Concern for parent or patient satisfaction, a common method by which clinicians are evaluated



Fear of infection complications and related negative consequences

www.cdc.gov/getsmart

GET SMART

Sanchez GV, et al. Effects of primary care provider knowledge, attitudes, and practices on antibiotic drug selection, United States. *Emerg Infect Dis*. 2014;20:2041-7.

11/2014

Objective

- Whether the policy implication for antibiotics prescription on Taiwanese physicians would influence in following years or not
- To investigate the trends for acute bronchitis



Methods

- Taiwan's Bureau National Health Insurance Database (BNHI)
- 1 million population cohort data sample
- Time duration: 1998-2011
- Selected subjects who visited with acute bronchitis



Inclusion criteria

- Acute bronchitis (*International Classification of Diseases, Ninth Revision*, code 466.0)
- Presence of antibiotics (Anatomical Therapeutic Chemical, first level of the code J; excluded J05, J06 and J07)
- Gender and Age groups 18-44 and 45-64 year
- 258049 visits of acute bronchitis met inclusion criteria



Exclusion criteria

- Patients who were admitted to the hospital
- Or the visits associated with:

✓Chronic pulmonary disease

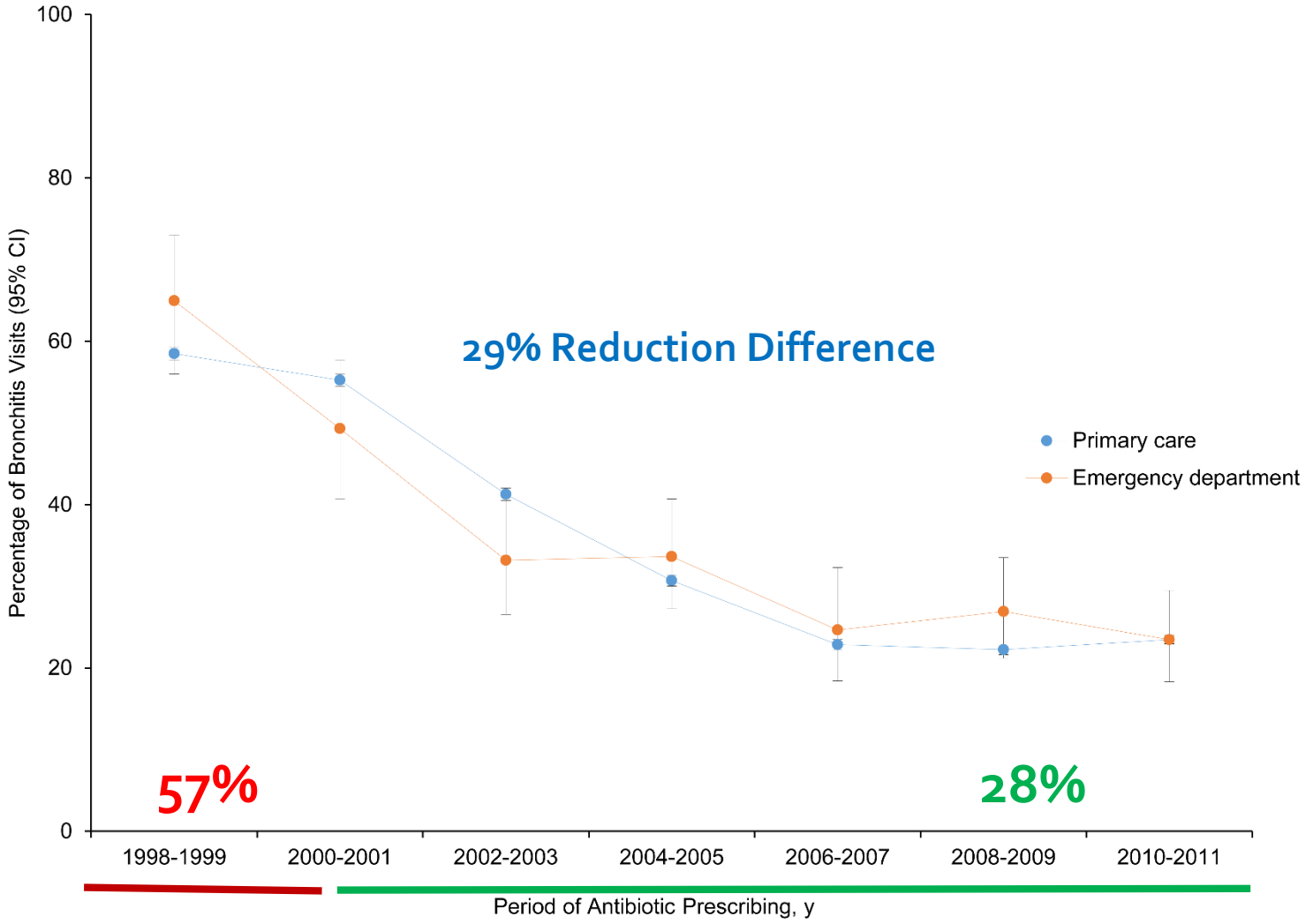
✓Immunodeficiency

✓Cancer or

✓Concomitant infectious diagnoses



Results



No. of sample visits							
Primary care	30888	32914	32649	36145	34065	38647	50356
Emergency department	235	284	344	376	298	405	443

Antibiotic prescribing behavior for acute bronchitis in Taiwan, 1998–2011. Abbreviation: CI, confidence interval.

Conclusion



- New regulations discouraged physicians
- Reduced the antibiotics prescriptions if it is not proven
- Significant behavioral change
- It could be because of multifactorial effects such as
  - ✓National health insurance reimbursement
  - ✓Dissemination of knowledge
  - ✓Peers' pressure and behavior

Acknowledgement

- **Prof. Yu-Chuan (Jack) Li, M.D., Ph.D., FACMI, FACHI**
- **Professor and Dean**
- College of Medicine Science and Technology, Taipei Medical University, Taiwan
- **Editor-in-Chief**
- Computer Methods and Programs in Biomedicine (CMPB)
- International Journal for Quality in Health Care (IJQHC)




THANK
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Q&A