New Approaches to Immunization Communication

The Immunization Infodemic – An Innovative BC Approach

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Presenter Disclosure

• Craig Thompson, Lily Crist, & Takuto Shiota

• Relationships with financial sponsors:
  - None
About the Public Health Association of BC

• PHABC is a voluntary, non-profit, non-government, member driven organization that provides leadership to promote health, well-being and social equity.

• Vision Statement - A fair and healthy British Columbia for all.

• Mission Statement - PHABC promotes health, wellbeing and equity for all British Columbians through leadership in public health.

• Manages BC’s Immunization Promotion Budget, in consultation with the Immunization Promotion WG, which reports to the BC Immunization Committee.

• ImmunizeBC (brand) – ImmunizeBC, I Boost Immunity, Kids Boost Immunity, Club Boost Immunity

• PHABC holds the chair position with additional executive membership on the WHO’s, Vaccine Safety Net.

• Visit us at PHABC.org for more information
Immunization Promotion WG (IPWG)

• Membership - RHAs, including BCCDC, FNHA – and also includes reps from the BC MoH, Pharmacy Association, PHAC, and PHABC

• Recognised by the MoH as an integral component in all provincial health promotion and other related immunization activities

• Works with PHABC in funding directions

• Assists in planning and development

• Advises and recommends

• OUR EXPERTISE & FOCUS GROUP ALL IN ONE
ImmunizeBC – The ORIGINAL Immunization Brand!

- Launched/branded in 2007
- Originally composed of the IPWG
- Has evolved from a single program to an umbrella of multiple programs, IBI, KBI-ENG, KBI-FR, Club Boost
- employs 15 staff/contractors, including nursing, teachers, tech, social media experts, marketers, creative design, editors, fundraisers
Definitions

• Information - knowledge obtained from investigation, study, or instruction

• Misinformation - incorrect or misleading information – AKA Fake News

• Disinformation - false information deliberately and often covertly spread (as by the planting of rumors) in order to influence public opinion or obscure the truth - AKA Fake News

• Infodemic - too much information including false or misleading information in digital and physical environments during a disease outbreak
Sources of Misinformation – Pre COVID

• Internet
• Video sharing, Social Media – YouTube, Twitter, Instagram, etc.
• Healthcare Professionals (less likely)
• Peer group – friends, family,
• Interest groups
• Public forums – reddit comment section
• Schools/academia (limited)
• Independent Media (varying)
• Industry (to market products)
• General media communication - one-off reports (very limited)
Sources of Misinformation – Pandemic Era

• Everything from Pre-Pandemic X100

+ 

• Foreign national PH agencies/governments
• Government/Public Health - Politicians/officials
• Main Stream/Independent Media

= INFODEMIC
Examples of Misinformation

Pfizer Trials: All Injected Mothers Lost Their Unborn Babies

Pfizer trial documents reveal attempts to cover up the death of 100% of unborn babies in outcomes actually reported

By Dr. Mark Trozzi
Global Research, January 28, 2022

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Please recall our November 23, 2021 post titled “The FDA and Pfizer are a Match Made in Hell”.
There we described how the FDA took only 108 days to approve Pfizer’s injection, but wanted 55 years to produce the documents!

Thankfully Public Health and Medical Professionals for Transparency filed a lawsuit after the FDA denied their request to expedite the release of the records, and the records are being released, albeit still too slowly.

Among the first reports handed over by Pfizer was a ‘Cumulative Analysis of Post-authorization Adverse Event Reports’ describing events reported to Pfizer up until February 2021. You can download this entire report here.
Examples of Misinformation

Does Your Family Believe You are “Out of Your Mind”? You're in Good Company Because Jesus Faced the Same Thing with His Family

I'm the one out of my mind??

Stop being selfish!

by Brian Shihavy
Editor, Health Impact News
Examples of Misinformation

Just pulled this from the lung of a fully vaccinated, Covid +, intubated patient. Still think those jabs are harmless?
Examples of Misinformation

German study suggests those fully vaccinated for rona will have AIDS by end of January 2022...
Examples of Misinformation

Look at Israel, it does not work, it is experimental, people are being permanently harmed or are dying, and urine is a natural vaccine, I have not had anything and I know it works, I have had over 10,000 glasses and I know the benefits of natural health, diet and urine.
Examples of Misinformation

@NICKIMINAJ

My cousin in Trinidad won’t get the vaccine cuz his friend got it & became impotent. His testicles became swollen. His friend was weeks away from getting married, now the girl called off the wedding. So just pray on it & make sure you’re comfortable with ur decision, not bullied

2:44 PM · Sep 13, 2021 · Twitter for iPhone

25.1K Retweets   94.4K Quote Tweets   148.6K Likes
What is the root of misinformation

