Addressing Land Grant Universities Hesitancy: Getting to the Heart *(and mind)* of the Matter

EXCITE
Extension Collaborative on Immunization Teaching & Engagement

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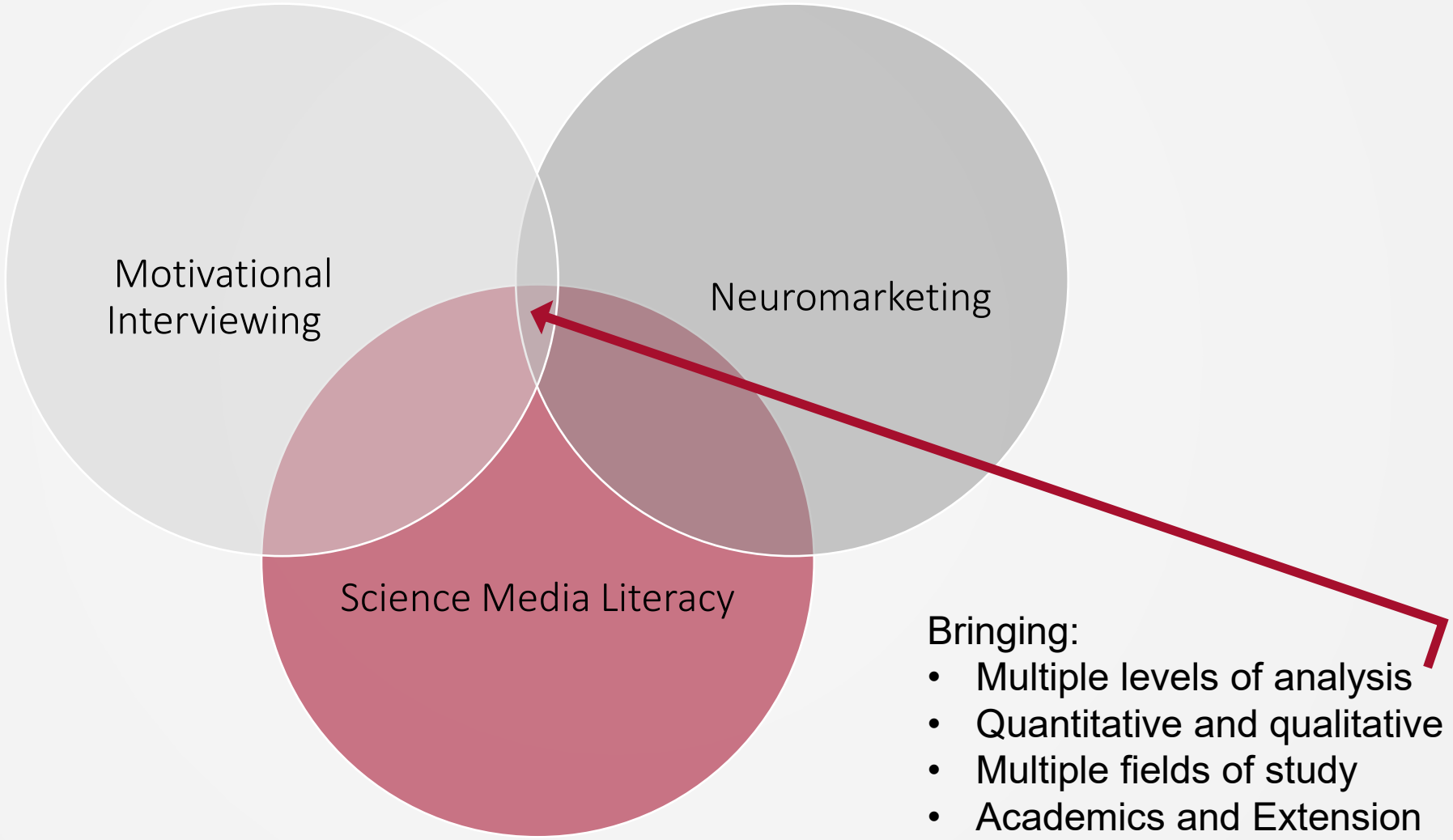
We have been developing a toolkit to better equip and empower Extension professionals for vaccination education and to make an informed choice in their own best interest to participate as active agents in vaccination education in their communities.

Our approach combines the influence of emotions and reason on behavior-change communication.



Bringing:

- Multiple levels of analysis
- Quantitative and qualitative research
- Multiple fields of study
- Academics and Extension

Our inclusive approach has ensured that voices from the entire Extension system have provided insights to support vaccination

March-April 2022

SURVEY

1009 Cooperative Extension professionals from all regions, institution types, program areas and position types across the System responded to an online survey.

April 2022

FOCUS GROUPS

31 “frontline” Extension professionals across regions not currently doing vaccine education provided their perspectives.

July 1 – August 4

AEA 2022

31 Extension professionals participated in on-site neuromarketing testing of messages in Orlando, FL.

August 2022

INTERVIEWS

10 directors/administrators from all five Extension regions provided their perspectives.

October 2022

NAE4-HYDP 2022

Extension professionals participated in additional neuromarketing message testing in Madison, WI.

Feb-March 2023

TOOLKIT/TRAINING "FIRST LOOK"

All Extension professionals' insights **informed the** communication science-based toolkit.

Need 1:Tailor trainings based on Extension roles

*"I would be uncomfortable doing vaccine education programs **considering my area of expertise** (and would also question if I was stepping into someone else's 'space' in Extension) -- but if asked would certainly do what I could to support it."*

~ Extension Professional

Need 2: Prioritize preserving community trust and professional credibility

"I would like honest information that takes the emotional appeal out of this. People have picked sides and don't seem willing to discuss holes in the message. ***Personal experiences of people around me DO NOT match mainstream messaging****. That* ***creates fear*** *and makes me slow to tell others what they should do."*

~ Extension Professional

Need 3: Establish connections with medical experts

"It is important for Extension to be responsive to needs in our communities and vaccine education fits great within our Health Equity and Well Being framework. ***Great opportunity for new partnerships*** *within the institution and with external partners particularly state health department."*

~ Extension Professional

"…we should leave COVID-19 Vaccine education to certified health professionals…"

~ Extension Professional

Need 4. Strengthen science media literacy skills to counter misinformation and communicate emerging science

*"We as a society **need to become less gullible** with our consumption of news and consumption of media and consumption of information, and I think **Extension can play a big role** in getting that. Once again, **if there's a need in this world for research-based information, it is now**, and I think it's time for everybody who doesn't know too much about vaccines and who is not in the medical field and who is not understanding of virus and biology to you know, let the information come out that comes from research."*

~ Extension Professional

"The association between misinformation and vaccine hesitancy is well documented*."

What has been your experience addressing vaccine misinformation?

(type answer in chat)

*Vaccine Hesitancy and Exposure to Misinformation: a Survey Analysis. J Gen Intern Med. 2022 Jan;37(1):179-187.

