

# Comprehensive Evaluation of the Online Lifelong Education Course Prevention and Treatment of Substance Use Disorders for Physicians in the Czech Republic: Study Protocol

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**BACKGROUND:** The course Prevention of Harmful Substance Use and Addiction Treatment is an integral and mandatory part of postgraduate medical education in the Czech Republic. Its aim is to acquire the necessary knowledge, skills and competences (learning outcomes) for good medical practice, screening and brief intervention. The course includes an international curriculum for treatment and prevention in addictology and a comparison with competency models. Part of the course is also testing attitudes with a focus on discrimination related to substance use. **AIM:** The aim of this study is to assess the quality of the newly prepared e-learning course for addictology education of physicians and attitudes of physicians to a selected group of addictive substances and their users. The measured attitudes will be compared between the

course participants and the control group and will also be compared with the general public. **SAMPLE:** The research sample will consist of medical graduates who have completed the course ~1000 respondents (group A) and the control group ~150 respondents (group B) with the same educational parameters, but did not complete the course. **METHODS:** A complete evaluation will be performed in order to verify the effectiveness of the course using pre-test, post-test and after six months of follow-up test. The main purpose will be the evaluation of educational outcomes, the secondary purpose will be the evaluation of attitudes with a focus on discrimination against drug users and their structural stigma. The research will take place between 2021 and 2024.

**Keywords** | Physicians – Postgraduate Education – Evaluation – Online Course – Learning Outcomes – Attitudes – Discrimination – Substance Use Curricula

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## ● 1 INTRODUCTION

The misuse of psychoactive substances is one of the main public health problems and affects more than a billion people on this planet. These people use addictive substances which are harmful and life-threatening. About 10% of illnesses are attributed to the use of psychoactive substances (WHO ASSIST, 2015). One of the important aspects is the possible inclusion of all the medical specialisations visited by patients in the early stages of the problem, usually as a result of connected health issues. The key factor is therefore availability and accessibility to the widest population (Miovský, 2015). It is connected with the need for quality education of physicians in various clinical specialisations, healthcare workers, and other professions that can be addressed by patients and clients in connection with their physical, mental, and social issues. A greater emphasis on training about addictive substances corresponds to a wider perception of addictive substance use disorders as chronic health problems and it has contributed to the establishment of specialised organisations, such as ASAM, and the improvement of the quality of education in the field of addictive substance use disorders. In spite of this, compared to other disorders, the amount of time devoted to this education is inadequately low (Klamen, 1999; Powers et al., 2004).

The lack of knowledge and clinical skills among physicians is usually connected with the negative attitudes to addictive substance users (Geller et al., 1989). The studies proved that many physicians are not able to examine and diagnose addictive substance use disorders properly (Buchsbaum et al., 1992; Cleary et al., 1988; Coulehan et al., 1987). The course is the main channel through which general practitioners gain information for the improvement of their procedures and screening, early interventions, and recommendations.

The attitudes to addictive substance users, of both legal addictive substances – alcohol and tobacco – and illegal ones, are one of the factors which may have an impact on medical procedures. For this reason, education courses about addictive substances often include a part focused on attitudes and effective strategies for how to change these attitudes (Skinner et al., 2007). The professional attitudes of physicians in their practice are focused on lawfulness, whether to react to the use of addictive substances in the particular field, trust in their standard of knowledge, and the perceived effectiveness of the available interventions (Eagly & Chaiken, 1993).

The integration of new knowledge and current trends in the field of education is an integral part of the necessary development in the above-mentioned specialisations and it is important for this development to react to various needs, comply with the requirements, and conform to certain standards of quality so that it would be possible to achieve effective cooperation between the individual specialisations and thus to improve the quality of the care for patients and clients within prevention, healthcare, and public healthcare.

The systematic attitude of the International Society of Substance Use Professionals (ISSUP) and the International Consortium of Universities for Drug Demand Reduction (ICUDDR)

raised a discussion about the role of universities as the key factor for further development. The Universal Treatment Curriculum (UTC) and Universal Prevention Curriculum (UPC) bring a revolutionary perspective as regards transferring various types of education and general training to everyday practice in the area of drug policy (Miovský, 2014). The addictological competences of physicians are defined by both international and national organisations. One of them is the American Board of Addiction Medicine (ABAM, 2012), which works with six core competences – care for patients in the form of screening, diagnosis, medical history, examination, explanation, and reasoning – or the International Society of Addiction Medicine, focused on the international education of physicians in the field of addictology. Another organisation, the American Society of Addiction Medicine (ASAM, 2015), describes nine key competences in relation to the curriculum – the observance of ethical rules and legal regulations, reflecting their own respectful and non-discriminative attitudes, understanding addiction, the application of evidence-based attitudes, screening, communication with the patient, consultancy, motivation interviews, matching, pharmacology and family and group therapy.

The circumstances, such as the conception of the curriculum and strategies for 2014-2020, the change of the Czech national legislation (Act No. 379/2005 Coll. was cancelled on 31 May 2017 and replaced with Act No. 65/2017 Coll.) and modifications of the individual education programmes, e.g. combining the Prague model and UPC and its European forms (EUPC), in compliance with international and Czech standards (Miovský et al., 2019; Volfová, Lososová & Miovský, 2020), and modifications to UTC for education programmes for physicians and healthcare workers contribute to a significant change of the form of education in addictology.

