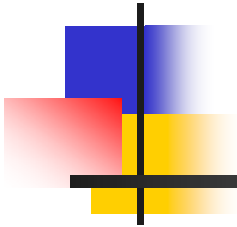


Judicious Use of Antibiotics



Office of Clinical Affairs, Division of Medical
Assistance

MassHealth Access Program, University of
Massachusetts Medical School





Judicious Use of Antibiotics Project

A Pilot Project
Utilizing the DMA/MAP Clinical
Education Template



Project Focus: Reduction of Antibiotic Use for Upper Respiratory Illnesses

- Population: MassHealth members ages six months to six years of age who have been diagnosed with:
 - Bronchitis
 - Sinusitis
 - Cough
 - Pharyngitis
 - Acute Otitis Media



Project Definition

- 1999 - 2000; Problem Definition
 - DMA Data suggests a high antibiotic use among children ages 6 months to 6 years.
 - Overuse of antibiotics is a public health concern increasing risk for antibiotic resistance.



Problem/Opportunity

- Factors that Contribute to Inappropriate Antibiotic Use:
 - Prescribing practices of providers. The use of antibiotics for viral infections, use of broad spectrum antibiotics and prescribing without a lab or office visit.
 - Parents request for unneeded antibiotics.
 - Patients who do not finish prescriptions.
 - Concerns of daycare providers.



Develop Project Resources

- October 2000; Completion of Guideline - Recommendations:
 - *Judicious Antibiotic Use: An Approach to Upper Respiratory Illness in Children.*
 - A collaboration between the Division of Medical Assistance, REACH Mass, and the Antibiotic Recommendation Work Group.



Develop Project Resources

- 2000: Development of Provider/Member Education Strategies and Materials
 - December 2000: Provider Toolkit Completed: Judicious Use of Antibiotics;
 - December 2000/January 2001: Educational Materials were Completed and Distributed to Clinical Sites.

November 2000: Focus Groups



- Focus Groups among parents were conducted in Spanish and English to:
 - Determine Parents' perceptions of antibiotic use and treatment of upper respiratory infections.

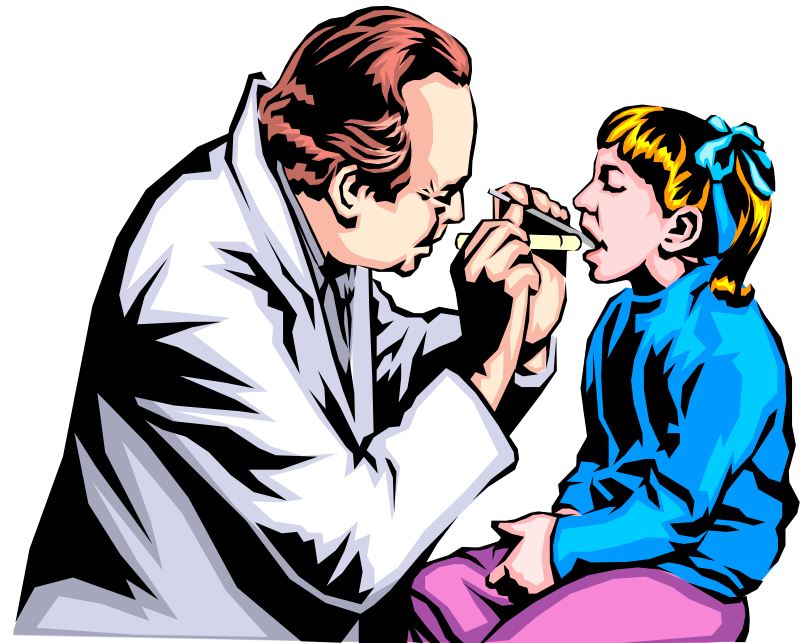


Parent Focus Groups: Perceptions Regarding Antibiotic Use

- When I asked you the question what do you prefer [regarding treatment], most of you said antibiotics... Why?
 - “Because that [antibiotics] makes them feel better, it works against the pain. I only treat mine for three days, because otherwise I think that the antibiotics make him vomit and after three days when I see that he is better I stop giving the antibiotics.”

Provider Focus Groups

- Focus Groups were conducted among providers to obtain their perceptions of parental concerns regarding antibiotic use and educational materials for parents.





Provider's Perception of Broad Spectrum Antibiotics and Parental Education.

- "I see a couple of different issues. The first and foremost is certainly physician education and I think there is the natural reflex sometimes to go with something broad, just to kill everything you can."
- "There's also misinformation for families...you have to spend another 10 - 15 minutes trying to educate them as to why you don't think that's [antibiotics] are helpful. That's why I think some of these handouts [antibiotic parental educational materials] could be helpful."



