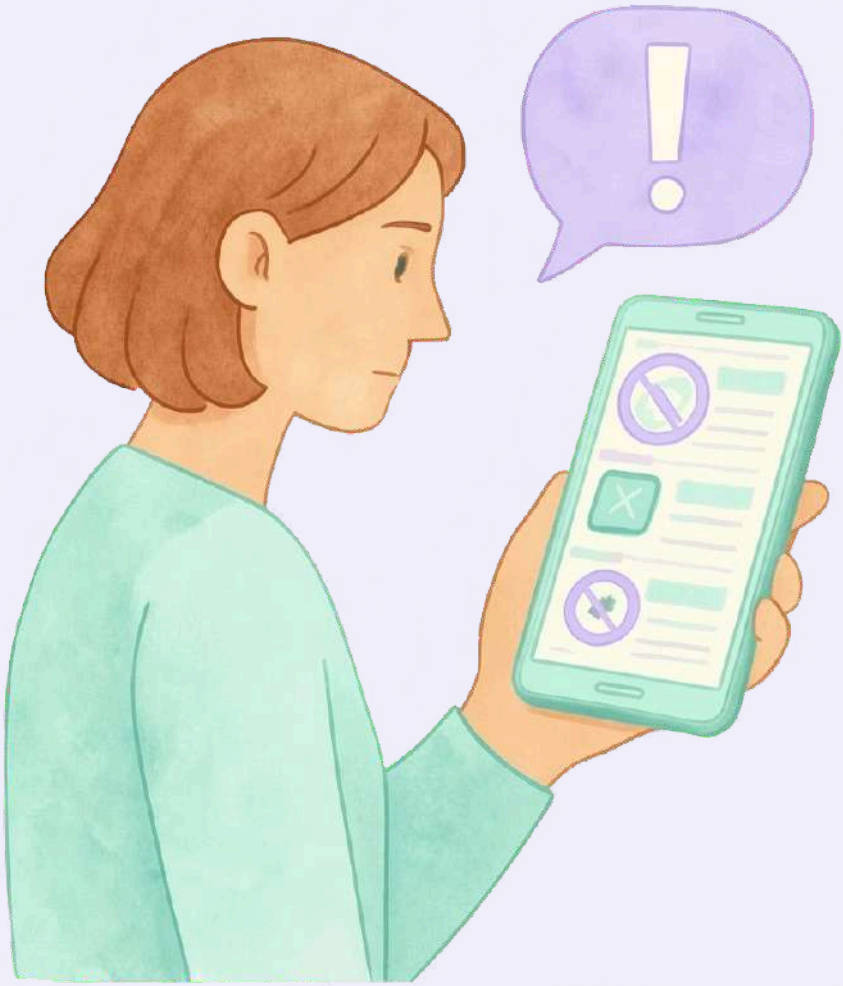
FRAMe Health Project

Community Infodemic Management and Health Literacy Program (CIMP)



Module 1–Disinformation, Infodemic, and Social Media Dynamics

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Co-funded by the European Union

Project Number 2024-2-IT02-KA210-ADU-000280006

This module introduces learners to how disinformation and infodemics spread in online environments and how social media dynamics — including algorithms, echo chambers, and emotional engagement — amplify false narratives. It equips learners with critical thinking, fact-checking, and ethical communication skills to responsibly navigate digital spaces and improve health literacy.

Learning Objectives

- **Understand mechanisms of health-related disinformation and infodemics**
- **Identify, fact-check, and counter misinformation and disinformation**
- **Understand how algorithms, echo chambers, and emotional engagement spread false narratives**
- **Build responsible online communication and ethical social media strategies**

Expected Outcomes

Improved skills to detect disinformation and navigate online environments more safely

Enhanced digital literacy and media verification skills

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1. Understanding the Infodemic

The World Health Organization (WHO) defines an infodemic as an excessive amount of information — including false or misleading content — that spreads rapidly during a crisis, making it difficult for people to find reliable guidance and trustworthy sources. In the digital age, information travels faster than ever before through social media, messaging apps, online videos, and influencers. During health emergencies, this can create confusion, fear, mistrust, and harmful behaviours.

Not all problematic information is the same. **Misinformation** refers to false information shared without the intention to cause harm, often by people who genuinely believe it to be true. **Disinformation**, on the other hand, is false or manipulated information deliberately created and shared to mislead, influence opinions, generate fear, or create distrust towards institutions, healthcare professionals, or specific groups. In some cases, disinformation campaigns may also be linked to political interests, financial profit, or attempts to manipulate public debate.

