Discussion of a Successful Complex Collaboration

Example of a CME Initiative Focused on Overcoming Barriers to Vaccine Use in the Pediatric Population

S63, Breakout
1:30 - 2:30 pm, Saturday
Pinnacle Peak 3/2
Mila Kostic
Director of Continuing Medical Education
University of Pennsylvania School of Medicine
Philadelphia, PA

Nike Gazonas, MS
CME Director
SCIOS Continuing Education
Newtown, PA
Disclosures

- Mila and Nike have no relevant relationships with commercial interests to disclose.
- Mila and Nike represent joint sponsors and primary collaborators in this educational initiative.
- The initiative was supported through an educational grant provided by Wyeth Pharmaceuticals.
Educational Objectives

At the conclusion of this session you should be able to:

- Review the benefits of and necessity for a collaborative approach to CME in today’s environment
- Competently assess your organization’s strengths to seek partners that can complement your educational mission
- Prepare to effectively manage collaborative projects by keeping the educational goals in sight
- Apply shared experiences and networking opportunities to advance your CME programs
Question For the Audience

What type of organization do you represent?

- Academic
- MECC
- Medical association or society
- Hospital or health system
- Government
- Commercial supporter
- Technology group
- Outcomes provider
- Publisher
- Other __________________
Question For the Audience

Has your organization collaborated with other providers in developing CME activities or initiatives, beyond typical joint sponsorship?

- Yes
- No
What types of organizations has your company collaborated with to develop CME initiatives?

- CME accreditation providers
- Medical associations
- Recruitment providers
- Technology groups
- Publishers
- Outcomes study providers
- Other
A Boost Up
Optimizing Childhood Immunizations

A Medical Detectives™ Case Presentation
Program Overview: Development Process

1. Assessing educational need & identifying target audience
2. Setting program goals & objectives
3. Securing resources & collaborators
   - Professional accreditation
   - Faculty/reviewers
   - Validation of educational need with target audience
   - Educational design
   - Program management
   - Recruitment and raising program awareness
   - Assessment of outcomes
Program Overview: Development Process

4. Development of content
5. Production of program/online patient cases
6. Launch of online program
7. Assessment of outcomes
8. Reassessing educational needs
Program Overview: Educational Design, Goals & Objectives

Goals & objectives
- Recognize barriers to effective pediatric immunization in the primary care and family practice settings
- Implement successful strategies for improving immunization rates in their practice
- Close treatment gaps specific to existing disparities in immunization rates across a variety of clinical settings

Educational design
- Refine the need
- Interactive, web-based, multimedia format
- Patient-case based (total of 3 case studies)
- Teaching tools and practice-related resources provided
Program Overview: Collaborative Model

Continuous Quality Improvement

Future Needs Identification
- Grantor
- U of Penn
- SCIOS CE
- Faculty
- CE City
- Target Audience

Ongoing Outcomes Assessments
- Differential results
  - Case 1 vs Case 2
  - Cases 1 + 2

Needs Identification

Ed. Design & Content Development
- Faculty
- U of Penn
- SCIOS CE
- Video/IT Provider

Develop and Release Case 1

Develop & Release Cases 2 + 3
- Repeat Recruitment Steps
  - U of Penn
  - CE City
  - MedPage Today
  - SCIOS CE:
    - E-mail Blast
    - Print (Direct Mail + Sales Rep Distribution)
    - State Health Departments

Outcomes Assessment Case 1
- U of Penn
- SCIOS CE
- Outcomes Inc.
- Target Audience: Participants, Control Group

Program Recruitment
- U of Penn
- MedPage Today
- CE City (CE Medicus)
- SCIOS CE: E-mail Blast, Print (Direct Mail + Sales Rep Distribution), State Health Departments
Program Overview: Main Collaborators

- State Public Health Depts.
- Outcomes Inc.
- CE City
- MedPage Today
- NAPNAP
- AAP
- AAFP

U Penn SOM CME & SCIOS CE
A Focus on Collaboration: Needs Assessment

- Faculty Survey Content
- Charitable Organizations Survey Incentives
- Commercial Supporter
- CE City Online Survey & Data Collection
- NAPNAP Member Respondents
- AAP Member Respondents
- U Penn SOM CME & SCIOS CE
- AAFP Member Respondents
Needs Assessment

- Great public health need for improvements in vaccination rates in pediatric population was assessed and validated
- Needs assessment sources
  - Commercial Supporter RFP
  - Literature search and epidemiological data
  - Faculty/thought leader feedback
  - Target audience online survey
Needs Assessment:
Target Audience Survey