Recruitment of Medical Practices

2000: Selection of Three Primary Care Practices:

- Hunt Family Practice Center, Danvers, MA
- Pediatric Health Center at Holy Family Hospital, Methuen, MA
- Holyoke Pediatric Associates
Holyoke and South Hadley, MA



Clinical Improvement Planning: Provider Training

- December 2000 - January 2001
 - Recommendation Training Provided to each Clinical Site Team by Clinical Experts in the field of Pediatrics:
 - Edward O'Rourke, MD, Division of Infectious Diseases, Children's Hospital, Boston
 - Timothy Ferris, MD, MPH, Partners, MGH Institute for Health Policy, MGH Everett Family Care.

Bugs and Drugs:

Thoughts on the judicious use of oral antibiotics in pediatric upper respiratory tract infections

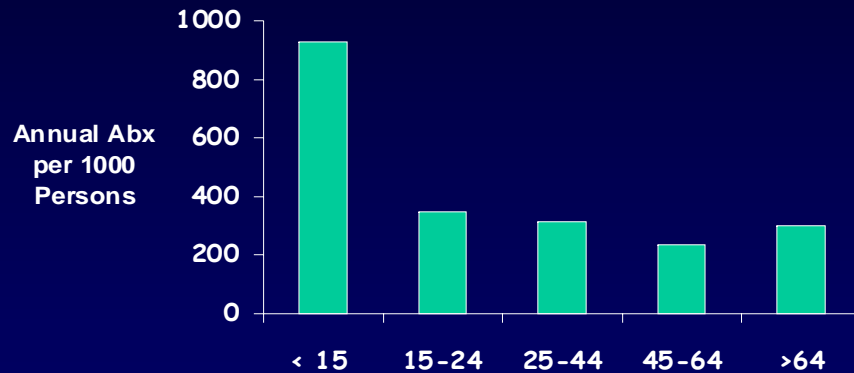
Edward O'Rourke, MD
Division of Infectious Diseases
Children's Hospital, Boston

Dr. O'Rourke's Presentation for Participating Clinical Practices

Objectives

- 1) Understand recent developments in the epidemiology of antibiotic resistant pneumococcus
- 2) Review current use and overuse of oral antibiotics in common respiratory tract infections
- 3) Review guidelines for judicious use of antibiotics

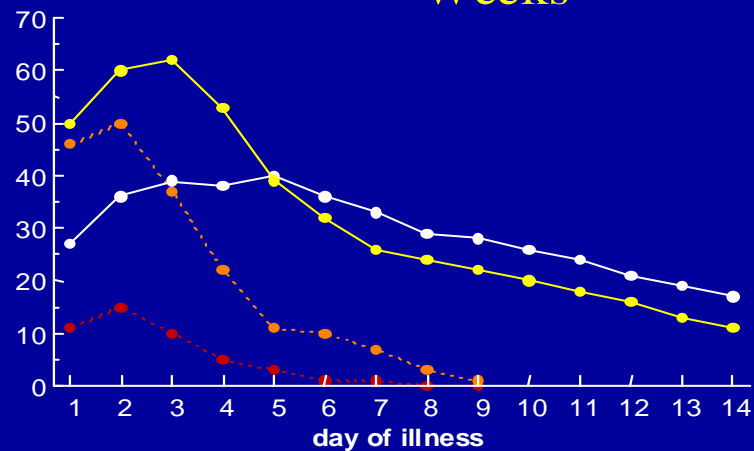
Antibiotic Prescriptions by Age (1992)