There is also **Malinformation**, which involves sharing real information in a misleading or harmful way, often by taking facts out of context or using private information to create fear or hostility. **Rumours** and **Conspiracy Theories** are another important part of the infodemic environment. Rumours usually emerge in situations of uncertainty, when people try to explain events without verified information. Conspiracy theories, on the other hand, often suggest that powerful groups or institutions are secretly hiding "the truth" from the public.

Infodemics usually develop when uncertainty, fear, emotional reactions, and rapid information sharing combine. Social media platforms amplify this process because emotional or controversial content often receives more attention, reactions, and shares than calm and evidence-based information. Algorithms tend to prioritise content that generates engagement, meaning that shocking or polarising messages can spread much faster than verified information. Repetition also plays an important role: when people see the same message many times, they may begin to believe it even without evidence.

According to APA (apa.org) People are more likely to believe false statements that appeal to emotions such as fear and outrage. They are also more likely to believe misinformation that paints opponents in a negative light than they are to believe misinformation that is negative about their own in-group. Finally, people are more likely to believe repeated information, even when it contradicts their prior knowledge.

The impact on public health can be serious. False or misleading information may discourage people from seeking medical care, reduce trust in healthcare professionals and institutions, increase vaccine hesitancy, or encourage unsafe treatments and self-medication. During the COVID-19 pandemic, for example, misleading claims about vaccines, miracle cures, or "hidden truths" spread widely across Europe and contributed to confusion, fear, and mistrust in many communities. In some cases, people delayed seeking emergency care or followed dangerous online advice instead of consulting healthcare professionals.

Health literacy therefore includes not only understanding health information, but also learning how to critically evaluate it before believing, sharing, or acting upon it.

How can we detect misinformation, malinformation, rumours, and conspiracy theories?

Detecting misleading information is not always easy, especially online where content spreads quickly and emotional reactions often come before critical thinking. However, there are some common signs that can help people evaluate information more carefully.

Misinformation is often shared by people who genuinely believe it is true. To detect it, it is important to check the original source, publication date, and whether the same information appears on reliable health or news platforms. If a claim only appears on social media posts or messaging apps, caution is needed.

Malinformation can be more difficult to recognise because it may contain real information used in a misleading or harmful way. This often happens when facts, photos, or private information are taken out of context to create fear, anger, or hostility. Checking the full context of a story is therefore essential.

Rumours usually spread during periods of uncertainty or crisis, when people are searching for explanations. They are often based on phrases such as “someone said,” “I heard,” or “they are hiding this from us,” without clear evidence or identifiable sources.

Conspiracy theories frequently present complex events as the result of secret actions by powerful groups or institutions. They often claim that governments, scientists, journalists, or doctors are “hiding the truth.” These narratives usually rely more on suspicion and emotion than on verifiable evidence and often reject official sources automatically.

Some practical questions can help identify problematic information:

- Who created this content and why?
- Is the source clearly identified and trustworthy?
- Is there evidence, or only opinions and emotions?
- Is the information confirmed by multiple reliable sources?
- Does the message try to provoke fear, outrage, or urgency?
- Is the content encouraging people to distrust all institutions or experts?

A useful habit is to pause before sharing. In many cases, taking a few minutes to verify information through reliable sources can prevent the spread of harmful or misleading claims.

> Example of misiinformation: In the link below you will find a material by BBC Bitesize Other Side of the Story – a real-world example showing how misinformation can spread quickly online. The material explains how false or misleading claims—often presented as news or shared through social media—can distort facts, influence opinions, and cause confusion. It highlights the importance of checking the original source, verifying evidence, and considering the other side of the story before believing or sharing information.
>
> Does cracking your knuckles really give you arthritis?
>
> **https://www.bbc.co.uk/bitesize/articles/z6rrp9q**

