



Do Bugs Need Drugs?

A Community Project for Wise Use
of Antibiotics



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Objectives



- A general overview of antibiotic resistance
- A review of the Do Bugs Need Drugs? Program
- A discussion regarding the dissemination of this program to other health regions

Overuse of Antibiotics

- Human
- Environment
- Animal

Bacteria



- 60% of earth biomass
- 2-3 billion microbial species
- < 0.5% have been identified
- preceded plants/animals by >3 billion years
- essential to both internal/external environments



National Mandate

To decrease antibiotic prescriptions in
respiratory tract infections by 25%

(CCAR 1997)



Antibiotics

Facts

- ↓ 80% of antibiotics are used in the community
- ↓ 75% of antibiotics are used for respiratory tract infections
- ↓ 50% of antibiotics are inappropriate



Misconceptions

Canada

↓ 54% of adults believe antibiotics
are effective against viruses

(NIPA 2000)

Pilot project in Grande Prairie, Alberta



- 12% decrease in antibiotic prescriptions
 - Decreased antibiotics per capita vs control community
- Increased public awareness
- Value of educating pharmacists
- Value of educating children



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Capital Health





Partners

- Alberta Medical Association
- Alberta Lung Association
- Capital Health
- University of Alberta



Misconceptions

Capital Health

- ↓ 31% of adults expect an antibiotic for respiratory symptoms
- ↓ 35% of adults expect an antibiotic for their child with respiratory symptoms
- ↓ 11% will seek another physician if an antibiotic is not prescribed

(Ryan and Wong Consulting, March 2000)



3 Key Messages

- Handwashing is important
- Not all bugs are created equal
- Antibiotic resistance is a problem
Use Antibiotics Wisely

Promotional Materials



- Project Poster
- Handwashing Poster
- Project Pamphlet
- Parent Guide
- Activity Sheet
- Buggy Mascot

Website

(www.dobugsneeddrugs.org)

- Health Care Professional
 - Bugs and Drugs Antimicrobial Reference
 - AMA Clinical Practice Guidelines
- Public
 - Parent Guide
 - multiple languages
 - Website Links
- Children
 - Poem
 - Games
 - Teacher education material



Health Professionals



- Doctors
- Pharmacists
- Public Health
- Occupational Health
- Continuing Care
- Infection Control

Physicians



- CME session
- Antibiotic Utilization Patterns
- Project Prescription Pad
- Pre and Post Survey
- Distribution of Promotional Materials



Public Campaign

- Media campaign
- Grade 2 program
- Daycare
- First Nations

Media Campaign



- Television
- Radio
- Parent guide
- Website - www.dobugsneeddrugs.org
- Community Hall Meetings

Grade 2 Program



- University/College students
 - Interdisciplinary Course
- Teaching Session
 - 3 messages

Daycare



- Training Sessions
 - Staff
 - Parents
 - Children
- Accreditation Agency
 - Survey policies and procedures
- Point Prevalence Studies
 - Antibiotic rates



Results - Public

- Pre study
 - Edmonton & Calgary
- Post study
 - Edmonton - before / after
 - Edmonton & Calgary

Results



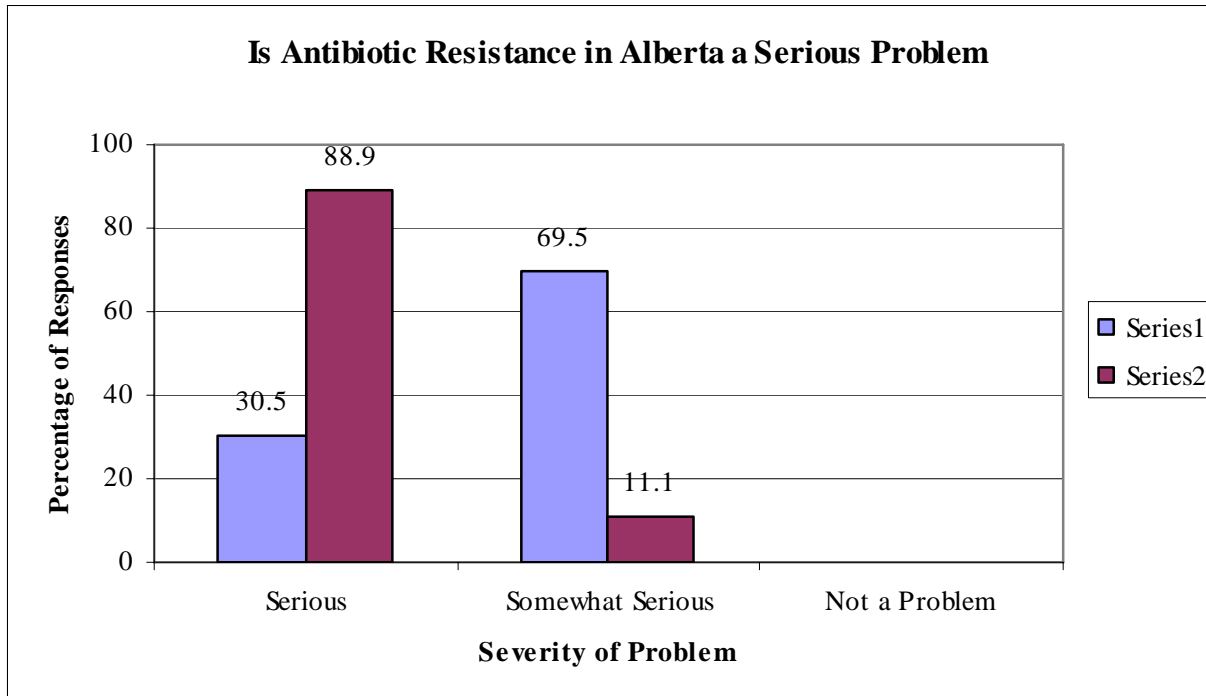
Post survey

Edmonton vs Calgary (all $p < 0.01$)

