What makes successful educational materials

*Insights from behavioral and social sciences*

Prepared by Christine E. Prue, Associate Director for Behavioral Science
Presented by Valerie Johnson, Health Communication Specialist
ME/CFS Partners meeting
August 30, 2018
Objectives

- Describe the communication science and behavioral science that underpin CDC’s approach to developing educational materials.
- Describe the steps that CDC communicators and educators take to ensure materials are effective.
- Introduce CDC’s Clear Communication Index – a science-based tool that you can use to develop more effective educational materials.
Key decisions educators and communicators make every day

- Who is my primary audience?
- Why do I need to educate/communicate with them?
- What do I want/need to tell them?
- What is the best manner to tell them?
- What is the best medium to tell them?
- How will I reach my primary audience?
- How will I get feedback?
Communication and behavioral science can help you navigate these decisions

- Stay focused on destination
- Prioritize audience needs
- Minimize detours or distractions
Commonly Used Communication Theories or Models

- McGuire’s Hierarchy of Communication Effects
- SMCR Model of Communication
- Consumer Information Processing
- Social Marketing Theory
- Uses and Gratification Theory
- Agenda Setting Theory

- Elaboration Likelihood Model
- Crisis and Emergency Risk Communication Model
- Network Theory (social networks)
- Extended Parallel Process Model (how attitudes are formed when fear appeals are used)
- Knowledge Gap Theory
Commonly Used **Health Behavior** Theories or Models

- Stages of Change (Trans-theoretical Model)
- Health Belief Model
- Theory of Planned Behavior/Theory of Reasoned Action
- Social Cognitive Theory/Social Learning Theory
- COM-B Model
- Social Marketing Theory
- Diffusion of Innovation
- Precaution Adoption Process Model
- Integrated Behavioral Model
- Common Sense Model (Illness Representation Model)
- Transactional Model of Stress and Coping
- Community Organization
- PRECEDE-PROCEED
- Social Ecological Model
- Behavioral Ecological Model
McGuire’s Hierarchy of Communication Effects

<table>
<thead>
<tr>
<th>Outputs:</th>
<th>Source</th>
<th>Message</th>
<th>Channel</th>
<th>Receiver</th>
<th>Destination</th>
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<tbody>
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<td>1. Exposure</td>
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<td>2. Attending</td>
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<td>3. Liking</td>
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<td>4. Comprehending</td>
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<td>5. Acquiring skills</td>
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<td>6. Yielding</td>
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<td>7. Remembering</td>
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<td>8. Seeking information</td>
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<td>9. Deciding</td>
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<td>10. Behaving</td>
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<td>11. Reinforcing</td>
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<td>12. Consolidating</td>
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McGuire’s Hierarchy used in CDC’s VERB campaign

1. Aware of VERB campaign; has prompted or unprompted recall of VERB’s generic message
2. Understands meaning of VERB’s message; able to explain VERB message as VERB campaign intended
3. Changes attitude to VERB and to becoming physically active
4. Changes in outcome expectations of what will happen if they “find their VERB”
5. Changes behavior: changes number of weekly physical activity sessions
Health Belief Model

- Perceived susceptibility.
- Perceived severity.
- Perceived benefits.
- Perceived barriers.
- Self-efficacy.
- Cues to action.
Health Belief Model used in rabies education

- **Perceived susceptibility.** I don’t think I’ll ever get infected with rabies.
- **Perceived severity.** If I am infected with rabies, I could die.
- **Perceived benefits.** If I wash the wound and get care right away, I can survive.
- **Perceived barriers.** It is easier to kill the dog than observe it for 14 days.
- **Self-efficacy.** I am confident I can protect myself from rabies if I’m bitten by a dog.
Health Belief Model: Cues to action
How CDC ensures that education and communication efforts are effective

https://www.cdc.gov/ccindex/
Steps CDC takes to ensure that education and communication efforts are effective

1. Select an audience
2. State a clear communication objective
3. Engage your audience
4. Design with the audience in mind
5. Pre-test your material and revise based on feedback
6. Produce, place, and promote them
Clear Communication Index covers Steps 1–4:

1. Select an audience
2. State a clear communication objective
3. Engage your audience
4. Design with the audience in mind

https://www.cdc.gov/ccindex/
How to get and keep your audience’s attention

- Have a **main message** that is prominent and portrayed graphically or visually
- Include specific **calls to action** or make behavioral recommendations
- Use **language and numbers** that your audience’s uses
- **Chunk and layer information** so your audience can easily find what they are looking for

https://www.cdc.gov/ccindex/

https://www.cdc.gov/me-cfs/pdfs/me-cfs-children-parents.pdf
New audience means
New main message and photo
New calls to action
New words
New audience means
New main message and photo
New calls to action
New words

Managing ME/CFS in Children and Adolescents
Fact Sheet for Healthcare Professionals

Myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) in adolescents and younger children can be challenging to diagnose and manage. Adolescents and younger children with ME/CFS can have a wide range of symptoms. Due to the varying severity and duration of symptoms, periodic reassessment of ME/CFS symptoms and illness course are imperative. This approach can monitor the variation of symptoms and also identify other new health problems should they occur.

Help Patients Reduce Symptoms Affecting their Quality of Life
The goal of managing ME/CFS in adolescents and younger children is to reduce symptoms that limit daily activity:

- Memory and concentration problems are two commonly reported symptoms of ME/CFS in this population. An adolescent or younger child with concentration problems often has a hard time in school and with after-school activities, such as sports or school clubs.
- Sleep problems can contribute to poor school performance or school attendance. Encourage parents to provide students with tools such as organizers and schedulers that may be helpful in managing the effects of the illness.
- Healthcare providers should use extra caution when prescribing medicines for children with ME/CFS. Patients with ME/CFS might be more likely to have adverse reactions to standard doses. Starting medications at the smallest possible doses and for the shortest possible time should be considered.

Understand How ME/CFS Affects a Student’s School Experience
ME/CFS can affect a student's school experience in several ways, such as attendance, participation inside and outside the classroom, completion of assignments, relationships with peers, and overall school success. Symptoms can fluctuate day to day and week to week, affecting a young person's ability to attend school regularly and perform consistently.

In extreme cases of the illness, children may be unable to leave the house because their symptoms are so severe. This could isolate them from their friends or peers, as they miss out on opportunities to socialize. For example, children with ME/CFS say they particularly miss eating lunch with friends and participating in after-school activities.

Adolescents and younger children with ME/CFS may experience problems with attention, response speed, information processing speed, and delayed recall of verbal and visual information. For instance, it may be challenging for adolescents to take notes and listen to their teacher at the same time.

https://www.cdc.gov/me-cfs/me-cfs-children/factsheet-healthcare-professional.html
5. Pre-test your material with your audience and revise based on feedback

This step can be done multiple times, if needed.

- Interviewing
- Observation
- Contextual Inquiry
- Walk-a-mile

“What people say and what people do and what they say they do are entirely different things.”

--Margaret Mead, Anthropologist
6. Produce, place, and promote your material

“If you build it, they will come!” only happens in the movies 😊

- Use audience insights to place your materials where your audience will most likely encounter it.
- Promote your material with the audience and with people or organizations whom your audience trusts and respects.
Recap: The steps that make education and communication effective

1. Select an audience
2. State a clear purpose
3. Engage your audience
4. Design with the audience in mind
5. Pre-test your material and revise based on feedback
6. Produce, place, and promote them
thank you
Christine E. Prue, MSPH, PhD
cprue@cdc.gov

Valerie Johnson, MPH, CHES
vjohnson@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.