2. Social Media Dynamics and Cognitive Bias

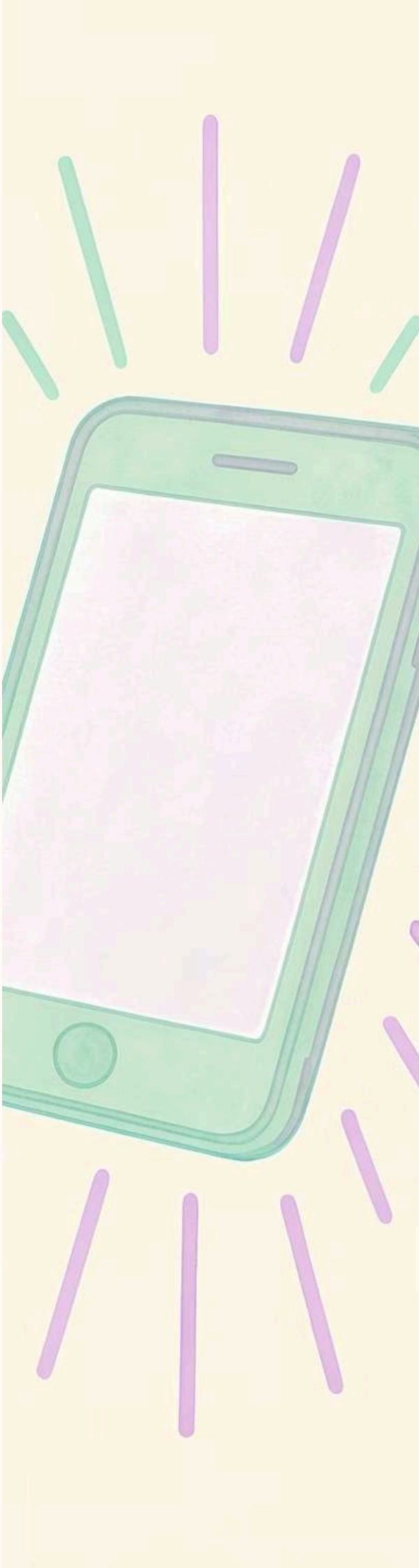
False information spreads differently on social media than on television, radio, or in newspapers. Traditional news outlets usually check facts and correct mistakes. On social media, anyone can share information instantly, even if it is wrong, allowing false claims to spread quickly. Social media also groups people with others who share the same views. These "echo chambers" repeat the same ideas and make it harder for people to see accurate information or corrections.

Social media platforms are designed to maximise attention and engagement. Their algorithms tend to prioritise content that generates strong emotional reactions such as fear, anger, outrage, or surprise. As a result, misleading or sensational information often spreads faster than calm and evidence-based communication. People are also more likely to interact with content that confirms their existing beliefs, creating environments where the same opinions and narratives are constantly reinforced.

This process is closely connected to what are called cognitive biases — mental shortcuts that influence how people interpret information and make decisions.

One common example is confirmation bias, where people tend to believe and share information that supports what they already think, while ignoring contradictory evidence. Another is the authority bias, where people trust information simply because it comes from someone perceived as influential or authoritative, such as celebrities, influencers, or public figures, even when they are not experts.

The illusory truth effect also plays an important role online. When people repeatedly see the same claim — even if it is false — they may begin to perceive it as true simply because it feels familiar. Similarly, the availability heuristic leads people to judge risks or situations based on memorable or emotional examples they have recently seen online, rather than on real statistical evidence.



> **Example**: If someone watches several videos claiming that vaccines are dangerous, social media algorithms may continue suggesting similar content. Over time, repeated exposure can create the impression that these views are more common or credible than they actually are.

Understanding how algorithms, emotions, and cognitive biases interact is essential for recognising why misinformation spreads so effectively online and why critical thinking is an important part of health literacy.

3. Fact-Checking and Verification Tools

Can you identify the signs of a false social media account?

When you scroll through social media, take a moment to think about **who wrote the post and why**.
Some accounts are trying to influence opinions, push a political message, **or make money by getting as many clicks as possible**.

Check for verification badges

A blue tick or "verified" badge on platforms like Facebook, Instagram, or X (Twitter) usually means the account really belongs to a public figure or organization.

Look closely at the account name

If it contains lots of random numbers or letters, it may not belong to a real person.

Watch for spelling mistakes or exaggerated headlines

Posts with ALL CAPS, lots of exclamation marks, or dramatic language are often designed to grab attention rather than share facts.

Check the website link (URL)

Misspellings, extra symbols, or strange web addresses can be signs of unreliable sources.

Question images and photos

Pictures can be taken out of context or altered. A reverse image search can show where an image originally came from.

See if other trusted news sources are reporting the same story

If only one account is talking about it, be cautious.

Be wary of emotional reactions

Posts that make you feel angry, scared, or shocked are often meant to push you to share quickly without thinking.