- less likely to expect antibiotics for cold/flu symptoms
- more likely to mention handwashing as a measure to prevent infections
- more likely to recognize that antibiotics offer no advantage in the management of cold/flu
- more likely to define antibiotic resistance correctly

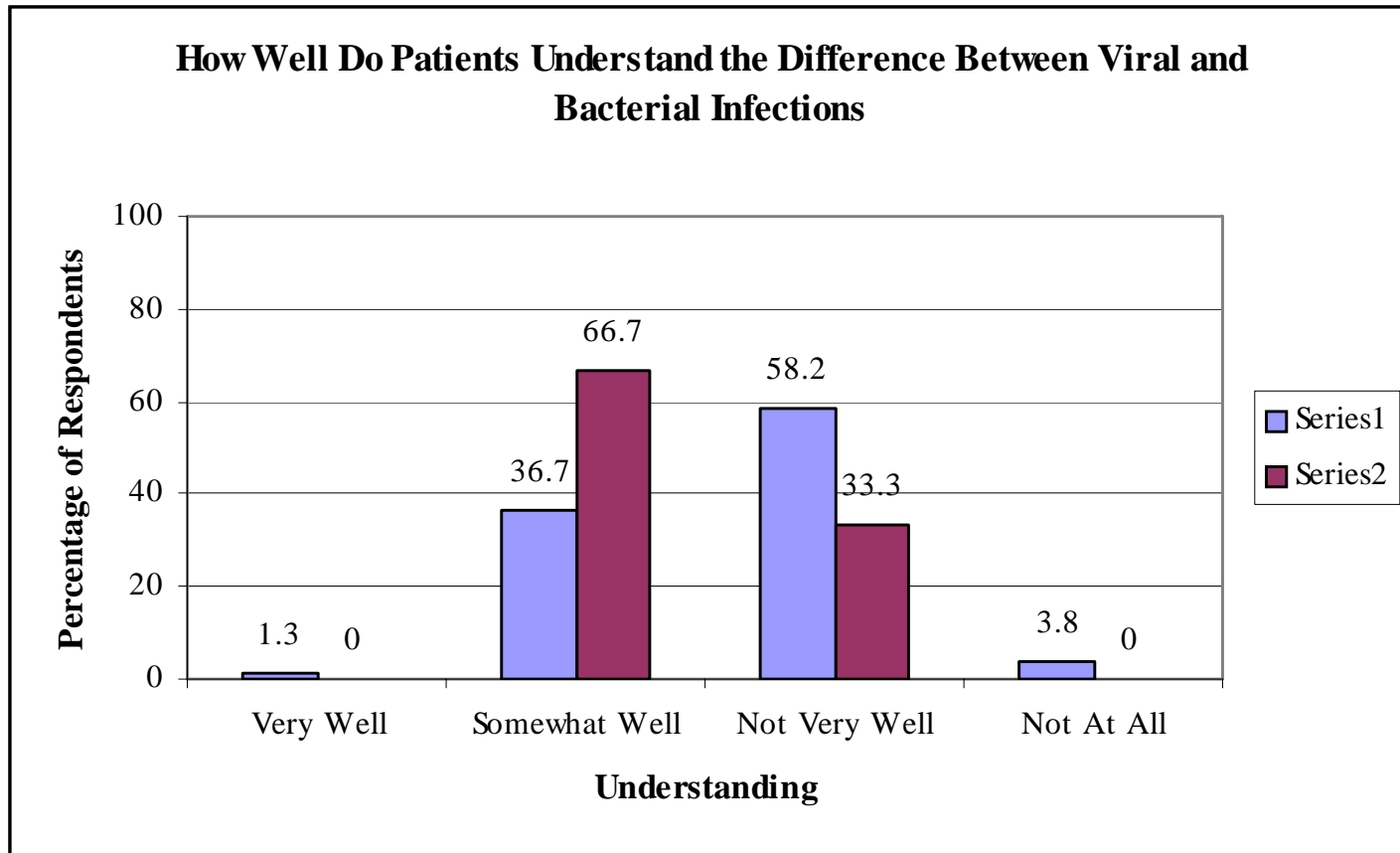


Results - Physicians





Results - Physicians



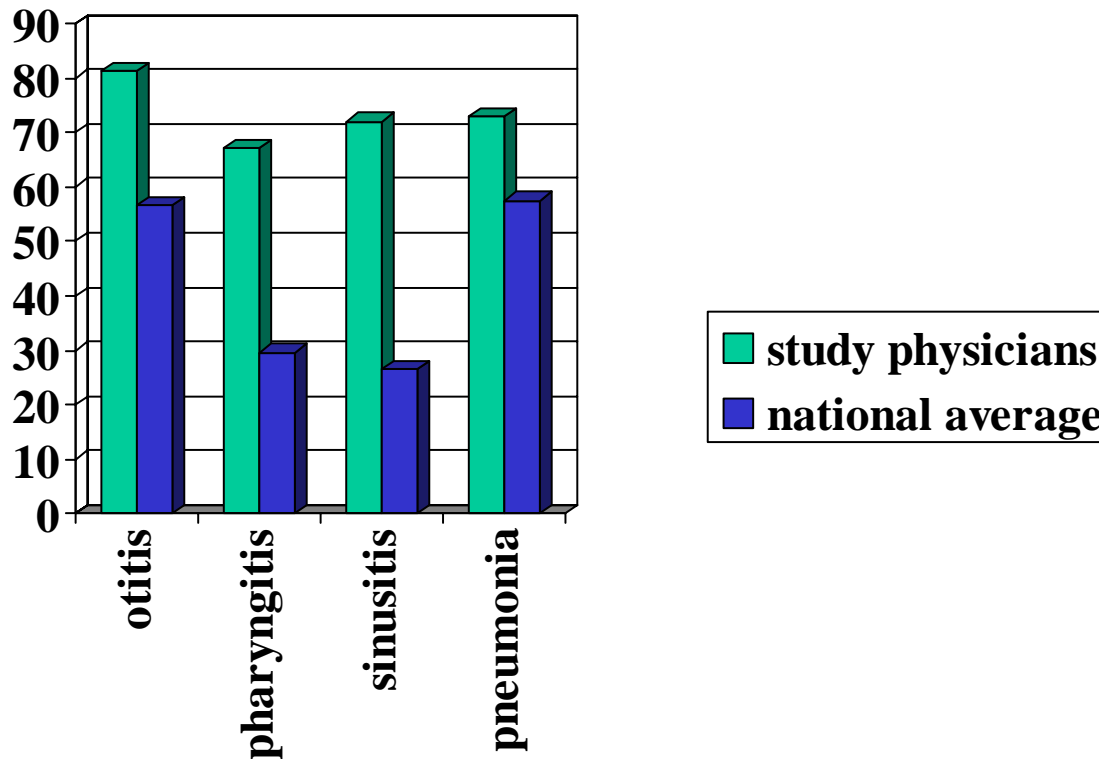


Results

Use of First Line Agents

Study Physicians vs National Average (IMS)

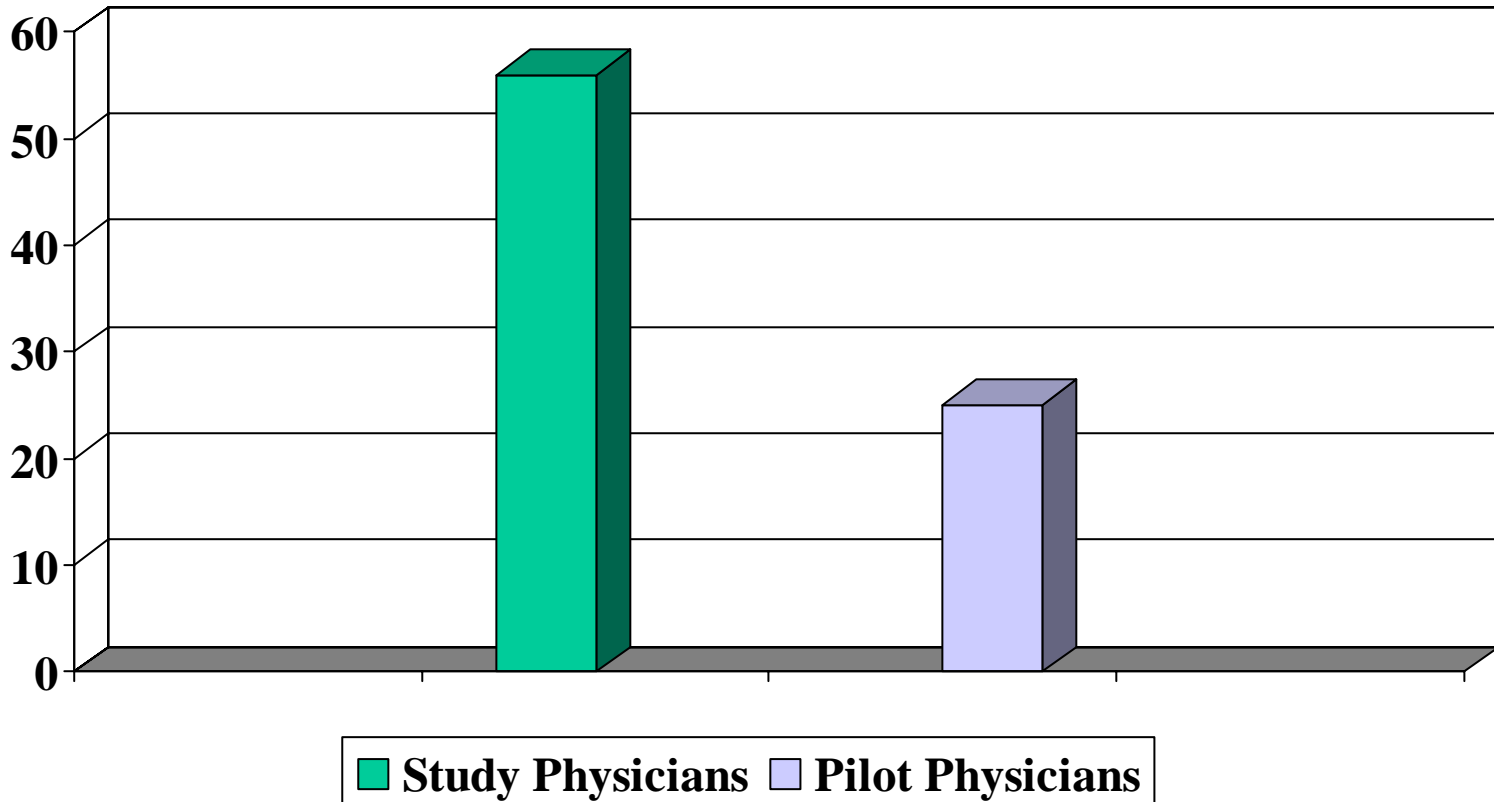
(all $p < 0.01$)