Volume 133, Issue 4
April 2014

Previous Article Next Article

ARTICLE | APRIL 01 2014

Effective Messages in Vaccine Promotion: A Randomized Trial

Brendan Nyhan, PhD ✉; Jason Reifler, PhD; Sean Richey, PhD; Gary L. Freed, MD

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FINANCIAL DISCLOSURE: The authors have indicated they have no financial relationships relevant to this article to disclose.

Pediatrics (2014) 133 (4): e835–e842.
https://doi.org/10.1542/peds.2013-2365 **Article history**

OBJECTIVES:

To test the effectiveness of messages designed to reduce vaccine misperceptions and increase vaccination rates for measles-mumps-rubella (MMR).

Select which message(s) you predict were effective:

1) Correcting misinformation
2) Presenting information on disease risks
3) Using dramatic narratives
4) Displaying visuals to make those risks more salient

(type number(s) in the chat or “0” for none)

[Autism correction]

Please examine the following information about measles, mumps, and rubella carefully.

All children should be vaccinated for measles, mumps, and rubella. The measles, mumps, and rubella vaccine (MMR) is safe and effective.

Because signs of autism may appear around the same time children receive the MMR vaccine, some parents may worry that the vaccine causes autism. Vaccine safety experts, including experts at the Centers for Disease Control (CDC) and the American Academy of Pediatrics, agree that MMR vaccine is not responsible for recent increases in the number of children with autism. A 2004 Institute of Medicine report concluded that there is no link between autism and MMR vaccine, and that there is no link between autism and vaccines that contain thimerosal as a preservative.

Refuting claims of an MMR/autism link successfully reduced misperceptions BUT ***decreased intent to vaccinate*** among parents with least favorable vaccine attitudes.

[Disease risks]

Please examine the following information about measles, mumps, and rubella carefully.

All children should be vaccinated for measles, mumps, and rubella. These are serious diseases.

Measles

Measles virus causes rash, cough, runny nose, eye irritation, and fever.

It can lead to ear infection, pneumonia, seizures (jerking and staring), brain damage, and death.

Sharing information about disease risks ***did not have a significant effect*** for improving attitudes or intentions for vaccines.

A dramatic narrative about an infant in danger ***increased self-reported belief in serious vaccine side effects***.

[Disease narrative]

Please examine the following information about measles, mumps, and rubella carefully.

All children should be vaccinated for measles, mumps, and rubella. This is a true story that shows why vaccination is so important.

If you hear "106 degrees" you probably think "heat wave," not a baby's temperature. But for Megan Campbell's 10-month-old son, a life-threatening bout of measles caused fevers spiking to 106 degrees and sent him to the hospital.

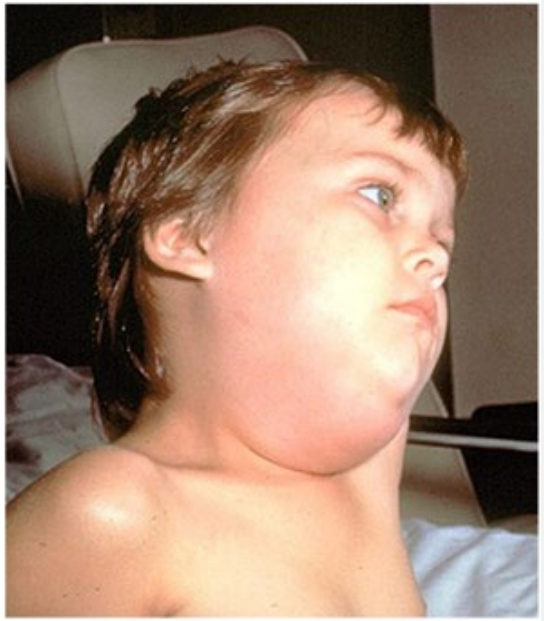
Images of sick children ***increased belief in vaccine/autism link***.

All children should be vaccinated for measles, mumps, and rubella. These are serious diseases.

Because of advances in public health, most people in the United States have never had measles, mumps, and rubella or seen a child with these diseases. Please look at these pictures of children with the diseases before proceeding.

Measles

Mumps



Rubella

Take Aways:

- Trying to change vaccine hesitancy by simply providing the facts may backfire and increase resistance

- **Cochrane review:** Simply providing practical and logistical information that doesn't consider ***individual values and beliefs*** is likely to be ineffective

- Current public health communications about vaccines may not only be ***ineffective, but may actually increase misperceptions and reduce vaccination intention***.

People also say they want timely, simple, context-specific facts provided by a trusted professional.

Listen to How MI Changed My Opinion on Vaccine Education.

Melanie Pugsley 0 comments June 2, 2022

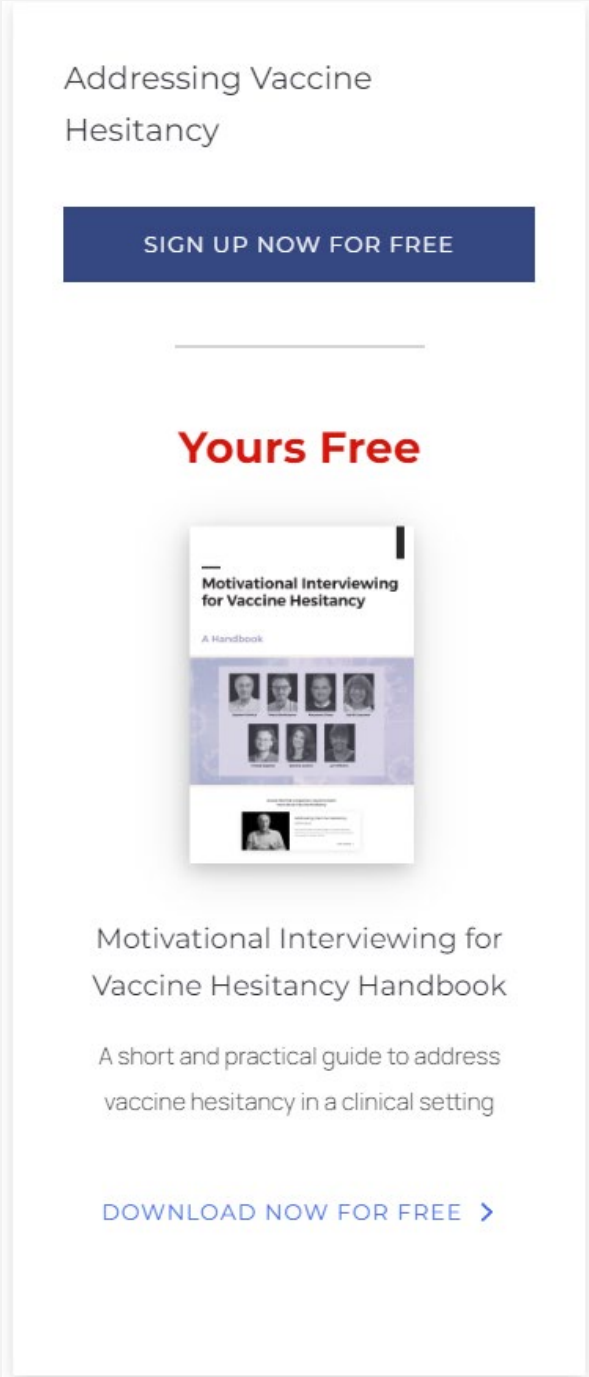
New Connect Extension Podcast Episode: Getting to the Heart of the Matter with Washington State University

The Washington State University EXCITE program team comes on the podcast to discuss their new project Getting to the Heart of the Matter which aims to address vaccine hesitancy among Extension professionals. The goal of the project is to implement strategies that will reduce vaccination hesitancy and increase willingness to become immunization educators. Project leaders from WSU include Erica Austin, Paul Bolls, Zena Edwards, Courtney Payne, and Bruce Austin.

