



Michigan Provides Education and Tools on Appropriate Antibiotic Use

Background



The Michigan Antibiotic Resistance Reduction (MARR) Coalition was founded in 1997 with a generous grant from the General Motors Corporation (GM). Together with the Michigan State Medical Society, GM convened a group of

healthcare professionals from across the state to learn about antibiotic research and the threat of antibiotic resistance. Following the meeting, these healthcare leaders formed the MARR Coalition, a multi-stakeholder group dedicated to promoting appropriate antibiotic use by healthcare professionals and consumers to preserve the antibiotic lifeline.

What Was Done



Since 1997, the MARR Coalition has developed and implemented a number of educational interventions that are available on the MARR Coalition website including but not limited to:

- **Antibiotics and You:** an elementary student and community education program for presentation. This program has also been presented by pharmacy students as part of their experiential training programs.
- **Antibiotics in the Treatment of Upper Respiratory Tract Infections:** a continuing education program for healthcare providers.
- **Viruses and Bacteria, Antibiotic Development, and Antibiotic Resistance:** a high school biology and health curriculum that has also been used to train medical professionals throughout the world.
- **Videos:** An in-flight media project where video spots were shown on Jet Blue, American Airlines and U.S. Airways flights in conjunction with “Get Smart Week.” The video spots have also been used as public service announcements (PSAs) by four mid-Michigan television stations during “Get Smart Week,” and, in a variety of venues including the MARR homepage.
- **Long Term Care Toolkit:** a guide for implementing CDC’s 12 Steps to Prevent Antimicrobial Resistance among Long-Term Care Residents, part of the Campaign to Prevent Antimicrobial Resistance in Healthcare Settings. The toolkit was distributed to all long-term care facilities in Michigan in 2006, and, MARR has provided annual live training for directors of nursing for the past eight years. The toolkit is currently under revision to incorporate recent updates and to add guidelines for establishing antibiotic stewardship programs in long-term care facilities.
- **A booklet** developed in collaboration with a major southeastern Michigan healthcare system, which includes guidance on using regional antibiogram data in concert with clinical practice guidelines to support use of targeted antibiotic therapy in the treatment of common outpatient infections. The project included mandatory patient counseling on appropriate antibiotic use and provision of a CDC antibiotic adherence flyer to patients filling oral antibiotic prescriptions at the outpatient pharmacies affiliated with the health system.

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Centers for Disease
Control and Prevention
National Center for Emerging and
Zoonotic Infectious Diseases





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How It Was Accomplished



The above educational materials were developed in collaboration with many partners, stakeholders, and professional organizations including but not limited to CDC, Michigan State Medical Society, Oregon Alliance Working for Antibiotic Resistance

Education, Michigan Infectious Disease Society, Michigan Society of Infection Prevention and Control, and Wayne State University. Together, these partners and stakeholders develop content, conduct reviews with subject matter experts, present the programs at multiple venues, and post resources to the MARR Coalition website. Continuous feedback is sought through focus groups and surveys.

Impact



Educational resources developed and promoted by the MARR Coalition have had a wide reach. The two educational programs for students have not only been used in countless classrooms across Michigan, but have also been used in

at least 30 additional states and several other countries. Both educational programs have also been adapted for training entry-level medical professionals. Change in knowledge is measured by pre/post test scores which consistently illustrate an increase in knowledge. In the past year, the in-flight media project has had over 3 million passenger views. Over 51,000 patients having oral antibiotic prescriptions filled at one of the 28 outpatient pharmacies received the CDC Antibiotic Prescription Adherence flyer in conjunction with mandatory counseling on appropriate antibiotic use.