- Survey background
  - Survey drafted with faculty: April-May 2006
  - Online survey launch: May 22, 2006
  - Online survey closing: June 15, 2006
  - Total respondents: 156

- Completion incentives
  - No honorarium offered to respondents
  - Respondents completing the survey were eligible to win a donation to a charity of their choice (n=20)
    - Centers for Disease Control Foundation (15%)
    - National Foundation for Infectious Diseases (10%)
    - Children’s Health Fund (75%)
Needs Assessment:
Target Audience Survey Summary

- Demographic and practice setting
- Self-reported needs
- Assessment of barriers
- Knowledge assessment
- Format and topic preferences
### Needs Assessment: Summary

<table>
<thead>
<tr>
<th>Need/Gap/Barrier</th>
<th>Literature Search</th>
<th>Faculty/Experts</th>
<th>Target Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racial/ethnic and socioeconomic disparities</td>
<td>✔ ✔ ✔</td>
<td></td>
<td>✔ ✔ ✔</td>
</tr>
<tr>
<td>Provider-type differences</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
<td></td>
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<tr>
<td>Up-to-date immunizations/ACIP schedule</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
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<tr>
<td>Incomplete vaccination records</td>
<td>✔ ✔ ✔</td>
<td></td>
<td>✔ ✔ ✔</td>
</tr>
<tr>
<td>Parental concerns about vaccine safety</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
</tr>
<tr>
<td>Reimbursement</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔</td>
<td>✔ ✔ ✔</td>
</tr>
<tr>
<td>Practice-based barriers</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
</tr>
<tr>
<td>New vaccines</td>
<td>✔ ✔ ✔</td>
<td></td>
<td>✔ ✔ ✔</td>
</tr>
</tbody>
</table>
A Focus on Collaboration: Content Development

Creative Team

Faculty

U Penn SOM CME & SCIOS CE
## Content Development: Needs-Focused

<table>
<thead>
<tr>
<th>Need/Gap/Barrier</th>
<th>Literature Search</th>
<th>Faculty/Experts</th>
<th>Target Audience</th>
<th>Case Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racial/ethnic &amp; socio-economic disparities</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Provider-type differences</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>1, 2, 3</td>
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<tr>
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<td>✔</td>
<td>✔</td>
<td>1, 2, 3</td>
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<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>2, 3</td>
</tr>
<tr>
<td>Parental concerns of vaccine safety</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>1, 2</td>
</tr>
<tr>
<td>Reimbursement</td>
<td>-</td>
<td>✔</td>
<td>✔</td>
<td>2, 3</td>
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</tr>
<tr>
<td>New vaccines</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>1, 3</td>
</tr>
</tbody>
</table>
Content Development: Three, Interactive, Online Patient Case Studies
Content Development: Online Functionality

- URL registration
- Links to www.PedsVaccinesCME.com
- Participant registration via U of Penn website
- Online programming (video, polling questions, knowledge questions, clue dossier/clue viewing)
- Posttest via U of Penn website based on provider type
- Certification based on provider type
- Colleague referral capability
Online Functionality: Faculty Commentary Video Clips

Recommendations for Tdap Vaccine

- 11- to 12-year-olds who have not had the Td booster
- 13- to 18-year-olds who have not received the 11- to 12-year Td/Tdap booster
- An interval of at least 5 years is recommended in those who have already received Td, although shorter intervals can be used
- Adults 19 to 64 years should receive a single dose of Tdap instead of their next dose of Td
- Adults who have close contact with infants < 12 months of age

Online Functionality: Patient/Parent/Provider Video Clips
Online Functionality:
Polling Questions with Immediate Tallies & Correct Answers

Polling Question:
What percentage of 8th graders in the United States have had sexual intercourse?
- A. 14%
- B. 24%
- C. 34%

You are correct if you chose C (34%).
According to a CDC study, in 2006, 34% of 8th graders reported having sexual intercourse.
Online Functionality: Informational Slides

Source of Pertussis in Infants <1 Year Old (%)

- Mother: 20
- Father: 15
- Sibling: 32
- Grandparent: 8
- Neighbor, friend, or other day-care contact: 25

Online Functionality:
Clue Collection & Online Dossier
References

Case 3: Case of the Unprotected Athlete


Online Functionality: Web Resource Links

- 2006 Childhood & Adolescent Immunization Schedule, including Catch-Up Schedules
- Current vaccine information statements (VISs)
- Disease state information
- Contraindications
- Educational handouts
- Vaccination storage & handling information
- Electronic medical records information
- CDC, CHOP, ACIP, and other websites
Online Functionality: Web Resource Links