This episode is a conversation with Project PI Erica Austin and Zena Edwards. They share the project's inception and how their background in interpretation processing theory, motivational interviewing, and neuromarketing science will be used to get to the heart of vaccine hesitancy and outline the first steps of the project in which they are currently working to. Hear the two share personal stories of vaccine hesitancy they've faced themselves and at Washington State, what they are curious to learn about Extension through this process, challenges they anticipate, and the impact they hope the research has on vaccine hesitancy and other issues.

After listening, I'm sure you will agree that the analysis and tools gained from this project will be pertinent to Extension beyond covid-19 vaccine education. Follow the Washington State team's project on the EXCITE website- extcite.extension.org for all of their updates and published research!

The podcast episode is available on most podcast networks and the podcast player below. Thank you to Erica and Zena for sharing!
https://soundcloud.com/user-73...paign=social_sharing



Some resources to get you started…

Addressing Vaccine Hesitancy with Dr Stephen Rollnick | Psychwire

Gagneur A. Motivational interviewing: A powerful tool to address vaccine hesitancy. Can Commun Dis Rep 2020;46(4):93–7. https://doi.org/10.14745/ccdr.v46i04a06

Nyhan B, Reifler J, Richey S, Freed GL. Effective messages in vaccine promotion: a randomized trial. *Pediatrics (Evanston)*. 2014;133(4):e835-e842. doi:10.1542/peds.2013-2365

Motivational Interviewing is one of the few strategies that has resulted in a ***decrease in vaccine hesitancy and an increase in vaccine coverage***.

1. Cultivate a culture of partnership and empathy

The four elements of the spirit of MI enable health care providers to provide a respectful relationship with empathy:

- Partnership — Achieving equality, strengthening collaboration
- Acceptance — A positive, empathic attitude that reinforces autonomy
- Evocation — Having the individual verbalize the change
- Compassion/altruism — Acting in a caring way

Motivational interviewing: A powerful tool to address vaccine hesitancy. https://doi.org/10.14745/ccdr.v46i04a06

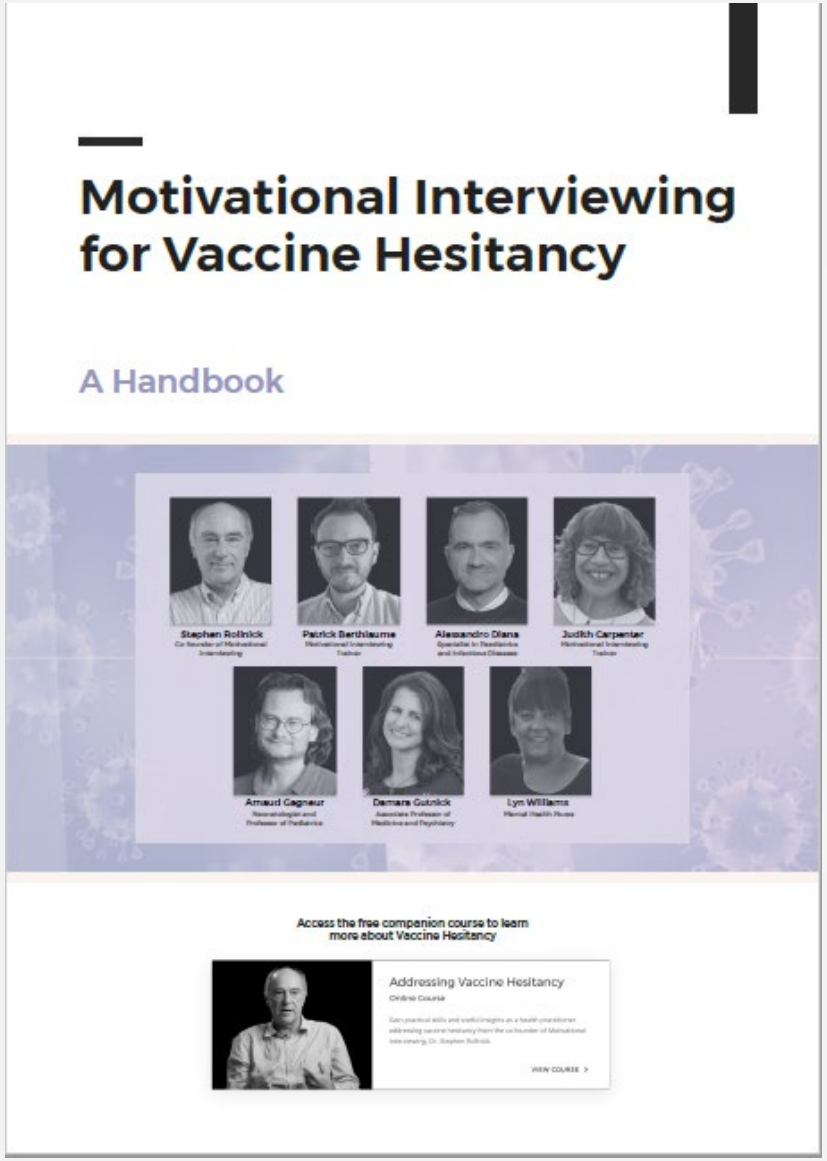
Skills	Objectives	Examples
Open questions	To evoke responses and avoid doubts	Open-ended questions: ("What did you understand?"/"What do you think?") Closed questions: ("Did you understand?"/"Do you think it's important?")
Affirmation	To encourage the individual and highlight their strengths	"The health and safety of your children are important to you." "You already have a lot of knowledge."
Reflective listening/ summaries	To allow the individual to add nuance to and correct what they have just said Simple reflection: what the individual says Complex reflection: what the individual means	"You have read articles about the relationships between vaccines and disorders such as autism." "What matters most to you is that your child is as healthy as possible."
Elicit–Share–Elicit	How to give information/ advice: ELICIT = ask what the parent/caregiver knows and ask permission to complete their knowledge	"What do you know about ...?"
	SHARE = provide the information /advice on the subject	"If you agree, I could complete ..."
	ELICIT = verify what the parent/caregiver has understood and what they will do with this information	"Does this new information make sense?"

