

CHALLENGES AND OPPORTUNITIES IN DEVELOPING AN INFODEMIC MANAGEMENT COURSE

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Abstract:

Infodemic affects all of us at different levels, starting with an individual who may adopt risky behaviour, influence his/her family, spread misinformation into society, increase the burden on the health system, and impact society as a whole. Infodemic management comes to prevent and/or diminish this impact. Health authorities are increasingly recognizing the need to expand their capacities for infodemic management in their efforts to better prepare for future health emergencies, and one of the most important roles here is played by public health and healthcare managers. The aim of this paper is to identify the challenges and opportunities in developing an Infodemic Management course in the Republic of Moldova and come up with recommendations for course continuity. This experience can also be useful to other countries, with local languages other than English. At the School of Public Health Management (SPHM), in partnership with UNICEF, a 25-hour Infodemic Management course was developed. The focus of the course is to prepare public health managers for current and future infodemics. The course was tested on 25 participants in March 2024 to gather feedback and make improvements. The results showed that test scores almost doubled after the course, indicating that the objectives were successfully met. Also, the course was highly appreciated in the evaluation questionnaire. In developing the Infodemic Management course, each of the identified four challenges has brought an opportunity. Thus, limitations regarding time, costs, interaction, and little awareness could be solved by adapting available content, building partnerships, digitising the course, and applying proper promotion techniques. Taking into account the above, we can conclude that Infodemic Management is a successful, extremely current, and useful course for managers in the health system, which needs to be implemented in the Continuing Medical Education offer of the SPHM.

Key words: *infodemic management, course development, resilience, misinformation, disinformation*

JEL: I12,H12, I23.

1. Introduction

Infodemic means „too much information, including false or misleading, in digital and physical media during an outbreak”, and it is a notion that was widely used since the Covid-19 pandemic. It causes

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confusion and risky behaviours, because people may try treatments heard from friends or influencers, that may be harmful, it also leads to distrust of health authorities, by eroding public trust, and undermining the public health response because people won't listen to the recommendations (WHO website). Infodemic affects all of us at different levels, starting with an individual who may adopt risky behaviour, influence his/her family, spread misinformation into society, increase the burden on the health system, and impact society as a whole. To prevent and/or diminish this impact, infodemic management comes to ensure that people have „the right information at the right time in the right format so that they are informed and empowered to make behavioural changes during the epidemic to protect their health, the health of their loved ones and the health of their communities” (World Health Organization, 2021).

Infodemic management is about listening to community concerns and questions, promoting risk understanding and expert health advice, increasing resistance to disinformation, engaging and empowering communities to take positive action. An infodemic management framework begins with social listening to understand public questions and concerns and ends with enhancing preparedness (Purnat, 2020). Global, regional, and local health authorities are increasingly recognizing the need to expand their capacities for infodemic management in their efforts to better prepare for future health emergencies (Purnat, Nguyen and Briand, 2023). One of the most important roles in infodemic management is played by public health and healthcare managers. This is the focus of our course: to prepare public health managers for current and future infodemics, because future challenges are yet to come.

The aim of this paper is to identify the challenges and opportunities in developing an Infodemic Management course in the Republic of Moldova, and come up with recommendations for course continuity. This experience can be also available for other countries, with local languages other than English.

Since 2020, WHO and its partners have developed an innovative global blended training program and created a network of over 1300 infodemic managers from 142 countries. Also, WHO has created a series of free safe-paced online courses (Purnat et al, 2023). We think this effort can be continued at the local level, especially by adapting content and make it accessible in different languages.

The main motivations for developing a local infodemic management course are:

- Emerging topic – it is increasing the importance of infodemic management for vaccination programmes.
- Need to motivate professionals to learn more – by providing various opportunities, including by offering study credits (continuing medical education) and certificates.
- Adapted information for local context – examples have to illustrate the local experience and specific.
- Relevant topics for public health managers – the topics have to be of interest for the target audience, not too general and not too specific.
- Expanding the accessibility of information – there are courses in English, for example offered by Open WHO, but not all of our target audience speak English, that is why we have decided that offering a course in Romanian would be impactful.