Diagnose Viral Etiology

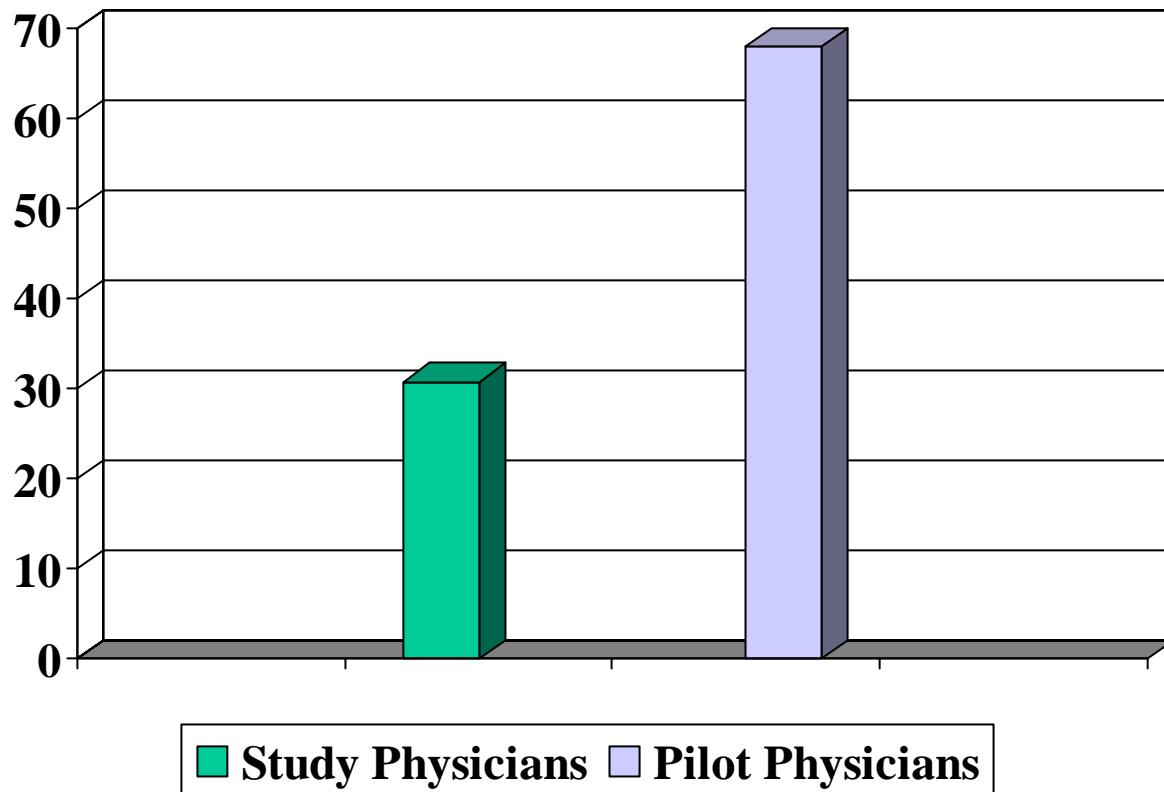
Study Physicians vs Pilot Physicians





Likelihood of Prescribing Antibiotics for RTIs

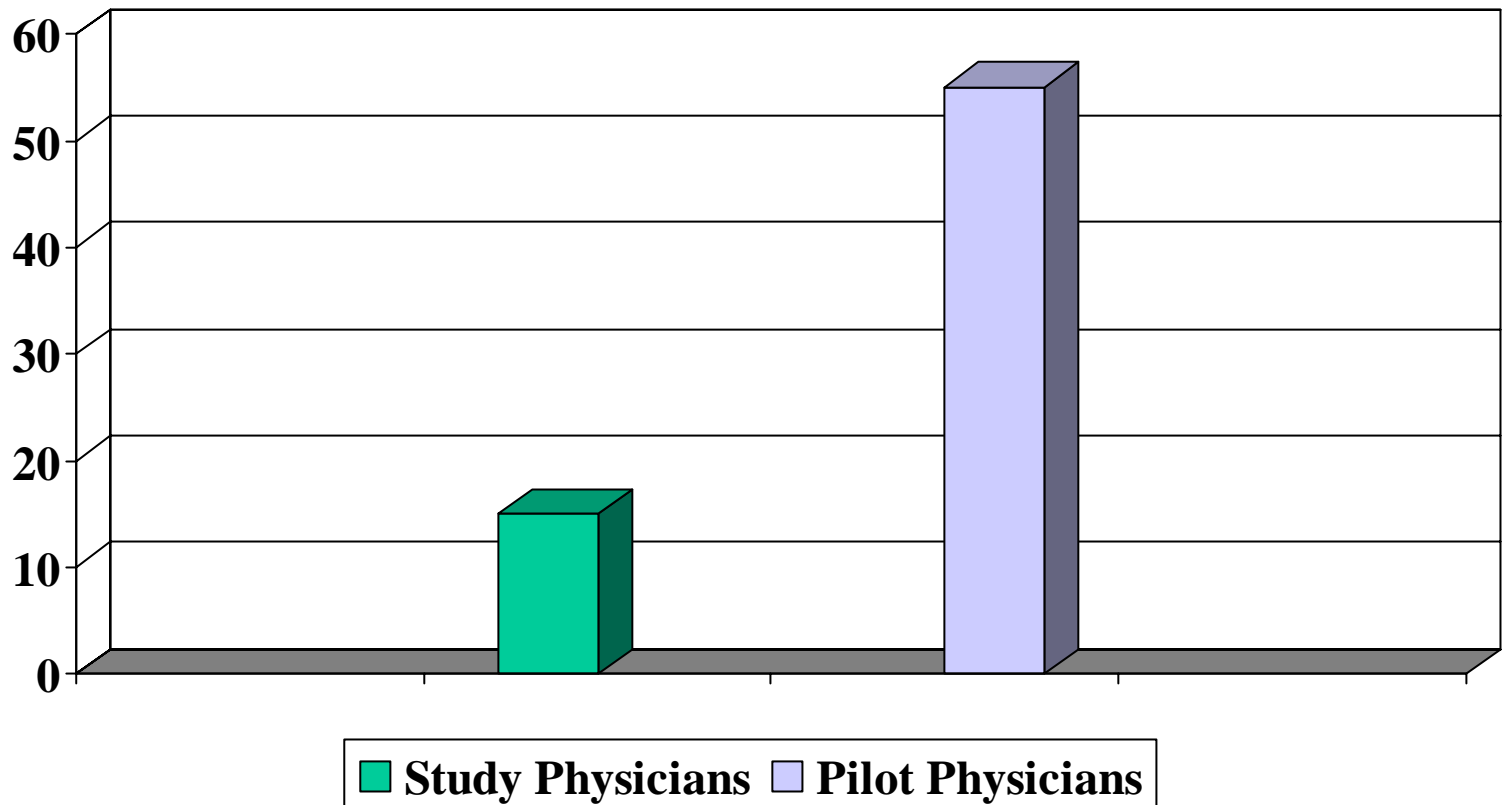
Study Physicians vs Pilot Physicians