Motivational Interviewing provides communication tools for engaging in short, vaccine education conversations with colleagues and community members with a focus on relationship by:

- Eliciting and exploring personal & professional vaccine choices
- Helping them explore ambivalence
- Guide them to make their own decision
- Helping reduce resistance and defensiveness

Motivational interviewing: A powerful tool to address vaccine hesitancy. https://doi.org/10.14745/ccdr.v46i04a06

MI.for.Vaccine.Hesitancy.-.A.Handbook.pdf



3. Offer information - "Ask-Offer-Ask"

The goal is to provide information that is tailored to their needs.

Ask

"What do you know about...?"

"What would you most like to know about ....?"

"How do you understand ....?"

Summarise and validate what they have said.

Offer

"I wonder what you make of this...
(Offer information)..."

"Here's what I understand about...
(Offer information)".

Ask

"What do you think?"

"What will help you to feel more confident?" "Do you have any more questions?"

Summarise and validate what they have said.

Watch Dr Stephen Rollnick demonstrating Ask-Offer-Ask with a patient

"All people have the right to health information [presented in a way] that helps them make informed decisions."

U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2010). National Action Plan to Improve Health Literacy. Washington, DC: Author.

Motivational Interviewing helps us "be compassionate messengers of accurate information that helps people make the vaccine decision in their own best interest."

How could Motivational Interviewing help with confidence level at your institution in vaccine education?

(***Type answers in the chat***)

Science Media Literacy

Shawn Domgaard & Erica Austin

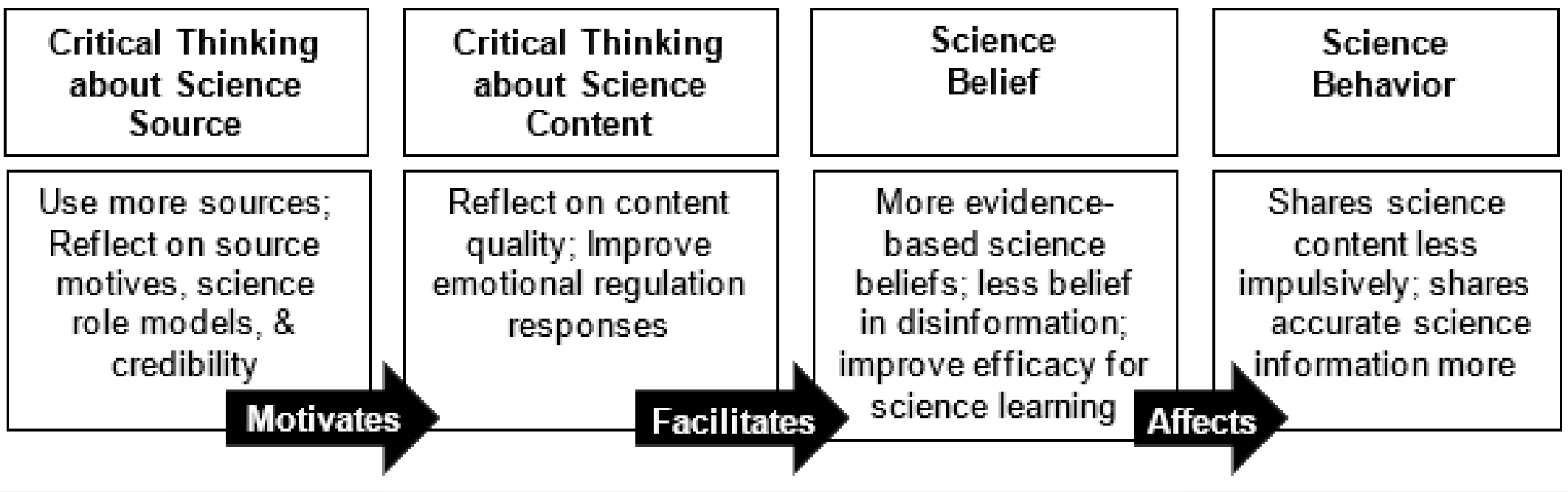
What is Science Media Literacy?

- It focuses on the skills required to critically interpret and integrate messages related to scientific studies communicated through media.
- Science information communicated through media can be difficult to understand, so these skills can help.

Science Media Literacy as a filter

- Science and medical researchers want to communicate their findings so you can make evidence-based decisions in your life.
- Yet, in the current media environment, the quality of how that information is communicated can vary. Science media literacy helps you know which information to trust.

Science Media Literacy Theory of Change



Science Media Literacy Skills

- Verifying scientific sources in media by using multiple sources
- Verifying scientific content in media by recognizing biases
- Lateral reading- leaving a site to see what other sources say about the same thing
- Emotional regulation- evaluating emotions to mediate your response to the information presented