Web Resources

- American Academy of Family Physicians
  http://www.aafp.org
- American Academy of Pediatrics
  http://www.aap.org
- Centers for Disease Control and Prevention
  http://www.cdc.gov
- Immunization Action Coalition
  http://www.immunize.org
- National Institutes of Health
  http://www.nih.gov
- National Network for Immunization Information
  http://www.immunizationinfo.org
- Vaccine Education Center at the Children’s Hospital of Philadelphia
  http://www.vaccine.cchp.edu

Download Extended PDF version.
A Focus on Collaboration: Awareness Strategy

- CE City Network Posting
- NAPNAP Website Link
- MedPage Today Website Link
- www.PedsVaccinesCME.com & U Penn CME Online
- Mail Invite Target Audience
- Rep Invite Target Audience
- Email Blast Target Audience
- Email Blast State Health Depts
Awareness Strategy:
U Penn SOM CME Website

Online CME

A Boost Up: Optimizing Childhood Immunizations: The Case of the Right Start

A Boost Up: Optimizing Childhood Immunizations: The Case of the Right Start

Faculty: Jay M. Lieberman, MD, Sharon G. Humiston, MD, MPH, FAAP, S. Michael Marx, MD, and Carol L. Honda, MS, ARNP, BC
Credit: Up to 1.0 AMA PRA Category 1™
Fee: No charge
Original Release Date: 07/10/2006
Expiration Date: 07/10/2007
Last Review Date: 07/14/2006
Educational Format: Multimedia Interactive Case Study utilizing Flash

Program Description:
This Medical Detective™ CME-certified, interactive, online case-based learning opportunity is designed to improve childhood immunization rates. Developed for the primary care practice setting, this patient case was created to be interactive and engaging, as well as to provide tools and resources for clinicians who treat pediatric patients. The ultimate goal of this program is to optimize childhood immunizations.

Registration Instructions:
1. If you have not already done so, you must sign up for an account
2. Register for the activity by clicking on the "Register" button located in the box at right
3. Click "BEGIN THE ACTIVITY"
4. Click "Take Test at the end of the activity"
5. Complete post-test and evaluation
6. View and print CME certificate
Awareness Strategy: CECity Network

- Posting of activities announced via press release on the Mediwire Network which currently totals 120 web sites targeting healthcare professionals (n=450,000)
- 3 case study activities distributed through CECity’s Centricity network
- Ongoing marketing via e-newsletters to the members of each portal throughout the length of the accreditation period
- Portals include CE Medicus, CAFP, CPD Gateway, Med Ed Today, AOA, etc.
  - Estimated that activities will appear in 10-12 e-newsletters in the Centricity network
Activities featured on a variety of CE Medicus specialty sections, including
- “Featured CME”
- “Waiting Room”
- “America’s Best”
Awareness Strategy: MedPage Today Website

- Links from MedPage Today’s CME Spotlight
  - MedPage Today home page (1 week/case)
  - Daily e-mail announcements (1 week/case)
  - Pediatric (1 year)
  - Primary care (1 year)
  - Family practice (1 year)
  - Public health (1 year)
Awareness Strategy: NAPNAP Website

- Link from NAPNAP website
Awareness Strategy: Print Invite

- Ongoing distribution of print invite:
  - Medical conference participants, including FP and pediatrics-related conferences
  - State public health departments
  - Commercial Supporter sales reps (supplemental)
### Awareness Strategy: Email Blast

- **Sequential e-mail blasts to:**
  - Different provider types (n=30,000)

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>Family Practice</th>
<th>Pediatrics</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician</td>
<td>13,186</td>
<td>5,678</td>
<td>18,864</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>3,589</td>
<td>2,777</td>
<td>6,366</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>3,567</td>
<td>1,290</td>
<td>4,857</td>
</tr>
</tbody>
</table>

- State public health departments
- Referred colleagues
- Earlier participants (Case 1, etc.)
State health departments were contacted to request their assistance in disseminating availability of the program to their immunization contacts.