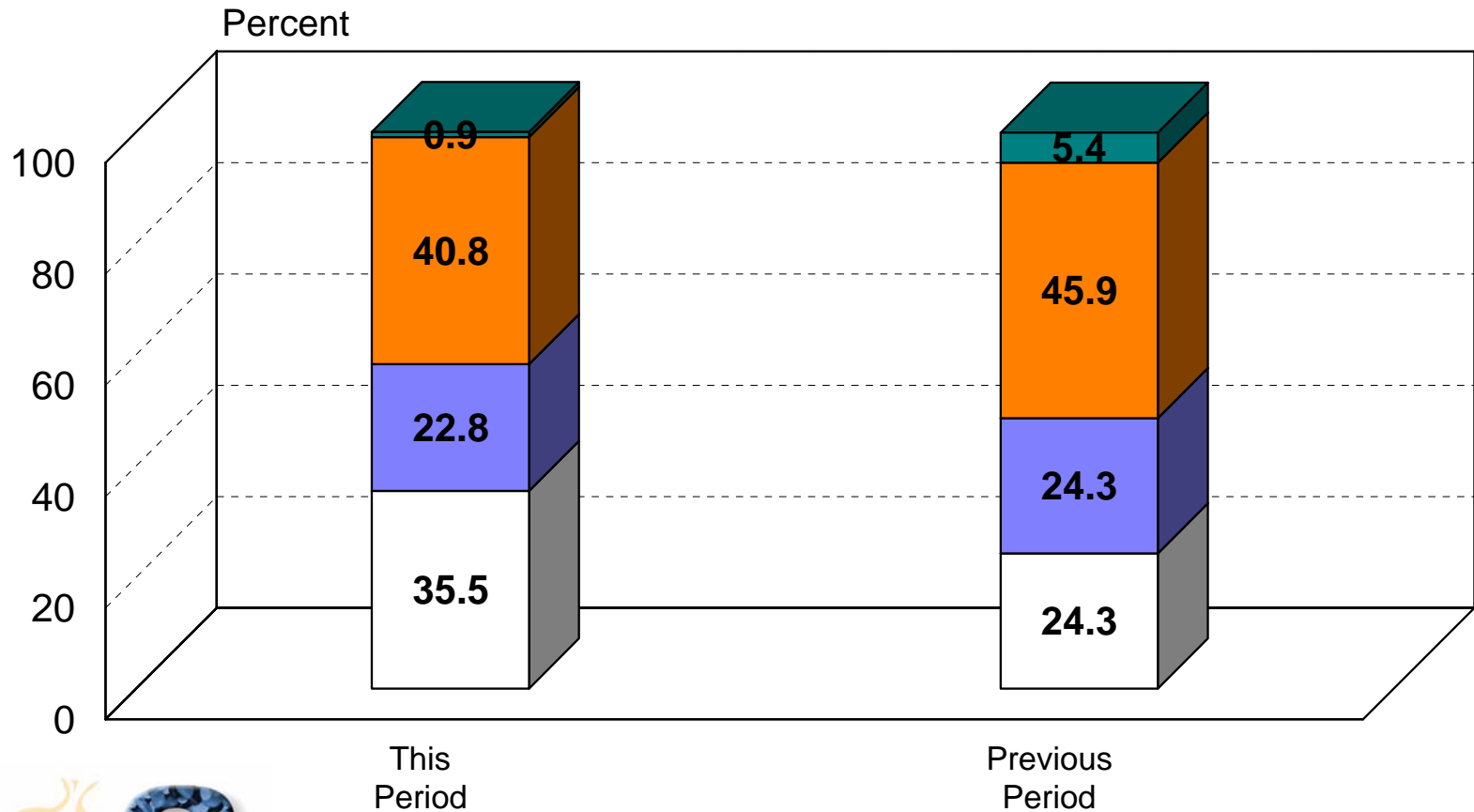
Antibiotic Prescription when Etiology Unclear



Study Physicians vs Pilot Physicians



Days of Amoxil/Amoxicillin Rx for Acute Otitis Media - Current Period (10/01-03/02) vs. Previous Period (02/01 - 04/01)