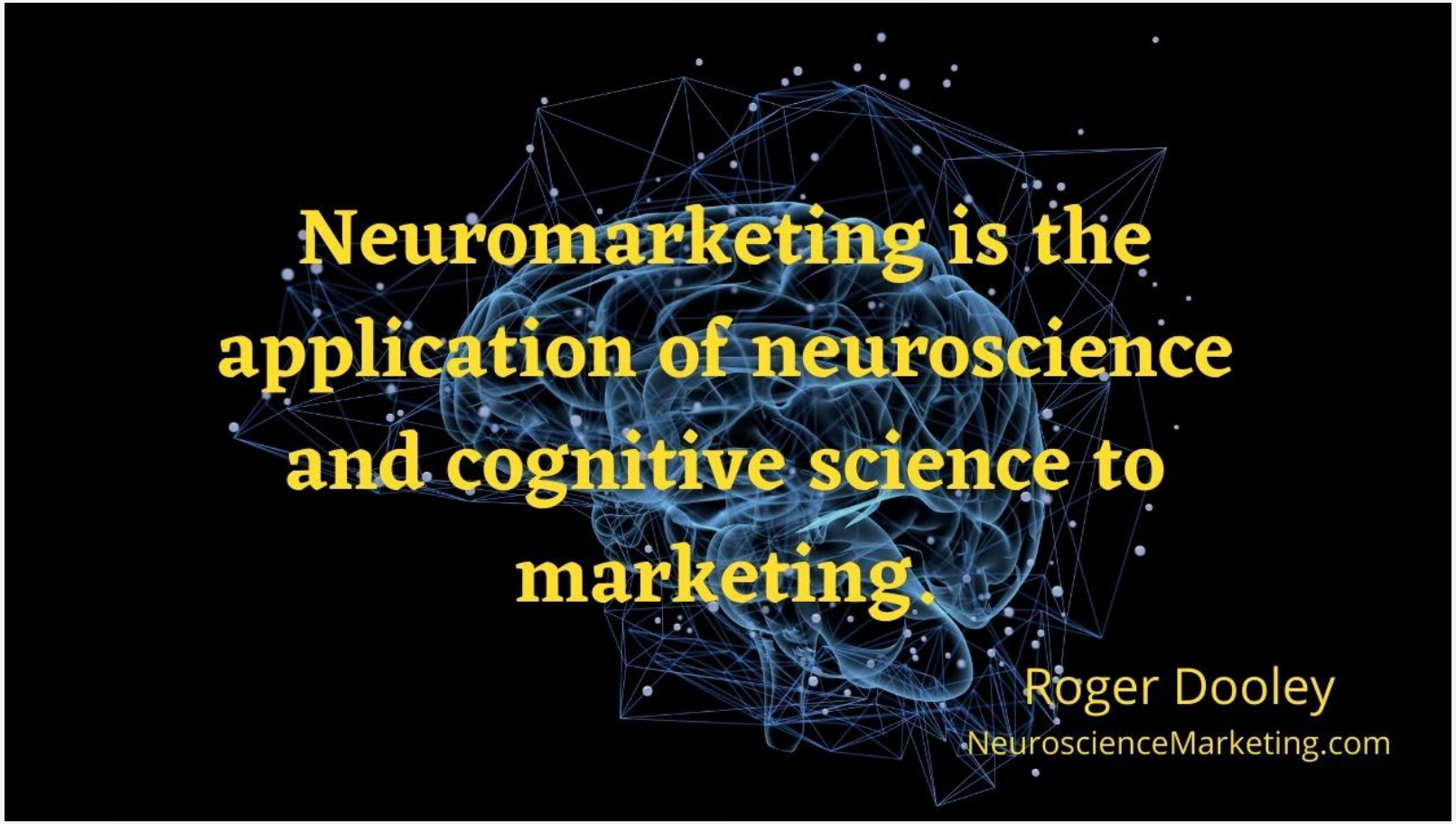
Understanding the Scientific Process

- Uncertainty
  - Not one study has a definitive answer, but science builds towards the answer over time.
- Peer Review
  - Credibility in science is built by other experts reviewing information.
- Expertise
  - Understand how a person received their expertise. Make sure the institution they work for does not cause their findings to be biased.
- Consensus
  - If an explanation has broad support from the scientific community, it is usually the most credible way to guide your understanding of the topic.

Neuromarketing Message Testing and Development

- A “Tool” for Effective Vaccine Education

Why Neuromarketing?



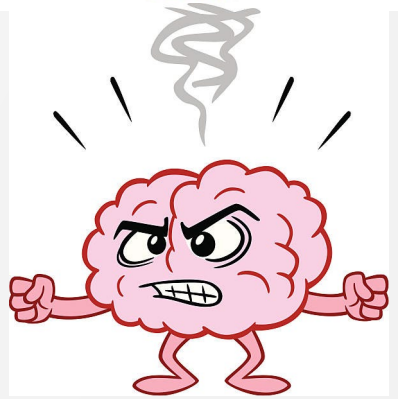
Why Neuromarketing?

Neuromarketing Message Testing and Development is a ***tool*** for producing vaccine education content that is…

BRAIN FRIENDLY

NOT

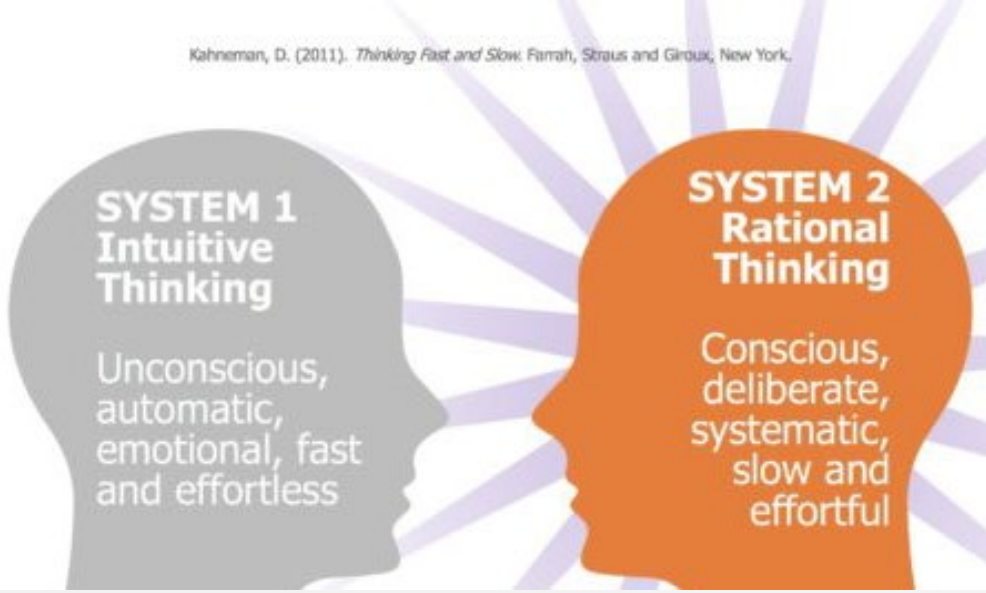
BRAIN UNFRIENDLY



Using Neuromarketing as a “TOOL”
Step 1: THINK about the human mind/brain

- Brain Friendly vaccine education content for “vaccine hesitant” communities MUST reduce defensiveness and emotionally resonate to motivate individuals to consider and act on information

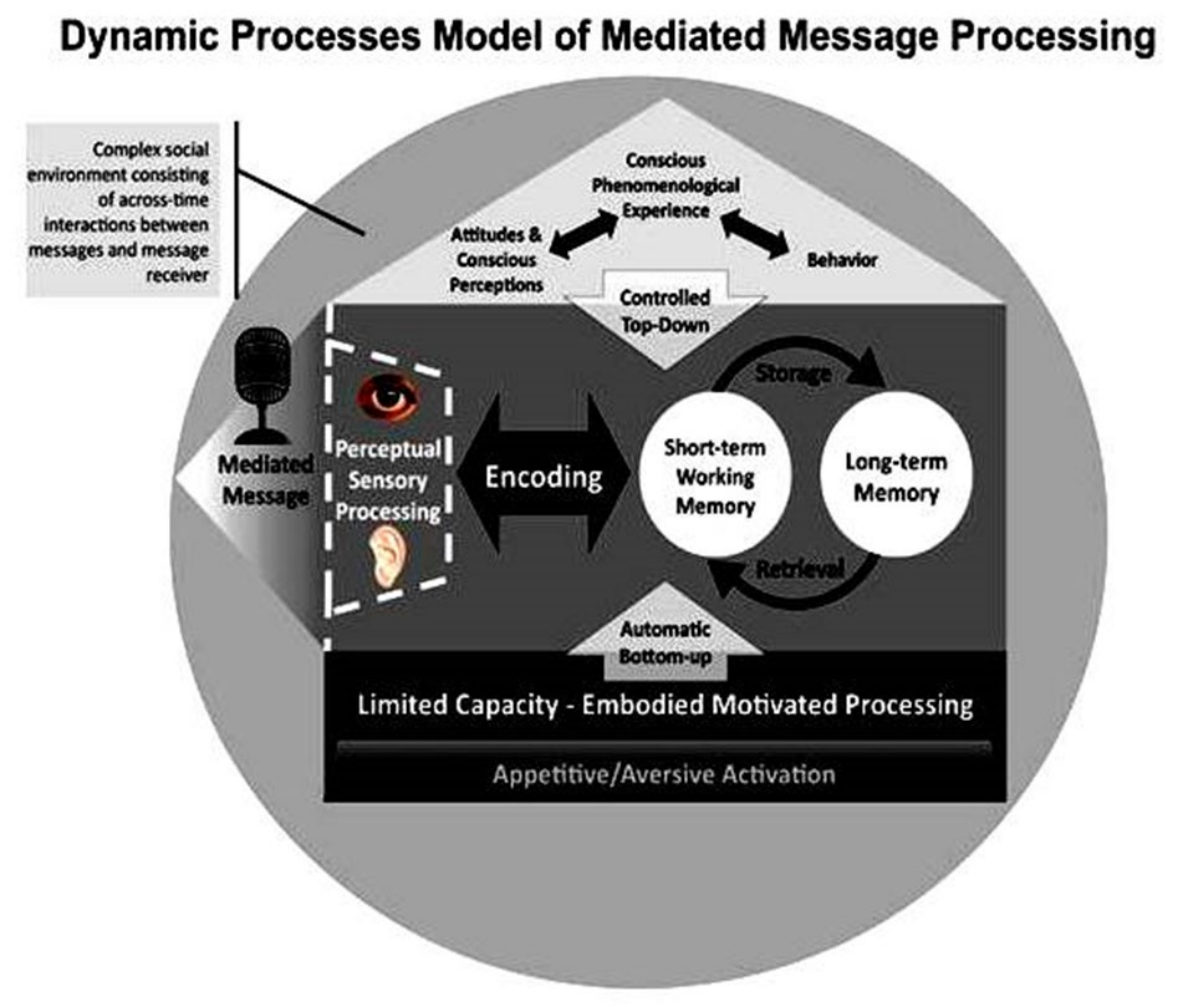
Brain Friendly vaccine education content will engage BOTH “Intuitive” AND “Rational” thinking

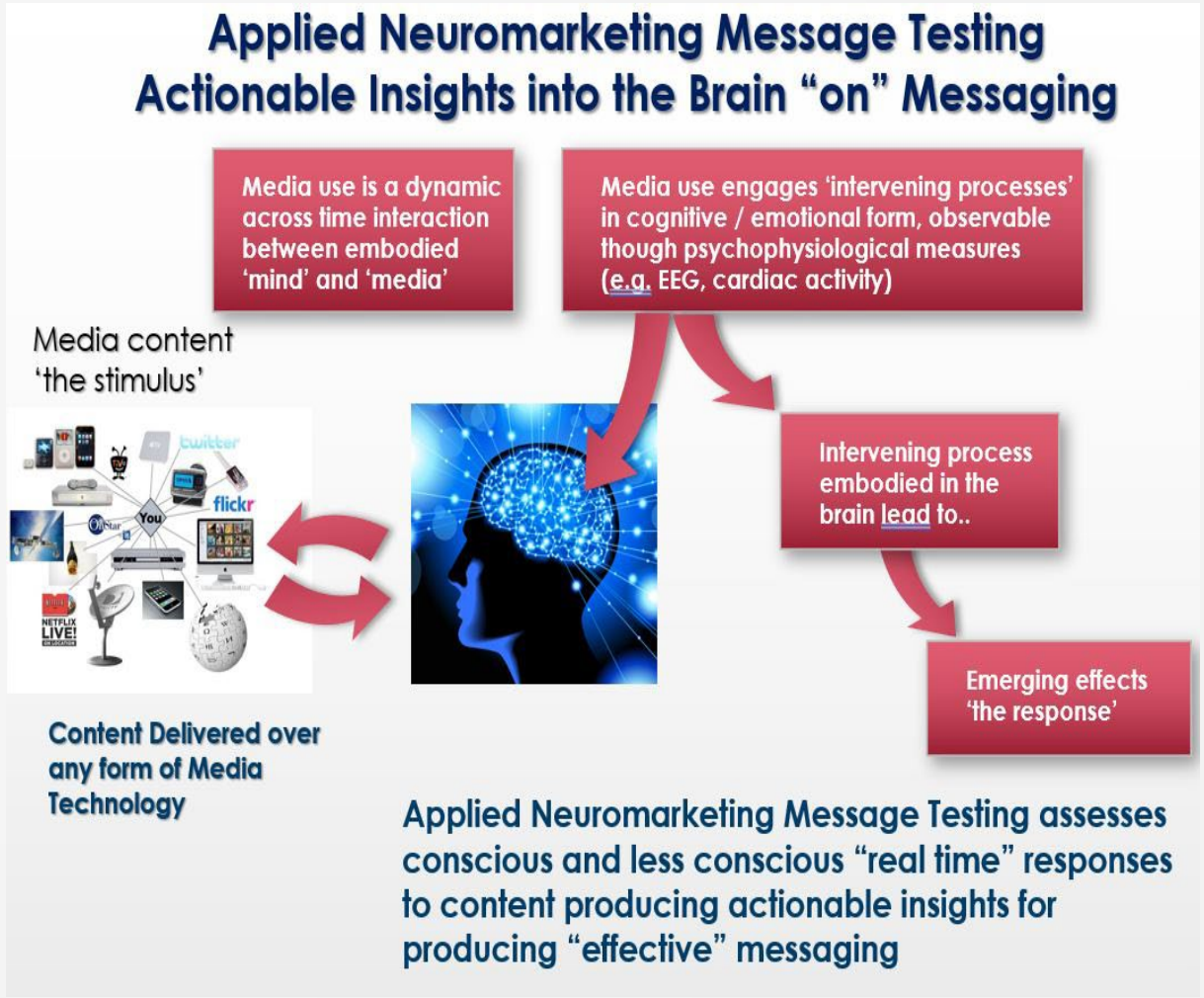


Brain Friendly vaccine education content will be designed to respect 3 “brain truths!”