2. Basic content.

At the School of Public Health Management of *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova, in partnership with UNICEF, a 25-hour Infodemic Management course was developed. The course was tested on 25 participants in March 2024 to gather feedback and make improvements.

The scope of the course is to develop to the course participants the skills of managing the infodemic, detecting misinformation and countering rumours in health. Beneficiaries are managerial staff (medical and non-medical) from medical institutions in the country and specialists in the field of public health.

At the application level the following objectives were set:

1. apply the six fundamental elements of person-centred interventions
2. describe how an infodemic affects public health
3. identify the roles of different actors in managing the infodemic
4. describe the concept of risk perception in relation to health emergencies
5. identify challenges related to risk communication and community engagement
6. explain the importance of social marketing in creating messages
7. understand and identify false information and misinformation
8. identify tactics used by malicious actors to create misleading information
9. analyse the nature, origins and spread of disinformation
10. describe the relevant expertise needed to structure an infodemic report

At the level of integration the objectives are:

1. learn to adapt to different operating environments to ensure measurement of the impact of interventions
2. identify how and why risk perception varies
3. test messages before and after implementation
4. identify mechanisms for using social listening and engaging key actors and communities
5. verify health information and visual content online
6. identify effective methods of debunking and amplifying credible health information
7. use free social listening tools to identify information gaps
8. apply tips and tools to increase resistance to misinformation among peers and family
9. develop institutional capacities to increase resilience to disinformation and contribute to increasing correct information of the population
10. streamline report production to meet timely dissemination to relevant stakeholders.

The course consists of five topics, each with about five academic hours (courses and seminars), focusing on the most important aspects that our public health managers need to know (see Table 1). Each topic is developed and taught by a professional and experienced lecturer. Sometimes, adapting the content to the experience and expertise of the available lecturer could also be a solution.

Table 1. Subjects of the Infodemic Management course, and number of hours

| | | Courses | Seminars | Total |
|-------------------------|---|---------|----------|-------|
| 1. | Introduction to infodemic management | 2 | 2 | 4 |
| 2. | Risk communication and community engagement. Social listening. Social Marketing and Message Testing Methods | 2 | 3 | 5 |
| 3. | Risk perception in public health emergencies | 2 | 3 | 5 |
| 4. | Verification of information. Contextual analysis of messages. Debunking and inoculation | 2 | 3 | 5 |
| 5. | Data analysis and reporting | 2 | 3 | 5 |
| | Evaluation | | 1 | 1 |
| Total (academic hours): | | 10 | 15 | 25 |

Source: Infodemic Management Curriculum, School of Public Health Management

The evaluation is a combined one, focusing on the creation of an infodemic management project based on a case study from the curriculum. Participants have to imagine that a measles epidemic was declared in the Republic of Moldova. The exercise implies that in the last month, 50 cases were detected in adults and children, as well as 5 deaths. The Ministry of Health ordered the mobilisation of an infodemic management team.

The project requires teamwork and consists of six assignments to be completed based on what was learned during class: creating the team, developing interventions, applying Design thinking, analysing Social Listening results, designing a Social Marketing strategy, and reporting.

The course is also available online, in the learning management system of SPHM. It comprises the presentations, written text that explains the presentations, discussions (chats), exercises, assignments and an evaluation test. By digitalizing the course we provide the opportunity for self-learning, asynchronous interaction between participants and long-term access to information.

A 10-question test was given to assess participants' knowledge before and after the course (Figure 1). Each question focused on a different course topic. A total of 25 people took part in the course, and while completing the test was voluntary, 21 participants took the test before the course began. The average score for the pre-course test was 3.31 out of 10, with the lowest score being 1 and the highest score 7. After completing the course, 20 people participated in the test again on the fifth day. This time, the average score improved to 6.95, which was nearly double the average from the pre-course test. Three people scored the lowest at 4, two people scored the highest at 10, and two more scored 9 points.

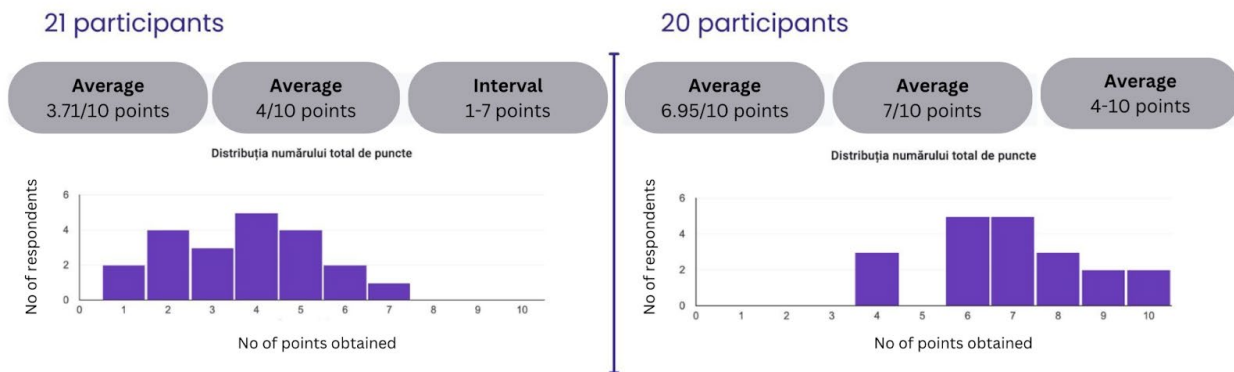


Figure 1. Pre and post-test results for the Infodemic Management course

Source: Developed by the authors

An evaluation questionnaire was conducted to assess opportunities for course improvement. The results indicated that the course difficulty was rated as average, and the majority of participants found it to be valuable for their professional development, with 33.3% giving it a mark of 9 and 66.7% giving it a mark of 10.

Strengths identified by participants:

- *Current subject with modern exposition and interactive methods*
- *Informative, useful, and interesting*
- *Introduction to the actuality, importance, and scope of the impact of the infodemic*
- *Identifying and promoting ethical communications and behaviours online*
- *Providing knowledge and techniques to identify and manage false or manipulative information*
- *Useful, clear, interesting, and interactive*
- *Informative, relevant, and inspirational*
- *Focuses on the current problem and contributes to strengthening everyone's ability to operate with information*
- *Creates a warm atmosphere and provides useful things*
- *Development of critical information evaluation skills*
- *Promoting informed behaviours and practices.*

Here are the revised responses from the participants when asked to identify three aspects to improve:

1. *More work needs to be done on preventing infodemic risks.*
2. *Allocate more time to the given topic, considering its relevance and impact on society.*
3. *Increase discussions on ways to counter infodemic and manage the spread of false or manipulative information.*

In developing the Infodemic Management course, the identified challenges are closely linked to the arising opportunities (Figure 2). The first challenge concerns the time limit: the course had to be developed on time and cover the most important aspects of infodemic management within a small number of hours. An opportunity in this case is to use and adapt the already available content, including the resources offered by Open WHO.

The second challenge pertains to high costs, which can be addressed by establishing partnerships with other organisations that could offer support. In the case of SPHM, the course was developed in partnership with UNICEF.

Participants may be hesitant to engage, so it is essential to provide practical examples for them to share their opinions and experiences. Additionally, it is necessary to incorporate group work and case-study solving into the final assignment. Also, digitalizing the content will make it more accessible and interactive.

Given the abundance of available courses and the busy schedules of public health managers, it may be necessary to actively encourage their participation. This can be achieved by providing well-prepared and experienced lecturers for each relevant subject, focusing on online dissemination, and leveraging word-of-mouth marketing.

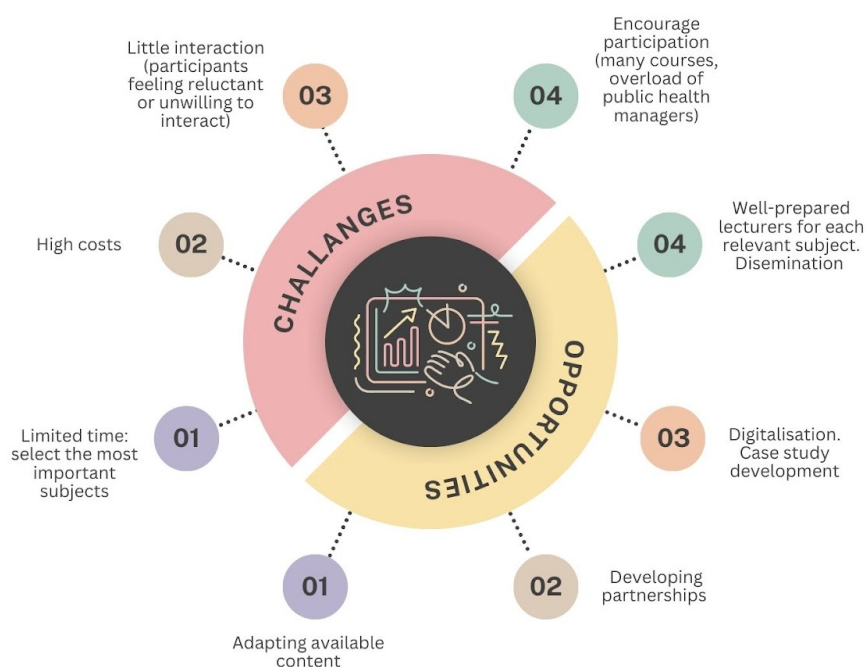


Figure 2. Challenges and opportunities in developing an Infodemic Management course

Source: Developed by the authors

3. Conclusions.

In developing the Infodemic Management course, each of the identified four challenges have arisen an opportunity. Thus, limitations regarding time, costs, interaction and little awareness could be solved by adapting available content, building partnerships, digitising the course and applying proper promotion techniques.

The results showed that test scores almost doubled after the course, indicating that the objectives were successfully met. Also the course was highly appreciated in the evaluation questionnaire.

Taking into account the above, we can conclude that Infodemic Management is a successful, extremely current and useful course for managers in the health system, which needs to be implemented in the Continuing Medical Education offer of the SPHM.

The key takeaways are as follows:

1. Ensure continuity by institutionalising the course, including it into curriculum or permanent training offer.
2. Increase awareness by promoting the course to attract participants and raise awareness regarding infodemic.
3. Piloting the course is crucial for producing a polished final product, it has to be adapted and relevant for local context and the target audience.
4. Evaluate results and course impact with pre- and post-tests, based on the subjects included in the curriculum.
5. Transform every challenge into an opportunity!

Bibliographical references.

1. Open WHO, infodemic courses:
<https://openwho.org/courses?q=infodemic&button=&channel=&lang=&category=&topic=>
2. Purnat, T.D., Bertrand-Fernadis, C., Wilhelm, E., Utunen, H., Briand, S., Nguyen, T. (2023), Building a comprehensive online course series to enhance infodemic management globally, *European Journal of Public Health*, Volume 33, Issue Supplement_2, ckad160.1473, <https://doi.org/10.1093/eurpub/ckad160.1473>
3. Purnat, T.D. (2020). Building systems for respond to infodemics and build resilience to misinformation. <https://www.linkedin.com/pulse/building-systems-respond-infodemics-build-resilience-tina-d-purnat/>
4. Purnat, T.D., Nguyen, T., Briand, S. (2023) *Managing Infodemics in the 21st Century: Addressing New Public Health Challenges in the Information Ecosystem*. Springer Nature. ISBN 3031277899, 9783031277894. 144 p.
5. World Health Organization (2021) *Infodemic management: an overview of infodemic management during COVID-19, January 2020–May 2021* ISBN 978-92-4-003596-6 (electronic version) Available from: <https://iris.who.int/bitstream/handle/10665/346652/9789240035966-eng.pdf>
6. WHO webpage: https://www.who.int/health-topics/infodemic#tab=tab_1