□ 5 Days □ 7 Days □ 10 Days □ Others



Results - Parents

$p < 0.01$

- less likely to expect antibiotics for cold/flu
- reduced use of antimicrobial soap

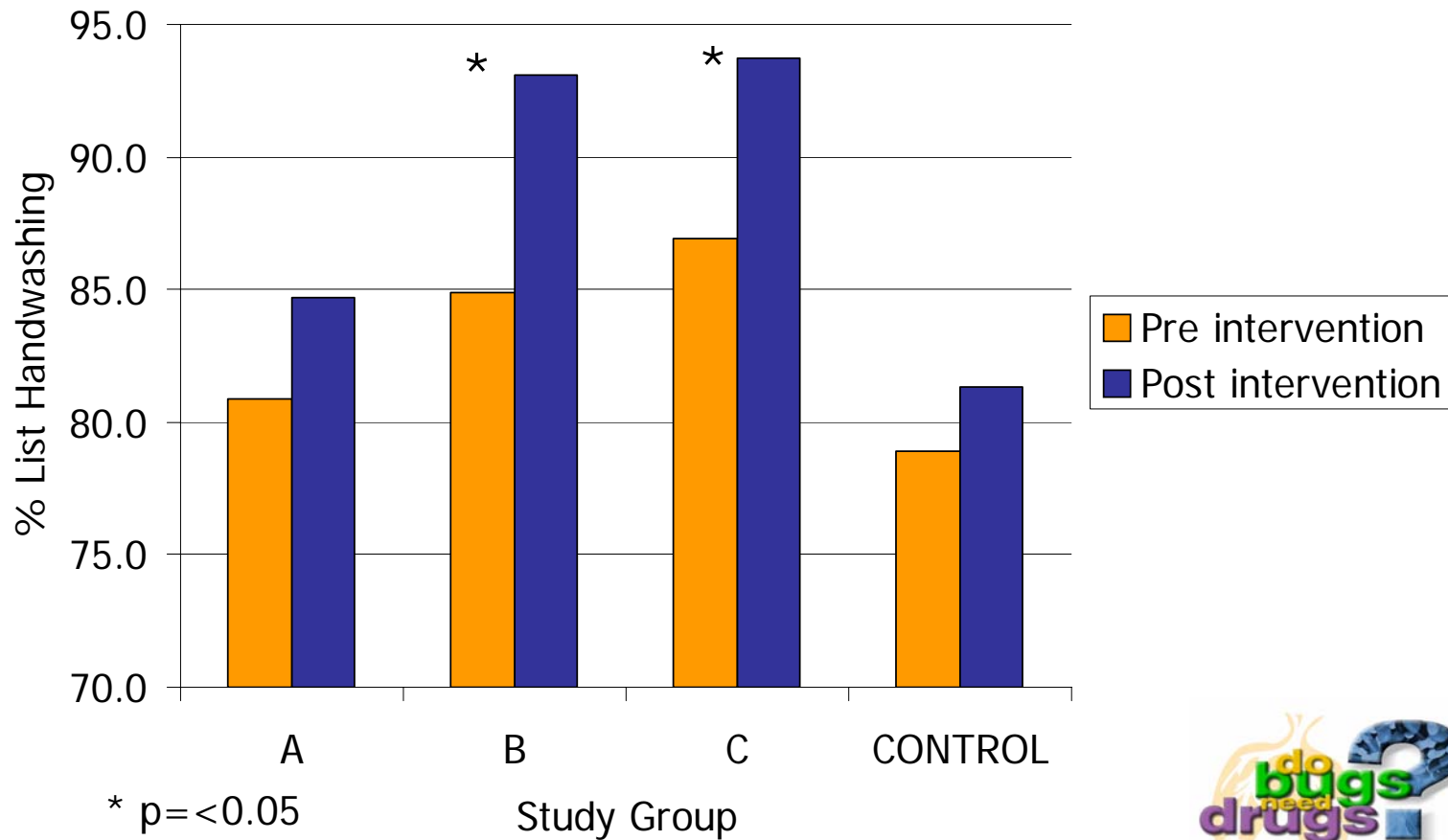


Results - Students

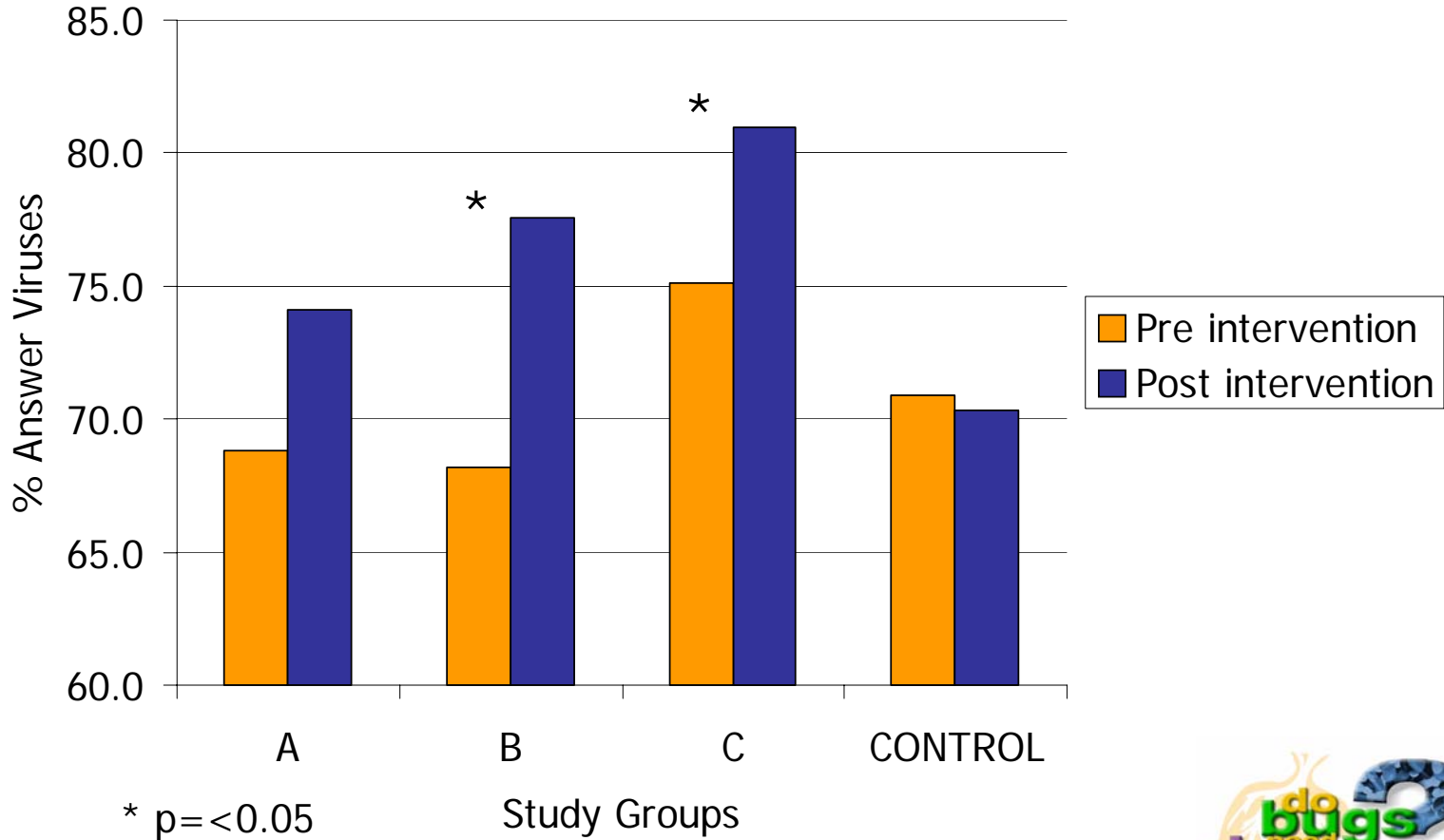
$P < 0.01$

- less likely to expect antibiotics for colds/flu (34.6% vs 9.9%)
- more likely to know that colds caused by viruses (79.3% vs 90.1%)