- 37 states were ultimately contacted via email or phone.
- 28% of states contacted did not respond to our request.
- 15% of states contacted requested print invites to mail to their immunization contacts.
- 49% of states requested an email blast invite to email to their immunization contacts.
A Focus on Collaboration: Outcomes Assessment

Outcomes Inc.
Faculty
U Penn SOM CME & SCIOS CE
Activity Participants
Non-Participants Control Group
### Outcomes Assessment: Outcomes Levels

<table>
<thead>
<tr>
<th>Outcomes Level</th>
<th>What was measured?</th>
<th>How was it measured?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Participation numbers</td>
<td>U of Penn registration</td>
</tr>
<tr>
<td>2</td>
<td>Participant satisfaction with the activity</td>
<td>U of Penn standard evaluation</td>
</tr>
<tr>
<td>3</td>
<td>Increases in knowledge</td>
<td>Knowledge questions within case study modules</td>
</tr>
<tr>
<td>4</td>
<td>Improvements in clinical practice</td>
<td>Outcomes, Inc.</td>
</tr>
<tr>
<td>5</td>
<td>Improvements in patient health</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Improvements in population health¹</td>
<td></td>
</tr>
</tbody>
</table>

Outcomes Assessment: Current Reach Based on Registrations and Issued Certificates

Case 1 – 6 month data (released 7/18/06)
  – 873 registrants (296 Physicians, 577 NPs, PAs, RNs, and others)
  – 316 credits issued 117 Physicians, 199 NPs, PAs, RNs, and others)

Case 2 – 2 month data (released 10/13/06)
  – 134 registrants (33 Physicians, 101 NPs, RNs, and others)
  – 52 credits issued (16 Physicians, 36 NPs, RNs, and others)

Case 3 (released 12/01/06)
Outcomes Assessment: Current Reach

Activity Report – December, 2006
Performance of Child Immunization links on MedPage Today

- In December, 967 healthcare professionals
- Year to date total is 2,440

* Childhood Immunization Series consists of three activities: Optimizing Childhood Immunizations: Case #1, Case #2, and Case #3 Interactive Patient Case Studies
Outcomes Assessment: Outcomes, Inc.

- Will conduct a total of two evaluations of the effectiveness of this series of cases addressing the latest, evidence-based advances in pediatric immunization
- Use of case vignettes\(^2\), \(^3\) as assessment tools
  - The 1st measured effectiveness of Case #1
  - The 2\(^{nd}\) will measure effectiveness of Case #3 and some differential analysis


Outcomes Assessment:
Outcomes, Inc.

- Outcomes, Inc. to provide an objective set of metrics with 2 survey instruments containing up to 4 case vignettes tailored to the key educational objectives of each case study

- These survey instruments will also include:
  - Barrier analysis questions
  - Attitudinal questions
  - Demographic questions
Outcomes Assessment: Case 1 Overview

- Is there a difference in vaccine administration between participant and non-participant groups?
- Does adherence to clinical practice guidelines and clinical evidence differ between participant and non-participant groups?
- Were there differences in perceived barriers to optimal pediatric vaccination between participant and non-participant groups?
- Was there a difference in the confidence in administering vaccines between participant and non-participant groups?
Outcomes Assessment: Case 1 Participant Demographics

- 176 activity participants and 156 “control group” non-participants were assessed
- Average medical practice duration of participants was 13 years
- Average patient load of participants was 105 patients/week
- Average patient load involving vaccine administration of participants was 32%
- 60% of participants were in private practice
- 58% of participants were in the suburban setting
Participants were more likely than non-participants to realize that there is no scientific evidence to support the claim that thimerosal causes autism (96% vs 85%).
Outcomes Assessment: Case 1 Key Findings (2)

Participants were more likely than non-participants to be aware that the temperature of the vaccine storage refrigerator should be checked twice a day (76% vs 38%; p=.001).
Outcomes Assessment: Case 1 Key Findings (3)

Participants were more likely than non-participants to understand that the Vaccine Information Statement must be provided to a child’s parents before vaccinating the child (47% vs 39%).

Which must be done before vaccinating a toddler?

- Obtain verification of any prior immunizations: Participants 39% vs Non-participants 31%
- Provide a Vaccine Information Statement to the mother for each vaccine: Participants 47% vs Non-participants 39%
- Screen for a family history of allergic reaction to vaccines: Participants 2% vs Non-participants 0%
- Conduct a brief physical exam: Participants 13% vs Non-participants 30%
Outcomes Assessment: Case 1 Key Findings (4)

Participants were more likely than non-participants to recommend that parents of young infants obtain a Tdap booster vaccine to protect their child’s health (51% vs 43%).