The form of the e-learning course has been integrated as postgraduate education of physicians in addictology within the scope of their specialisation training and it is divided into eight parts, in which the main topic is early diagnosis and brief interventions filling the gap between the prevention and treatment, and it provides a practical procedure whose aim is to recognise an actual or potential problem with addiction and to motivate an individual to active treatment (Babor & Higgins-Biddle, 2010). The aim of the research is to assess the quality of the preparatory documentation and efficiency of the Prevention of Harmful Use of Addictive Substances and Addiction Treatment course run by the First Faculty of Medicine and thus to find the advantages and imperfections and by means of them to determine possible measures through a formal report and recommendations, for example a more detailed specification of the learning outcomes. It means a description of the changes and parameters of the postgraduate education of physicians in the Czech Republic and the course in the Prevention of Harmful Use of Addictive Substances and Addiction Treatment and the performance of a comparison with other competence models (Vondrová, 2018).

## ● 2 SAMPLE

The study samples will comprise university-educated respondents, specifically graduates of faculties of medicine who completed the course (Group A). The estimated number of respondents is 1000 persons during two years; the limit is given by the course capacity, use of this capacity, and frequency. A control group of 150 respondents with the same educational parameters who did not complete the course will also be tested (Group B). The pilot study will be made on a sample of 100 persons with the same parameters as Group A.

The whole selection of Sample A will be performed by the First Faculty of Medicine, i.e. the institution organising the course; Sample B will be addressed by means of research workers who will use a freely accessible database of physicians, for example a database of health insurance companies or the Medical Chamber.

## ● 3 METHODS

The research is based on quasi-experimental evaluation, which is an important part of the educational programme and is significant for improving its quality. According to the WHO (2000), it is a means of getting feedback concerning the programme which is based on systematic collection, analysis, and interpretation of data concerning the programme and its possible effects and impacts (EMCDDA, 1998) which can be used in the future to optimise it, in particular its learning outcomes: knowledge, skills, and competences. It is a combination of formative and summative evaluation using quantitative and qualitative approaches.

Evaluation will be used to assess the possibilities and limitations of the changed form of the postgraduate course for physicians. The main aims are:

- description of the course and its intentions and goals and assessment of whether it corresponds with the determined requirements, whether the course assignment is prepared in sufficient quality and at the required level (evaluation of the preparation stage);
- assessment of whether the course solution (assessment of whether the aims of the course) and its individual implementations correspond to the criteria of quality and initial intention (evaluation of the process);
- establishment of whether the individual parts of the programme connect to each other and the level of quality of the individual steps (evaluation of the process);
- evaluation of the results obtained during two years from the course participants, monitoring of how the course impacts on the target group of respondents – physicians. This means whether their completion of the course gave them the required level of competence and whether there is a change in the established attitudes (evaluation of the results).

Data will be collected using a questionnaire based on pre-prepared questions answered by the respondent in writing when participating in the course. The testing comprises a pre-test, a post-test, and a follow-up test six months after the completion of the course. In parallel, a control group that is not participating in the course will be examined. Besides measuring the individual learning outcomes, the research will also measure attitudes related to the discrimination against users of addictive substances.

The quality of the data obtained corresponds with the construction of the questionnaire (paper-and-pen version). On the basis of his research, Denscombe (2010) even arrives at the conclusion that online questionnaires have fewer missing answers and provide more complete data than paper-and-pen questionnaires. The preparation and implementation of an online questionnaire therefore requires great emphasis to be placed on monitoring the risk of a low return rate, representativeness, and sampling error (Vicente & Reis, 2010).

A test with a score in points has been prepared to assess and measure the learning outcomes. A prerequisite for issuing a course completion certificate and fulfilling one of the conditions of postgraduate education is achievement of the percentage determined for successfully passing the course. The data for measuring attitudes will be established in the form of a questionnaire prepared from quantitative and qualitative components. The questionnaire will be based on questions assessed by the participants using a Likert-type rating scale and on open questions. The following standardised tests will be used:

- PORC - V1905 (PORC, 2019) establishing the attitudes to the consumption of selected addictive substances and opinions on drugs;
- EMCDDA – Attitudes to Drug Use (EMCDDA, 2004);
- originally designed structure of questions prepared according to a structural stigma study (Suto et al., 2012) and attitudes to comorbid addictions (Munro, Watson & McFadyen, 2007).

The test scores will be recorded in the relevant records and transferred to an Excel table. Their analysis will be performed in the SPSS software. Most statistical procedures will be preceded with normality testing using a Shapiro-Wilk test. With regard to the given group of the study sample, we expect non-parametric data and use Wilcoxon's test, Mann-Whitney, non-parametric ANOVA, and Spearman's correlation coefficient. If the correlations come out as significant, we will apply the methods of multidimensional analysis.

## ● 4 ETHICAL ASPECTS

The research proposal was approved by the NMS Ethics Committee, reference number EKNMS-9/2021. The research takes into consideration the need to observe ethical principles and the rights of every respondent in compliance with the valid leg-

isolation of the Czech Republic and the code of medical ethics, addictology, and the First Faculty of medicine. Important aspects include optionality, confidentiality, pseudonymisation, and an option of the respondent to withdraw freely from the research at any time. