How to address myths
and misinformation using behavioural insights

Myths and misinformation pose a serious challenge for government, particularly when they result in harmful behaviours or major disruption.

Once inaccurate beliefs are formed, they are hard to change and often continue to shape decisions despite credible corrections. Although this phenomenon has been widely studied, there is limited evidence on the best ways to tackle it.[1] This guide offers five potential strategies which should be tested with target audiences to find out what works.

Before myth-busting, make sure you:

- Understand your target audience and focus on those who are open to learning, rather than those who are personally attached to the myth.

- Ensure the evidence you are using to 'bust' the myth is accurate, unequivocal and easily accessible for your audience.

- Measure the impact of myth-busting on actual behaviour and check for potential backfire. This is important given the evidence on myth-busting is limited.

- Consider changing behaviour before changing minds, e.g., appointment reminders can achieve higher vaccination rates than trying to convince people that vaccinations are important.[2]

- For more information, refer to **bit.ly/the-debunking-handbook**

1. Teach misinformation techniques

People are better able to resist misinformation if they understand how they might be deceived.[3]

What to do? 'Vaccinate' people against false beliefs by showing them the methods used to create and spread misinformation.

Example: People who spent 15 minutes practising common strategies for manipulating news stories—such as Twitter bots, Photoshop and conspiracy theories—were better at detecting fake news headlines.[4]

2. Focus on facts, not myths

Presenting too much information on the myth can reinforce false beliefs because people tend to mistake familiarity with truth. Equally, factual information should be detailed but not complex as this can lead people to prefer the easy-to-understand myth over the truth.[5]

What to do? Increase people's familiarity with the key facts in a simple and accessible format, such as by using icons to present statistics. To weaken the persistence of false beliefs, ask your audience to participate in the development of counterarguments to the misinformation.[6]

Example: A 'myths vs. facts' flyer increased the misbelief that vaccines cause autism compared to a flyer which contained only fact infographics about vaccines.[7]

3. Reinforce personal adequacy

Humans want to feel good about themselves and their social group. This can lead us to reason away facts that challenge our personal beliefs, group identity or moral values.[8]

What to do? To make the truth less threatening to a person's self-worth, get them to complete a self-affirmation task before exposing them to a debunking message. This involves asking people to select their most important values and describe times when they demonstrated those values.[9]

Example: A US study found that people who completed a self-affirmation task before reading evidence that challenged their views on capital punishment, were more likely to change their mind, even when they held strong prior views.[10]

The design of every government initiative is different, so talking to the people whose behaviour you'd like to change will give you greater insight into how you can support them.

4. Use a trusted messenger

The less we know about something, the more our beliefs are shaped by the trustworthiness of the messenger. Trust is often more important than expertise. For example, a doctor may be an expert but not seen as trustworthy if they are sponsored by a drug company.[11]

What to do? Identify a trusted messenger for your audience to speak about the facts.

Example During the 2016 Zika virus outbreak, rebuttals to misinformation on Twitter were more effective at changing perceptions when they came from the US Centers for Disease Control and Prevention (CDC) rather than from other Twitter users, even when the same information was provided (Figure 1).[12]

Figure 1. The US Centers for Disease Control and Prevention rebutting misinformation on Twitter

Tyler Johnson @TylerJ41

Wow, check out this story – Zika is caused by GMO mosquitoes! USATODAY.com #zika

Zika outbreak 'caused by release of genetically modified mosquitoes in the U.S.

The genetically engineered insects were designed to stop the spread of dengue fever but critics now fear the program may have had a deadly consequence

USATODAY.COM

CDC @CDCgov   View summary

@TylerJ41 This information has been discredited by world leaders in disease control and world health. cdc.gov/zika #zika

5. Replace myth with explanation

To make sense of problems quickly, our mind organises information into 'mental models'. If the first piece of information we hear about a topic is a myth, it can form the foundation of a new mental model, making it very hard to forget. Debunking that myth may leave a 'gap' in our understanding which needs to be filled by something else.[13]

What to do? Be first to provide information about a new issue, reducing opportunities for a myth to become the basis of a mental model. If the myth has already taken hold, provide an explanation to fill the gap left by the myth you have debunked. For example, rather than saying previous studies linking autism to vaccines are false, explain other causes of autism.