• Historically abundant – “History is written by the victors”
• ‘Fishing tales’ – EXAGGERATION
• Time
• In the absence of gov’t/public health transparency, the People, will seek answers, find truth, look…
• …and if left without correction can cause serious societal harm
• Misinformation is born from bad communication
• Conscious and subconscious
• Are we guilty?
OUR INFRASTRUCTURE CHALLENGE

Canada has no infrastructure, policy or plan to address misinformation in the health sector

• Nationally
  • Coordinated strategy and related activities in response to the COVID-19 infodemic is spread across multiple government departments and agencies (Health Canada, Public Health Agency of Canada)
    • Provide resources on COVID-19 disease, track misinformation and its impact on vulnerable populations, monitor attitudes and behaviours as well as trust factors in government, fund interventions at the P/T level

• Provincial and Territorial Jurisdictions
  • Jurisdictions have coordinated their own responses to the infodemic

• Stakeholders (NGOS, academic institutions etc.)
  • Professional health and patient-centered organizations have addressed COVID-19 misinformation though communication strategies and coordinated responses
• Public health does what it knows best – “Let’s talk about the facts”

• Approach based on the knowledge deficit mode

• Repeatedly present the most rigorous scientific evidence available until the science wins over the intended audience

• Faced with a problem use rational solution and presented as the best science
Infodemic – What does the future hold?
WHAT HAS BEEN DONE BEFORE?
HOW WE DEVELOPED POLICIES AROUND IMMUNIZATIONS?

- Our research was based on a review of past and recent health policies around immunization in Canada, North America, Europe and Australia/NZ.

- Some of the conclusions around vaccination refusal or hesitation put the emphasis on the lack of dialogue and communications to allow patients to express their opinions or concerns.

- A continuum, from a compulsory model to a Canadian model that provides information and encourages immunization.
SOME QUESTIONS

• Telling someone what to do is not enough

• How do we communicate?

• What is the way to convey important information?
SOME INSIGHT FROM RESEARCH ON "THE PSYCHOLOGICAL DRIVERS OF MISINFORMATION"

- From: "The psychological drivers of misinformation belief and its resistance to correction"

“Misinformation has been identified as a major contributor to various contentious contemporary events ranging from elections and referendums to the response to the COVID-19 pandemic.

- Not only can belief in misinformation lead to poor judgements and decision-making, it also exerts a lingering influence on people’s reasoning after it has been corrected — an effect known as the continued influence effect.
MISINFORMATION FLOW CHART

Identify likely sources of misinformation
- Traditional news
- Sponsored content
- Social media
- Politicians

Anticipate misinformation themes

Prepare fact-based alternative accounts
If myth has traction or misdirection is expected

Deploy correction

Pre-emptive

Debunking
Fact
- Plausible alternative causal explanation
- Details better than simple retractions

Myth
- Preface with a warning

Fallacy
- Explain myth's fallacy/rhetorical technique

Fact
- Repeat, reinforce factual explanation

If myth is not widespread
Continue monitoring, withhold debunking, but prepare for quick response if myth escalates

Reactive
Embrace the complexity of misinformation!
What are some of the reasons out there...

Conspiracies
- Distrust in government
- Alternative Health
- Science Deniers
- Conspiracies
- Infringement on freedom
- Authorities are lying, we’re not at risk
- Infringement on freedom
- Big pharma gains
- Against my religion
- Vaccines contain mercury
- Vaccines cause autism
- Vaccines don’t work
- Diseases are not real
- Vaccines cause infertility
- Vaccines cause cancer
- Too many vaccines in schedule
- HPV vaccine promotes sex
- Infringement on freedom
- New vaccine
- Guilt as punishment
- Against my culture
- Against my religion
- Personal choice
- Political agenda
- Rushed. Not tested properly
- Vaccine ingredients are dangerous
- Authorities are lying, we’re not at risk
- Infringement on freedom
- Government spying
- Guilt as punishment
- Contain aborted fetuses
- Against my culture
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What are the responses to our current solutions?

- We can analyze online debates to see how people will think through and incorporate pro-vaccine arguments
- Findings:
  - Two kinds of misinformation
  - We aren’t doing enough to combat both types
Two kinds of vaccine misinformation...

1. Factually incorrect misinformation
   - “Ivermectin cures COVID”

2. Misinformation that erodes trust
   - “The CDC is hiding the real efficacy results of ivermectin”
   - Can’t fact check, distorts facts themselves
   - The deeper you go, the more the first type of information also erodes trust
   - We identified 4 pillars of trust
Four pillars of vaccine hesitancy
4 categories (+ religion)

- Mistrust in government
- Conspiratorial thinking
- Alternative and natural medicine as a vaccine replacement
- Distrust in vaccine science
What can we do?

**Type 1: Factually incorrect misinformation**
- Knowledge gap issue
- Interventions can reduce knowledge gap as long as there is enough trust
  - Presenting facts
  - Check your sources
  - Identifying misinformation
  - Pause moment

**Misinformation types are not mutually exclusive**

**Type 2: Misinformation that erodes trust**
- Trust issue not a knowledge issue
- Interventions need to build trust

Four underlying pillars:
- Mistrust in government
- Conspiratorial thinking
- Distrust in vaccine science
- Alternative and natural medicine as a vaccine replacement
Different Audiences, Different Needs

● 8 different types of vaccine deniers (extreme vaccine hesitancy)
  ○ Unique motivations and beliefs
  ○ Requires unique interventions and messages
● A solution came from embracing the complexity.
Preventative focus

How can we prevent individuals from being deceived by the second type of misinformation? How can we prevent people from developing a worldview that is supported by the four pillars?

- Everyone is vulnerable. This has been made clear through the pandemic.
- The causes of vulnerability to misinformation vary from individual to individual, are often complex and multi-factored\(^1\)
- Individual differences impact how we reason with information and evidence, and how we evaluate - accept or reject scientific consensus\(^2\)
Current solutions are not enough

- Presenting facts
- Teach how to check your sources
- How to identify misinformation
- Pause before you share
A possible idea

- Solutions need to be reasonable, ideally adopting something that can be a simple habit
- Target people when they are most vulnerable to misinformation which erodes trust
- Focus on the four pillars
- Provide information that tailor’s to the individual’s needs

Ideal:
- Relatively short
- Easy to learn
- Fun
- Interesting enough to share
What can we do?

Type 1: Factually incorrect misinformation

Knowledge gap issue

Interventions can reduce knowledge gap as long as there is enough trust

- Presenting facts
- Check your sources
- Identifying misinformation
- Pause moment

Misinformation types are not mutually exclusive

Trust issue not a knowledge issue

Interventions need to build trust

Type 2: Misinformation that erodes trust

Four underlying pillars:
- Mistrust in government
- Conspiratorial thinking
- Distrust in vaccine science
- Alternative and natural medicine as a vaccine replacement
Proposed approach

- **Emotion** drives misinformation which erodes trust
  - What if we recognize our emotional reaction (contrary to suppressing or regulating emotion)?

- There is significant value in focusing on emotion when it comes to science related misinformation\(^5\)
  - Hypothesize that noticing our emotions and taking them into account, is one possible way to improve our judgment as a preventative strategy

- Supporting evidence
  - Emotion can influence attitudes and how individuals process scientific issues and information\(^{10}\)
  - Emotions have a tendency to activate our cognitive biases\(^{10}\)
  - Previous research on information persuasiveness commonly suggests emotion as the origin to decision-making, judgement, and actions\(^{11}\)
  - Emotion is a strong driving force for believing and sharing information of any kind\(^5\)
The concept

Emotional Appraisal Approach (EAA)

https://www.wikihow.com/Write-a-Newspaper-Headline
STEP 1

Participants will go through a chosen set of various social media posts, headlines, stories, images etc. Each question will be based on each of the categories (4 overarching pillars) with some questions being a combination of the four together as well (eg. distrust in government plus conspiracy theory sentiment)
STEP 2

Individual chooses one or more emotional reactions experienced AND level of emotion (e.g. strong -> low)
STEP 3

Participants will be placed under a vulnerability stream(s). This will be accomplished by adding the number of any given emotional reactions to a specific category (type of emotion does not matter). There can be multiple vulnerability streams a participant shows emotional reactions to (not limited to just one).
Lastly, participants will be given further details regarding the results, explaining the particular vulnerability stream(s), and emphasizing EAA as a prevention opportunity for individuals to recognize emotions when reading and hearing information from any source or origin (eg. headlines, face-to-face interactions, news outlets, social media, etc.)

EAA is an approach to be used in concert with other established interventions

- Presenting facts
- Teach how to check your sources
- How to identify misinformation
- Pause before you share
Limitations

- For a certain audience this may not work (e.g., those with strong opposing beliefs)
- Still at hypothesis stage
- Focuses on one aspect (emotion) that impacts individual's susceptibility to misinformation (thus recommended to be used in conjunction with other interventions)
Embracing opportunity

Opportunity

Least vaccine hesitant, but vulnerable

Extreme vaccine hesitancy
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References


References


   https://doi.org/10.1073/pnas.2002484118

   https://doi.org.10.1080/10410236.2019.1587813