Dr. O'Rourke's Presentation for Participating Clinical Practices

Colds Sometimes Last More Than Two Weeks

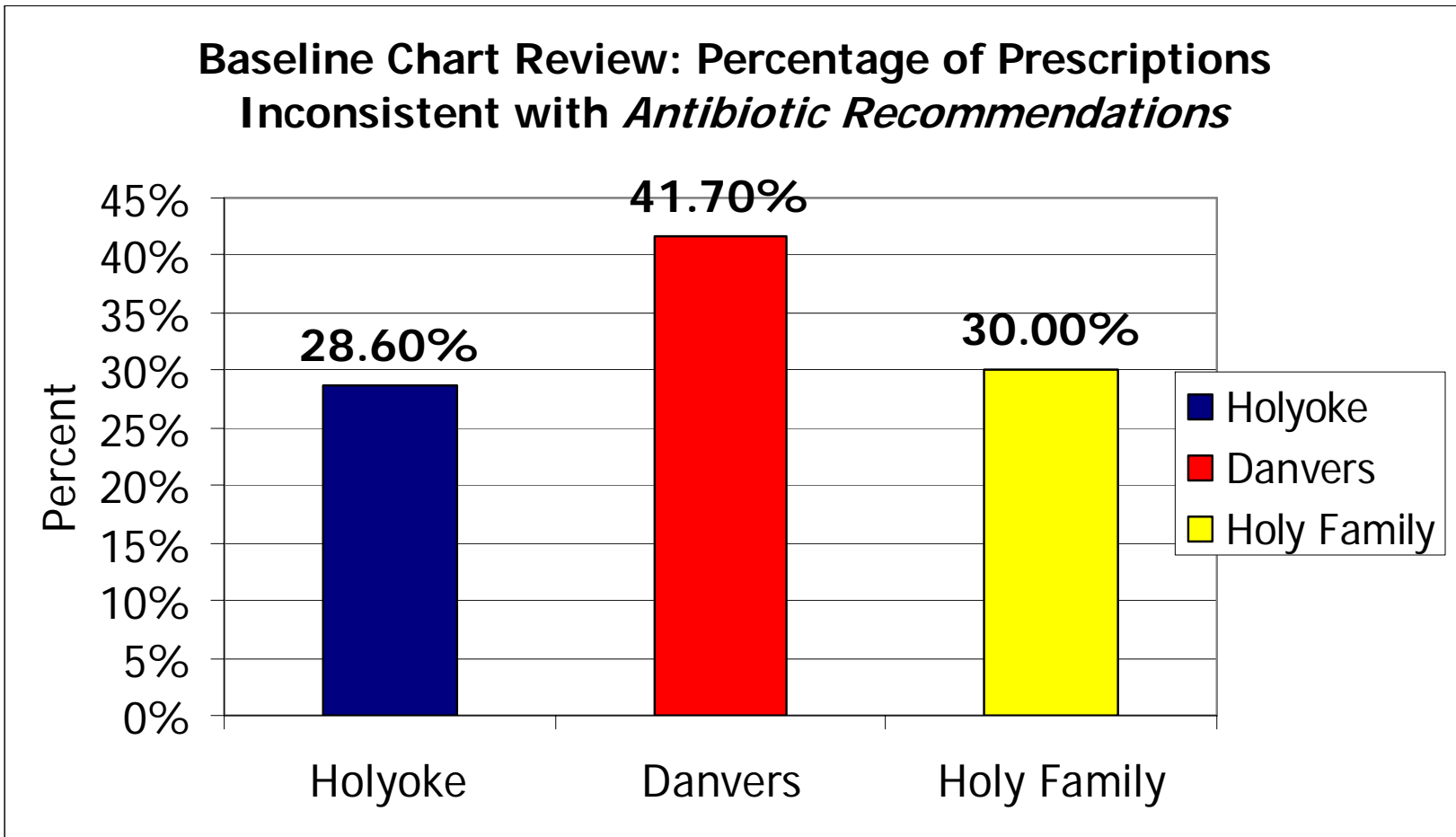
% of patients with symptom



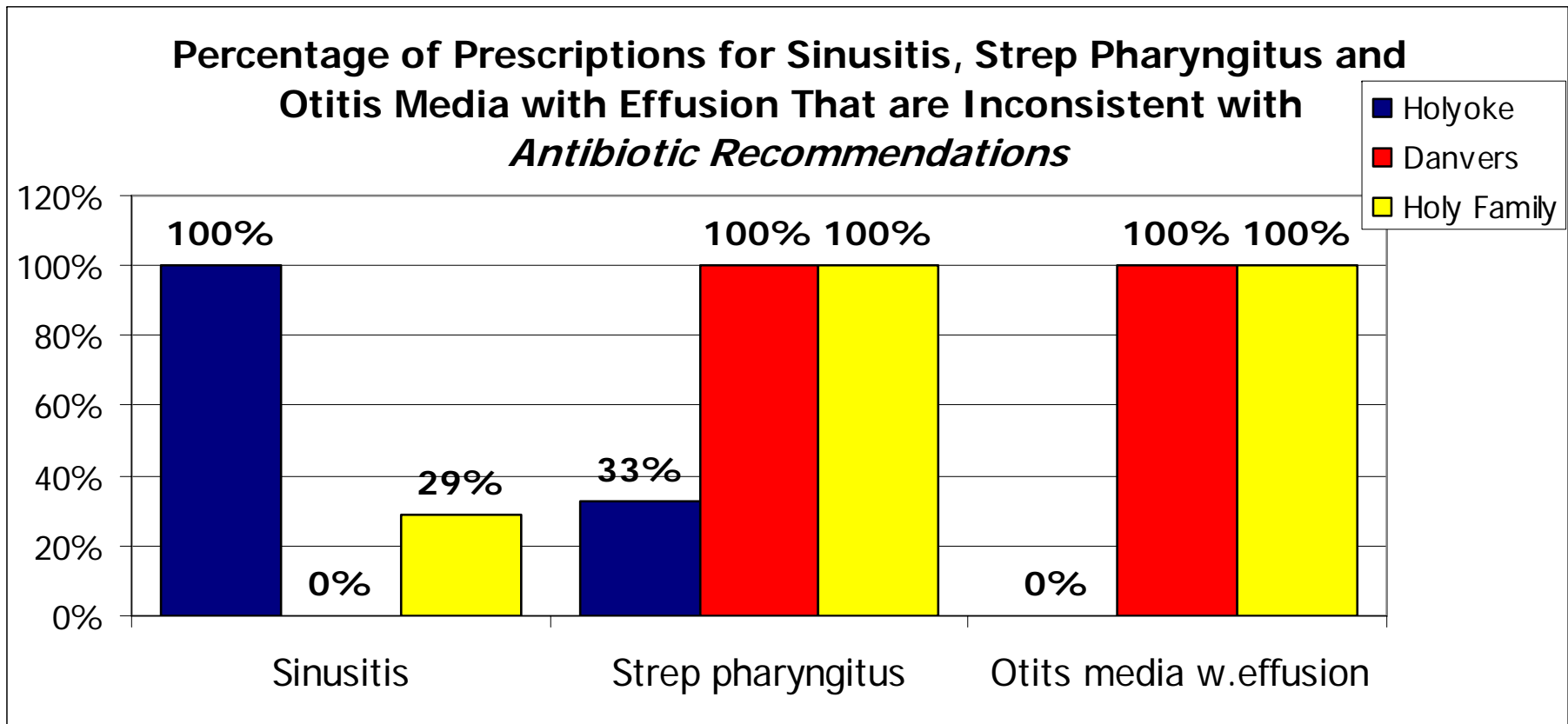
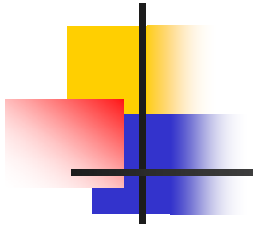
Gwaltney,
JAMA
1967;202:158