<table>
<thead>
<tr>
<th>Vaccine Type</th>
<th>Participants</th>
<th>Non-participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis A</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>MMR</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Tdap</td>
<td>51%</td>
<td></td>
</tr>
<tr>
<td>Pneumococcal conjugate</td>
<td>27%</td>
<td>43%</td>
</tr>
</tbody>
</table>
Further findings substantiate that the knowledge of the participants and non-participants in specific areas was already adequate:

- Awareness of the appropriate vaccine schedule for rotavirus oral vaccine (89% vs 88%)
- Recommended appropriate vaccines for an infant’s 2-month visit (71% vs 69%)
- Recognized that giving multiple vaccines at one time to a healthy child has essentially the same safety and efficacy as giving vaccines separately (93% vs 92%)
- Selected the greatest barrier to optimal vaccine delivery to be parent’s fear of adverse effects of vaccines in their children (40% vs 44%)
Outcomes Assessment:
Case 1 Educational Effectiveness

- Participants rated the program as being clinically relevant to their work at 8.38 (on a scale of 1-10)

- More than 4,018 pediatric patients receiving pediatric vaccines from healthcare professionals who participated in A Boost Up: Optimizing Childhood Immunizations Case 1: The Case of the Right Start are 30% more likely to receive evidence-based care than similar patients seen by healthcare providers who did not participate. (Level 5?)
Outcomes Assessment:  
Case 1 Educational Effectiveness (2)

- CME Quality of Education Index™ calculates the difference between the average scores of CME participants and non-participants. The difference between the two groups is reported in a standardized format as an effect size with a range of -3 through +3. A positive effect size represents participants scoring higher than non-participants.

- Effect size for this activity was calculated using the targeted audience of primary care physicians. The average score for the physician participants of the A Boost Up: Optimizing Childhood Immunizations Case 1: The Case of the Right Start was 75%, the average non-participant score was 65%, and the average difference between scores was 10%. This average difference between the two groups of physicians equals an effect size of .46.
Outcomes Assessment: Continuous Performance Improvement

- Future education should focus on:
  - Advising parents that receiving a Tdap vaccine will help protect their infant’s health
  - Educating physicians to provide Vaccine Information Statements to parents before vaccinating a child, as required by the National Childhood Vaccine Injury Act.

- Participants rated their likelihood to participate in future web-based, interactive case studies on pediatric vaccines at 8.59 (on a scale of 1-10, with 10 being very likely)
Challenges of Complex Collaborations

- Honest assessment of organizational strengths and weaknesses
- Selecting of partners – mission critical
- Complexity of project structure
- Keeping the communications open and flowing
- Honoring timelines
- Clear understanding of roles and responsibilities
- Prioritizing available resources
- Keeping the goals and objectives in mind at all times
- Keep the focus
- Securing resources for continuation of project
Question For the Audience

- Which of the following was the MOST important contributor to the success of this collaboration?
  - Combined capabilities of partners
  - Trust and open communication between partners
  - Clear cut delineation of responsibilities between partners
  - Clear focus on the educational objectives
  - Team camaraderie
Successful Collaboration: Combined Capabilities of Providers

- Outcomes Inc.
- U of Penn
- SCIOS CE
- AAFP
- CE City
- MedPage Today
- NAPNAP
- Trust
Successful Collaboration: Clear Cut Delineation of Responsibilities

University of Pennsylvania School of Medicine OCME

- Needs assessment
- Proposal development and grant submission,
- Final faculty selection
- Overall programmatic and budget management
- Management of major awareness campaigns
- Management of outcomes assessment provider
- CME certification
- Applications and certificate issuance with AAFP, AAP, and NAPNAP
- Web hosting
- Central utilization data repository
Successful Collaboration: Clear Cut Delineation of Responsibilities

SCIOS CE

- Needs assessment
- Proposal development
- Researching appropriate faculty
- Project management:
  - Needs survey project management
  - Faculty
  - Content development
  - Production
- Awareness campaigns
Successful Collaboration: Clear Cut Delineation of Responsibilities

CE City
- Online needs assessment hosting and administration,
- Activity links posting in the network
- Additional awareness campaign

MedPage Today
- Activity links posting in the network
- Additional awareness campaign

AAFP, AAP, NAPNAP
- Certification of activities for AAFP, pediatricians, and nurses
- Activity awareness

Outcomes Inc.
- Level 4 outcomes studies
Successful Collaboration: Clear Focus on Educational Objectives

- We always referred back to our goals and objectives
  - Recognize barriers to effective pediatric immunization in the primary care and family practice settings
  - Implement successful strategies for improving immunization rates in their practice
  - Close treatment gaps specific to existing disparities in immunization rates across a variety of clinical settings
Successful Collaboration: Trust and Open Communication Between Providers

Ability to trust your partners is critically Important!
Questions & Answers
Contacts:

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