- **The Brain is a “motivated emotional” processor**
- **The Brain is a “limited capacity” processor**
- **The Brain is a “contextual/cultural” processor**

Using Neuromarketing as a "TOOL"
Step 2: Content Development → Testing → Optimization





Neuromarketing-based message testing methodology

Objective: Identify visual and text content elements that are likely to effectively engage Extension Professionals in favorably responding to "Extension AND Covid-19 Vaccine Messaging

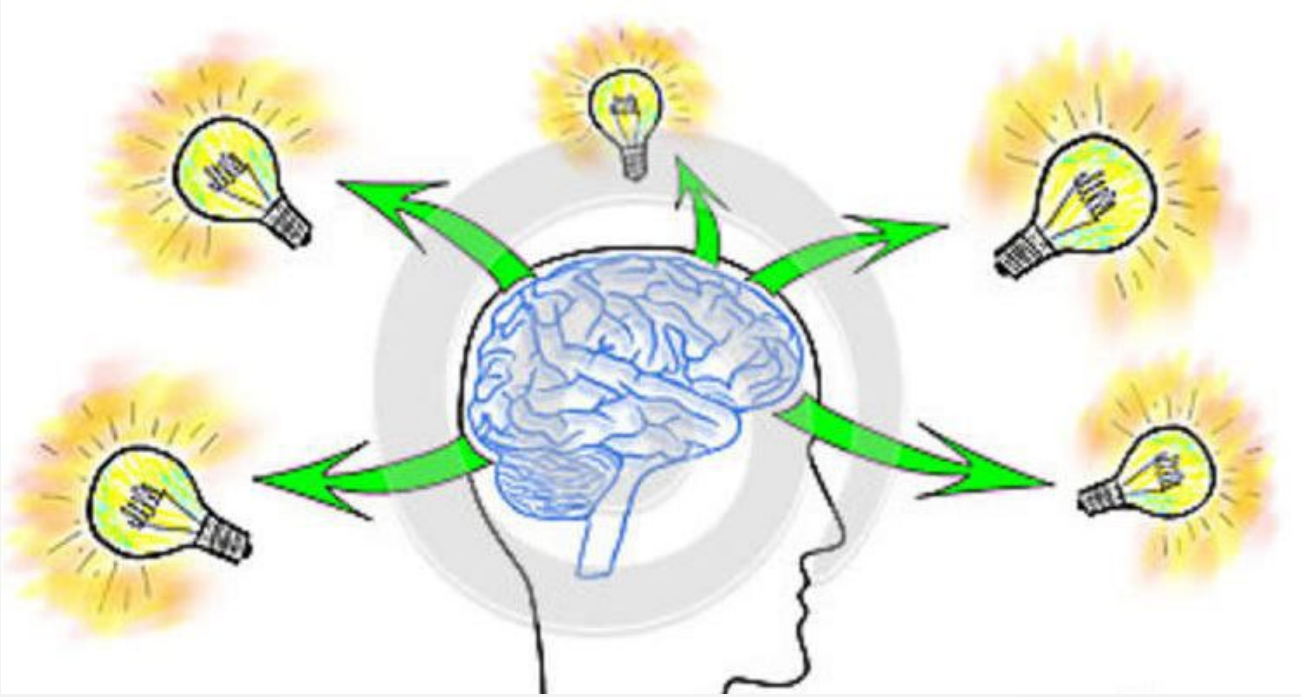
Vaccine Message Content Tested

- Photos depicting "vaccination"
  - Emotional tone (unpleasant) and Dominance of Vaccine Cue
- Textual framing that ties Extension to Covid-19 Vaccine education through emotional appeal and Extension values

"Covid-19 Vaccine education fits with the mission of Extension Professionals because we believe in intellectual freedom to search for and present the truth without bias and with courteous tolerance toward the views of others."

Neuromarketing-based message testing methodology

Neuromarketing Testing: Actionable Insights for Brain-friendly Vaccine Education Content



Actionable Insights

- Effective vaccine education content begins with “brain friendly” ***visuals*** that:
  - Capture attention and elicit a mixture of positive AND negative emotional responses
  - Evoke positive attitudes that will enhance mental processing of text
    - Positive attitudes
      - Favorable
      - Desirable
      - Likable
      - Informative

Brain Friendly Visuals

- **High Aversive / Low presence of vaccination “cue”**

Most Effective!

- **Low Aversive / Low presence of vaccination “cue”**

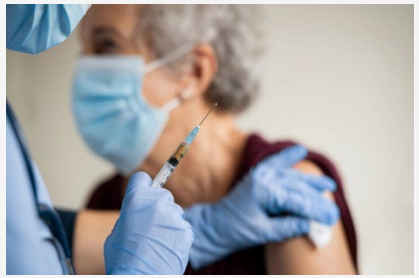
Highly Effective!

- **Low Aversive / High presence of vaccination “cue”**

Moderately Effective

Brain Unfriendly Visuals

- **High Aversive / High presence of vaccination “cue”**



Actionable Insights

- Effective vaccine education content delivers information through brain friendly text that effectively “frames” information by:
    - Engaging attention and emotion in a way that enhances memory/learning for content
    - Lowering negative feelings tied to vaccine education
    - Increasing self-efficacy related to engaging in vaccine education
- Two primary “framing” strategies for Extension vaccine education
    - Emotional frames (Gratitude; Empathy, Pride)
    - Extension Value frames

Actionable Insights

- **Brain friendly "Emotional" framing for vaccine education being part of the Extension mission:**

Empathy for Constituents

Extension Professionals who are willing to engage in Covid-19 Vaccine education with their clients/constituents have the **opportunity to demonstrate empathy for constituents** through their work. Extension Professionals can be equipped to deliver vaccine education in ways that **treat individuals who are afraid of vaccination or paranoid with respect and does not involve intimidation, humiliation, or even persuasion.** Extension should avoid a "savior complex" especially in rural areas. Just share general information about vaccinations, how they work and how they are developed.

Actionable Insights

- **Brain friendly "Emotional" framing for vaccine education being part of the Extension mission:**

Pride in Expertise

Extension Professionals who are willing to engage in Covid-19 Vaccine education with their clients/constituents have the **opportunity to feel pride in their expertise used to educate their community. Extension Professionals have tremendous ability to understand vaccines and the science behind them**. Extension has a history of providing vaccine education to Livestock producers, youth and adults. Extension has a history of providing evidence-based education. **We can be proud to engage in programs that lead to more thoughtful decision making.**

Actionable Insights

- **Brain friendly "Extension Value" framing for vaccine education being part of the Extension mission:**

Extension professionals are a link between people and scientists

Covid-19 Vaccine education fits with the mission of Extension Professionals because **we believe that Extension is a link between the people and the ever-changing discoveries produced by expert scientists**.

Actionable Insights

- **Brain friendly “Extension Value” framing for vaccine education being part of the Extension mission:**

Extension professionals believe in intellectual freedom

Covid-19 Vaccine education fits with the mission of Extension Professionals because **we believe in intellectual freedom to search for and present the truth without bias and with courteous tolerance toward the views of others.**

Sample Message Template Script (Creative Brief)

Visual concepts

Message Copy

Communities served by Extension have a critical need for respectful science-based vaccine education. Many community members have significant concern and confusion about the benefits and risks of vaccines. Extension professionals uniquely identify with the community members we serve. We can be a critical bridge between our communities and vaccine science. We can take pride in using our expertise to understand vaccines and the science behind them to produce programs that foster thoughtful decision making and empower ourselves with scientific knowledge.