Tips for Checking What Is and Isn't Real

🖼️ Images

Look closely at pictures for anything unusual — odd shadows, blurry faces, or missing details. Images are often reused or taken out of context.

Google Reverse Image Search

https://images.google.com

TinEye

https://tineye.com

Upload the image or paste the link to see where else it appears online.

📹 Videos

Videos can be edited or altered to be misleading. Watching frame by frame can help spot things that don't look right.

InVID Video Verification Tool

https://www.invid-project.eu

YouTube playback controls — pause and slow playback to examine details

Videos can be edited or altered to be misleading. Watching a video frame by frame can help you spot things that don't look right. Helpful tools include:

Also Look Out For

Source

Who posted the story? Check their previous posts and bio to understand who they are and why they might be sharing it.

Followers

How many followers does the account have, and do they seem genuine? Very new accounts with few followers can be a warning sign.

Verified Accounts

Does the account have a blue tick or verified badge? Many platforms use this to confirm the account is real.

Response from Others

Read comments and replies. Other users may question the story or share reliable sources that show another side.

Additional Fact-Checking and Verification Tools

In addition to the tools above, several European initiatives support citizens in identifying false or misleading information online.

EU-Level Fact-Checking Tools

EUvsDisinfo

Monitors and analyses disinformation campaigns targeting European societies and institutions.

https://euvsdisinfo.eu

FactCheckEU

A collaborative European fact-checking initiative involving journalists and researchers from different countries.

https://factcheckeu.info

Mediawijs

A Belgian organisation promoting digital and media literacy through practical educational resources.

https://www.mediawijs.be

National Examples

Italy

Facta

Italian fact-checking platform analysing viral news, social media claims, and misinformation.

https://www.facta.news

Open Online

Italian news and verification platform addressing disinformation and manipulated content.

https://www.open.online

Bulgaria

Factcheck.bg

Bulgarian fact-checking initiative focused on verifying public claims and online misinformation.

https://factcheck.bg

How to fact-check a health claim – simple steps

Before believing or sharing health-related information online:

Check the Source

Who published the information? Is it a recognised institution, hospital, or health organisation?

Check the Evidence

Does the article mention scientific studies, official data, or medical experts?

Compare with Other Sources

Do other reliable organisations report the same information?

Check the Date

Old health information may no longer be accurate.

Be Cautious with Emotional Language

Claims designed to create fear, panic, or outrage are often misleading.

> **Example**: If a social media post claims that a "natural remedy cures cancer" but no official health organisation confirms it, the information should not be trusted or shared.

4. Ethical Communication and Responsible Use of Social Media

Social media is often used to share information about health, wellbeing, and medical advice. Using it responsibly helps protect not only our own health, but also the health of others.

Think Before You Post

Ask yourself: Is this accurate? Is it safe? Could it cause harm? Even well-intentioned incorrect advice can lead to risky decisions.

Check Health Information Carefully

Be cautious with posts about cures, treatments, or diets. Use trusted sources like national health services or recognised medical professionals.

Avoid Fear-Based Messages

Health misinformation often uses fear or urgency. **Be especially careful** with posts claiming 'miracle cures' or that doctors are 'hiding the truth.'

Respect Privacy & Confidentiality

Do not share other people's health stories or diagnoses without permission. Think carefully before sharing your own health information online.

Communicate Respectfully

Health issues are sensitive and personal. **Avoid judging, blaming, or shaming others** for their health choices or conditions.

Understand Your Influence

Health information spreads quickly. What you share may affect how others manage illness, medication, or seek medical help.

Use Social Media Ethically

Make it clear when something is your personal experience, not medical advice. **Encourage others to consult healthcare professionals**.

Challenge Misinformation Safely

If you see false health information, respond calmly with reliable sources or report it to the platform. **Avoid arguments that spread confusion**.

Take Breaks & Protect Your Wellbeing

T**oo much health-related content can increase anxiety.** Taking time away from social media supports mental and emotional health.

Responsible Health Communication Online – Practical Checklist

Before posting or sharing health-related content online, it is useful to stop and ask a few practical questions:

- Is this information accurate and supported by reliable sources?
- Could this message create unnecessary fear or confusion?
- Am I sharing verified information or only opinions?
- Could vulnerable people misunderstand this content?
- Would I trust this information if it affected my own health or family?