- more likely to recognize that antibiotics do not help the flu (82.4% vs 93.1%)
- less likely to use antibacterial soap (45% vs 25.2%)

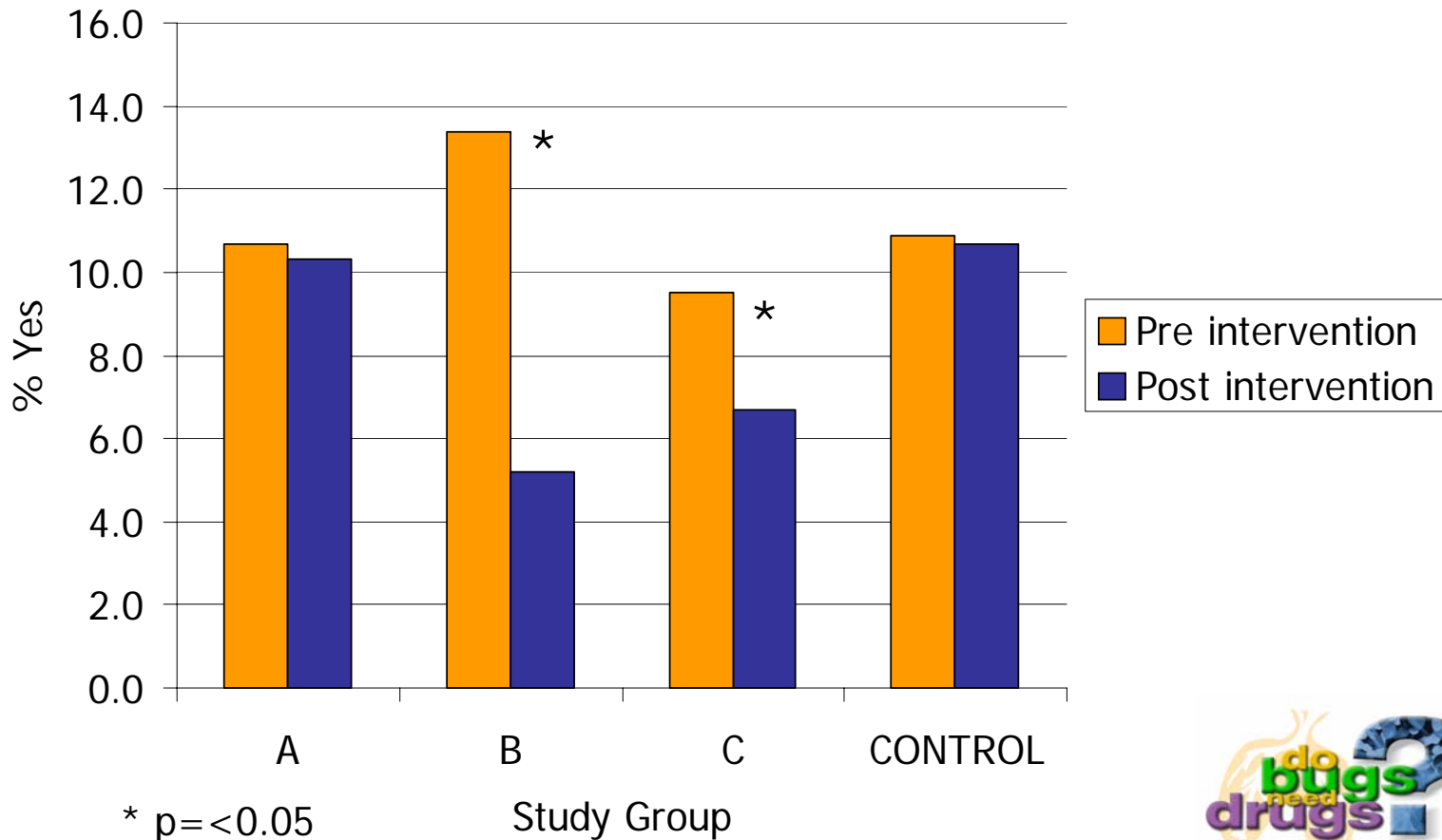
If you had the flu, what are two things that you could do to prevent the spread of infection from yourself to another person? One example would be to cover your nose and mouth when you sneeze.