Remember, antibiotics can't help cure colds! Ask your doctor for ways to help your child feel better.

November 2000: Baseline Chart Review Results



November 2000: Baseline Chart Review Results





Clinical Improvement Planning: Developing QI Projects

- Identification of Improvement Areas;
- Plan Improvement Using Provider Toolkit and the Plan-Do-Check-Act Quality Improvement Model with Support from MAP Representative;
- Additional Training from Clinical Opinion Leader as Needed.

Clinical Site: Example of a Quality Improvement Project

Holyoke Pediatric Associates:

- Increase compliance with clinical recommendations by decreasing inconsistent prescriptions from 45% to 25% at post evaluation chart review.
 - Primary Focus: Sinusitis and Otitis Media;
 - Eliminate Bronchitis as a diagnosis;
 - No major change for pharyngitis and URI.

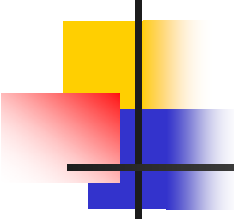


Clinical Site: Example of a Quality Improvement Project



Holyoke Pediatric Associates

- Utilize DMA educational materials to complement provider discussions with parent/caregiver of children with URI and during a well visit.
- Place posters in all exam rooms and waiting rooms.



Clinical Site: Example of a Quality Improvement Project

Practice Changes - Sinusitis

- Better documentation of history
- Use CDC/AAP Guidelines
- Treat after 14 days of symptoms
- Amoxicillin first line, 10 days
- Radiologic studies not helpful

Practice Changes - Otitis Media

- Better documentation of ear exam
- Treat otitis only when evidence of acute infection present
- Focus on pain management
- Amoxicillin first line, recommend high dose (80-100 mg/kg) and 5 days if over 2 years, use TID
- No ear check for uncomplicated



March 2001: Midcourse Chart Review

- Decrease from 45% to 8% of prescriptions inconsistent with Antibiotic Recommendations
 - (Small total number of charts reviewed)

Holyoke Pediatric Associates: Additional Data

Baycare Data January - June 2001

	HPA	Pediatric Group 1	Pediatric Group 2
Average Members	2,735	1,925	2,315
Antibiotic Cost Paid	\$8,855	\$17,125	\$15,922
Antibiotic Rx/1000	327	526	432



FY02 Project Extension

- Implementation: The addition of 2-3 meetings with MAP representative per site for technical assistance;
- Additional training for local ER physicians;
- Video of Opinion Leader Training;
- Modify chart review period to be consistent with pre-implementation review (12/1/2001 - 4/30/2002);
- Extend pharmacy claims review through 2002 and match review time for pre and post implementation.



Judicious Use of Antibiotics: Next Steps

- Complete Final Chart Review May, 2002
 - Following the Flu season, post implementation chart review will be conducted.
- Complete Project Evaluation
 - A DMA team will complete process and outcome evaluation of the Project.
- Rollout Considerations:
 - The most effective methodology (strategies and materials) should be provided to the DMA health plans at the conclusion of the pilot project evaluation.