Example: A US study found that simply retracting information about the source of a warehouse fire was not enough for people to believe a correction in the original story. However, when given an alternative explanation—that the fire was started by arson and not by negligent storage of gas cylinders—people were much less likely to rely on the original 'retracted' information.[14]

References

1   Swire, B. & Ecker, U. K. H. (2018). Misinformation and its correction: Cognitive mechanisms and recommendations for mass communication. In. B. Southwell, E. A. Thorson, & L. Sheble. (Eds), *Misinformation and Mass Audiences*. Austin, TX: University of Texas Press.

2   Brewer, N. T., Chapman, G. B., Rothman, A. J., Leask, J., & Kempe, A. (2017). Increasing vaccination: Putting psychological science into action. *Psychological Science in the Public Interest, 18*(3), 149-207.

3   Nsangi, A., Semakula, D., Oxman, A. D., Austvoll-Dahlgren, A., Oxman, M., Rosenbaum, S., Morelli, A., Glenton, C., Lewin, S., Kaseje, M., Chalmers, I., Fretheim, A., Ding, Y., & Sewankambo, N. (2017). Effects of the Informed Health Choices primary school intervention on the ability of children in Uganda to assess the reliability of claims about treatment effects: A cluster-randomised controlled trial. *The Lancet, 390*(10092), 374-388.

4   Basol, M., Roozenbeek, J., & van der Linden, S. (2020). Good news about bad news: Gamified inoculation boosts confidence and cognitive immunity against fake news. *Journal of Cognition, 3*(1), 2.

5   Lewandowsky, S., Ecker, U. K., Seifert, C. M., Schwarz, N., & Cook, J. (2012). Misinformation and its correction: Continued influence and successful debiasing. *Psychological Science in the Public Interest, 13*(3), 106-131.

6   Chan, M. P. S., Jones, C. R., Hall Jamieson, K., & Albarracín, D. (2017). Debunking: A meta-analysis of the psychological efficacy of messages countering misinformation. *Psychological Science, 28*(11), 1531-1546.

7   Pluviano, S., Watt, C., & Della Sala, S. (2017). Misinformation lingers in memory: Failure of three pro-vaccination strategies. *PLoS One, 12*(7).

8   Weir, K. (2017). Why we believe alternative facts. *Monitor on Psychology, 48*(5), 34-39.

9   Sherman, D. K., & Cohen, G. L. (2002). Accepting threatening information: Self–affirmation and the reduction of defensive biases. *Current Directions in Psychological Science, 11*(4), 119-123.

10 Cohen, G. L., Aronson, J., & Steele, C. M. (2000). When beliefs yield to evidence: Reducing biased evaluation by affirming the self. *Personality and Social Psychology Bulletin, 26*(9), 1151-1164.

11 Guillory, J. J., & Geraci, L. (2013). Correcting erroneous inferences in memory: The role of source credibility. *Journal of Applied Research in Memory and Cognition, 2*(4), 201-209.

12 Vraga, E. K., & Bode, L. (2017). Using expert sources to correct health misinformation in social media. *Science Communication, 39*(5), 621-645.

13 Hamby, A., Ecker, U., & Brinberg, D. (2019). How stories in memory perpetuate the continued influence of false information. *Journal of Consumer Psychology, 30*(2), 240-259.

14 Johnson, H. M., & Seifert, C. M. (1994). Sources of the continued influence effect: When misinformation in memory affects later inferences. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 20*(6), 1420.

Need more info?
bi.dpc.nsw.gov.au