Here's some human vaccine science highlights:

(drop in three brief vaccine science information highlights)

Extension professionals are dedicated to treating individuals who are concerned about the risks of vaccination with respect, without intimidation, humiliation, or even persuasion about human vaccines. Extension vaccine education is Extension expertise and empathy, bridging science and our communities.

Getting to The Heart and Mind of the Matter

A Toolkit and Training for Building Confidence in Being a Trusted Messenger of Adult Vaccine Information

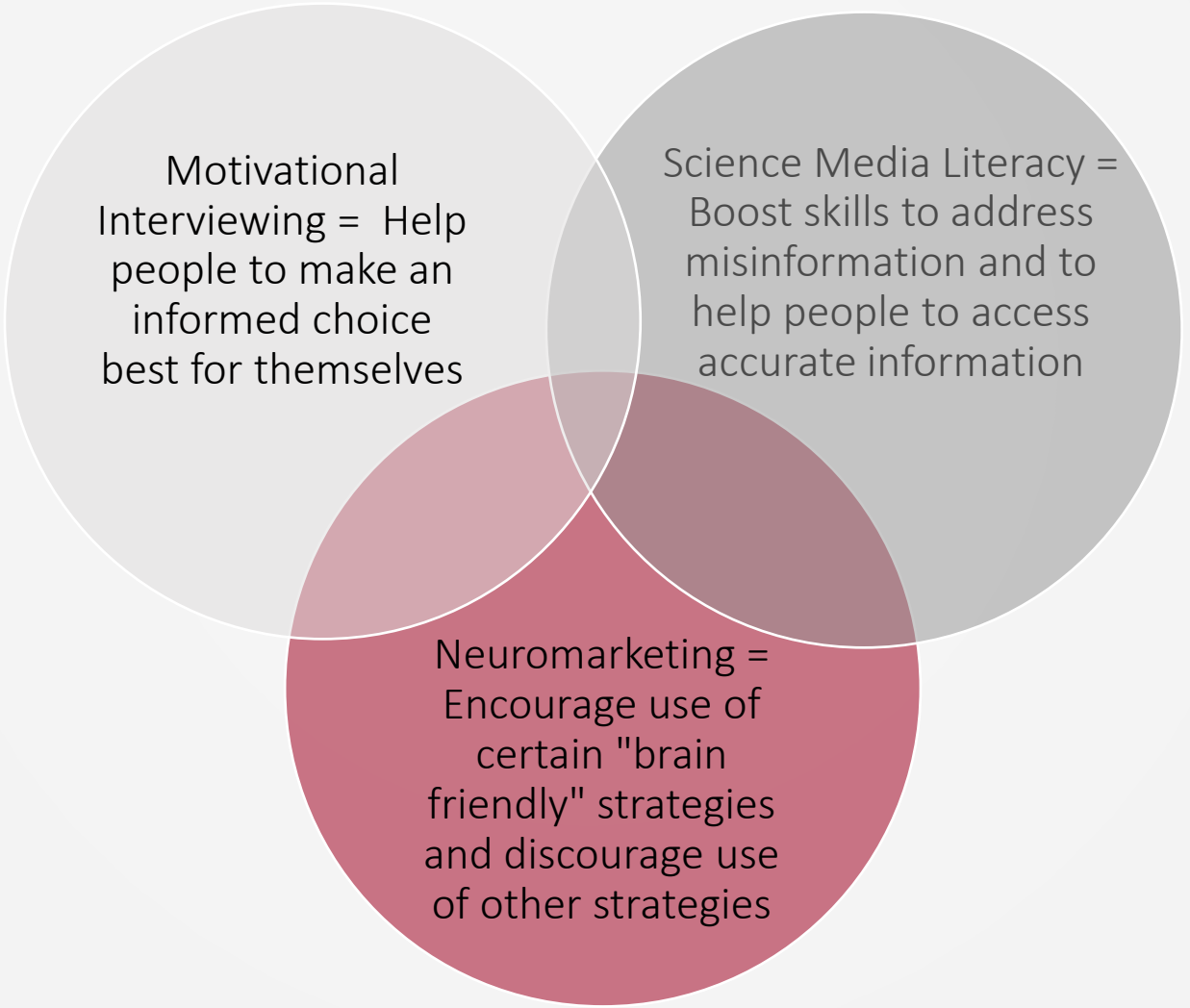
To provide practical communication tools and techniques to reduce adult vaccine hesitancy, reduce "psychological reactance" and influence how we communicate with others.

To produce adaptable materials that optimize audience responses based on Extension values and communication science.

WSU EXCITE Team "Getting to the Heart ***and Mind*** of the Matter”

A Unique Three-Pronged Approach

Combining the influence of emotions and reason on behavior-change communication



Motivational Interviewing

Foster motivational interviewing engagement processes in the relationship with clients. Exhibit empathy and self-efficacy to maintain trust and confidence in Extension's credibility as deliverers of emerging science, whereby people can make their own best decisions for themselves.

Science-Media Literacy

Integrate motivational interviewing relationship techniques to increase the chance that individuals will be receptive to improving and using media literacy skills to recognize reputable sources in misleading information environments.

Neuromarketing-based message testing

Utilize neuromarketing based messaging testing strategies (brain-friendly) when communicating about politically charged topics, such as vaccine education, and understand how psychological reactance interplays with the brain's ability to being open or not to messaging.

The training and toolkit resources are designed for application and action

Actively participate in the learning process

Engage in activities for immediate application of the new information for your context

Opportunities to practice new skills and tests new knowledge

The training and toolkit build on your unique background and knowledge about vaccine information education as well as the community you serve.

Your feedback during the training will help us refine and improve training/tool kit for final roll out across the country.

Getting to The Heart and Mind of the Matter:

A Toolkit and Training for Building Confidence in Being a Trusted Messenger of Adult Vaccine Information

Session 1:
February 21
1:30-3:30 PM EST

MOTIVATIONAL INTERVIEWING

How to communicate confidently with anyone about adult vaccines.

Avoid unpleasant confrontations while maintaining trust and credibility.

Session 2:
February 28
1:30-3:30 PM EST

SCIENCE MEDIA LITERACY

Skills for yourself and others about how to critically assess emerging science and counter media misinformation to increase trust in adult vaccines.

Session 3:
March 7
1:30-3:30 PM EST

NEUROMARKETING

Creating “brain friendly” messages to optimize Extension professional confidence in adult vaccines and willingness to engage with education efforts.

Registration Goes LIVE Monday January 23rd!

WASHINGTON STATE UNIVERSITY

EXCITE
Extension Collaborative on Immunization Teaching & Engagement