> **Example**: Sharing an unverified post claiming that a supplement "boosts immunity better than vaccines" may appear harmless, but it can influence people to avoid professional medical advice.

5. Case Studies

Case: Deepfake “doctor endorsements”

A recent investigation of Full Fact found AI-generated deepfake videos of real doctors being used to promote unproven supplements on platforms like TikTok and Facebook. The manipulated videos look like trusted health experts recommending products they never endorsed.

Prof David Taylor-Robinson, an expert in health inequalities at Liverpool University, is among those whose image has been manipulated. In August, he was shocked to find that TikTok was hosting 14 doctored videos purporting to show him recommending products with unproven benefits.

Though Taylor-Robinson is a specialist in children’s health, in one video the cloned version of him was talking about an alleged menopause side-effect called “thermometer leg”. (Source of information: article in Guardian **https://www.theguardian.com/society/2025/dec/05/ai-deepfakes-of-real-doctors-spreading-health-misinformation-on-social-media?utm_source=chatgpt.com**)

Case: COVID-19 vaccine disinformation in Bulgarian Facebook groups

What happened (pattern):During the COVID vaccination rollout, Bulgarian public Facebook groups and pages amplified anti-vaccine narratives (including imported conspiracies and local variants). A key issue highlighted by researchers was the speed and scale of sharing in groups, and the lack of consistent labeling/moderation on misleading vaccine posts. (source: DesinfoLab **https://www.disinfo.eu/publications/bulgaria%3A-the-wild-wild-east-of-vaccine-disinformation**)

Why it matters for health literacy:

- People may confuse high engagement (likes/shares) with high credibility.
- Group dynamics create echo chambers: repeated messages feel “true” over time, even without evidence.

Teaching points:

- “Popularity is not proof.”
- Check: Who benefits if I believe/share this?
- Promote a habit: “Before sharing health info, check a trusted health source or a fact-check.”

Case: Inflated claims about vaccine side effects and deaths

What happened (example of a claim-and-check cycle): Bulgarian public debate included statements implying extremely high numbers of serious vaccine complications or deaths. Fact-checkers reviewed such claims and referenced official data from the Bulgarian Drug Agency about reported adverse reactions, clarifying the difference between reported events and confirmed causation.

Why It Matters for Health Literacy

Correlation ≠ Causation

Many people don't know the difference between 'Someone reported a symptom after vaccination' and 'The vaccine caused that outcome.'

Real Consequences

Misunderstanding this leads to fear, avoidance, and delayed care.

Teaching points:

- Explain in simple terms: “Reports are signals to investigate—not final proof.”
- Encourage “3 checks”:
  a. Is there an official source?
  b. Is the claim confirmed or just suspected?
  c. Do multiple reputable sources say the same thing?

Case: Anti-vaccine narratives and childhood vaccinations in Italy

What happened (pattern):

In Italy, anti-vaccine narratives became particularly visible during debates around mandatory childhood vaccinations introduced with the Lorenzin Decree (2017). Social media groups, blogs, and online influencers spread claims linking vaccines to autism, infertility, immune system damage, or hidden long-term side effects, despite scientific evidence disproving these claims.

During and after the COVID-19 pandemic, anti-vaccine communities became even more active online, especially on Telegram, Facebook, and YouTube, where misinformation circulated widely through emotional testimonies and distrust towards institutions.

(Source: Italian National Institute of Health – Vaccines and misinformation **https://www.iss.it/vaccini** ; WHO Europe – Vaccine misinformation**https://www.who.int/europe/news-room**)

Why It Matters for Health Literacy

Emotion vs. Evidence

Many people confuse emotional personal stories with scientific evidence.

Repeated Exposure

Repeated exposure to anti-vaccine content can increase fear and mistrust.

Algorithmic Amplification

Social media algorithms tend to amplify controversial health content.

Teaching Points

Personal testimonies are not scientific proof.

Reliable vaccine information should come from health institutions and medical professionals.

High engagement online does not equal credibility.

Before sharing health information, verify it through trusted sources.

Case: Nutrition myths and “detox” culture on social media

In Italy, social media platforms such as Instagram, TikTok, and YouTube have increasingly promoted “detox diets,” miracle supplements, and restrictive eating trends presented as solutions for inflammation, fatigue, weight loss, or “purifying the body.”

Influencers without medical or nutritional qualifications often promoted extreme diets or products using dramatic before-and-after images and emotional language. Some content discouraged followers from consulting nutrition professionals and instead promoted quick online solutions.