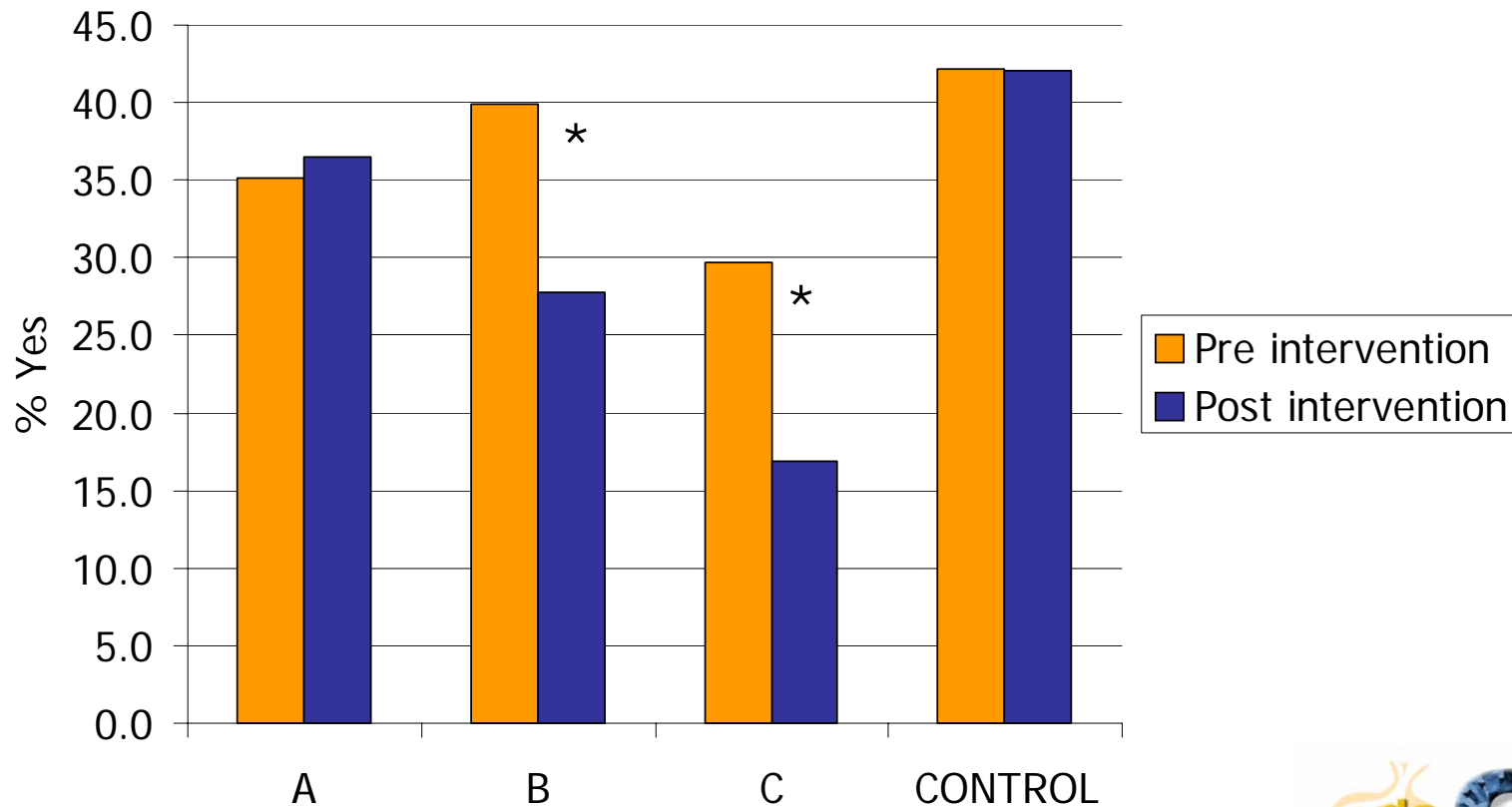
Are colds caused by bacteria or viruses?



If you had a cold, would an antibiotic help you get better?



As far as you know, do you use an antibacterial soap at home?



* $p = < 0.05$

Study Groups



Future Plans



Physicians/ Health Care Professionals

- ↓ Continue CME
- ↓ Sustainability studies

Public

- ↓ Continue media campaign
- ↓ Multicultural approach

Children

- ↓ Develop accreditation recommendations in daycares
- ↓ Continue school program given by post secondary health students



3 Key Messages

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Use Antibiotics Wisely



Acknowledgements

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