The Italian Competition Authority (AGCM) and consumer organisations have repeatedly raised concerns about misleading advertising linked to wellness and health products online.

(Source: Italian Ministry of Health – Nutrition and healthy lifestyles **https://www.salute.gov.it** ; European Food Information Council (EUFIC)**https://www.eufic.org** ; AGCM – misleading advertising cases**https://www.agcm.it**)

One-page checklist: How to spot a deepfake video of a doctor

Pause first

- ☐ Does the video make a strong emotional claim (fear, urgency, miracle cure)?
- ☐ Is it asking you to share quickly or buy something?

Check the person in the video

- ☐ Lips & speech: Do the lips match the words exactly?
- ☐ Face & expressions: Do expressions look stiff or unnatural?
- ☐ Eyes: Is blinking unusual (too little or too much)?
- ☐ Edges: Do the face, hair, or glasses look blurry or jumpy?

Check the voice

- ☐ Does the voice sound robotic, flat, or slightly off?
- ☐ Is the sound out of sync with the mouth?

Check the message

Be cautious if the "doctor":

- ☐ Promotes a product, supplement, or miracle cure
- ☐ Says "doctors are hiding this"
- ☐ Encourages stopping medication or avoiding medical care
- ☐ Gives medical advice without mentioning seeing a healthcare professional

Check the source

- ☐ Who posted the video?
- ☐ Is the account verified?
- ☐ Does the doctor appear on a real hospital, university, or clinic website?

Use simple tools

- ☐ InVID Video Verification Tool: **https://www.invid-project.eu**
- ☐ Slow playback (YouTube or phone video controls)
- ☐ Reverse image search (Google Images)

! Final rule: If you're unsure, don't share. Sharing unverified health information can cause real harm. !

6. Practical Exercise - Creating a Campaign Countering Health Misinformation

Participants work in small groups to design a simple awareness campaign responding to a real example of health misinformation or disinformation commonly found online. The objective is to help learners apply critical thinking, fact-checking, and ethical communication skills in a practical and collaborative way.

Step 1 – Select a Misinformation Example

Choose one example: anti-vaccine claims, fake "miracle cures", detox diets, manipulated videos or deepfakes, or misleading mental health advice online.

Step 2 – Identify the Target Audience

Define who the campaign addresses: teenagers, elderly people, parents, migrants, or social media users.

Step 3 – Fact-Check the Claim

Verify using official health websites, fact-checking platforms, and scientific sources. Ask: Is it supported by evidence? Who benefits? What are the risks?

Step 4 – Create the Campaign

Produce an awareness product (Instagram post, video script, infographic, poster, or WhatsApp message) using simple language, reliable sources, and no fear-based communication.

Step 5 – Present and Discuss

Each group presents their example, why it spreads, the public health risks, and their strategy. Discussion focuses on clarity, accessibility, credibility, and emotional impact.

Simple Campaign Template

1. Topic

What misinformation are you addressing?

2. Target audience

Who is most exposed to this misinformation?

3. Platform

Where would this campaign be shared? (e.g. Instagram, TikTok, community centre, WhatsApp)

4. Key message

What is the most important thing people should understand?

5. Reliable source used

Which official or verified source supports your message?

Expected Learning Outcomes

Through this activity, participants develop:

- **Fact-Checking Skills**

  Practical ability to verify health claims using reliable sources.

- **Misinformation Awareness**

  Understanding of how false health content spreads online.

- **Ethical Communication**

  Strategies for sharing health information responsibly online.

- **Health Communication Confidence**

  Confidence in communicating reliable health information in accessible ways.

About the Project

FRAME Health – Community Infodemic Management Programme (CIMP) is developed within the Erasmus+ project "FRAME Health" (Project No. 2024-2-IT02-KA210-ADU-000280006).

The project focuses on strengthening health literacy, combating misinformation and infodemics, and supporting more inclusive and accessible health communication practices across Europe. Through community-based education, digital literacy, and intercultural approaches, the project aims to empower adult educators, social workers, mediators, and local communities to better navigate health information in digital environments.

Project Partners

POT Project APS – Italy

Cultural association active in adult education, media literacy, digital storytelling, and social inclusion.
Website: **https://potproject.it**

BISI – Bulgaria

Organisation working in the fields of health literacy, vulnerable communities, and social inclusion initiatives in Bulgaria.
Website: **https://b-isi.eu/**

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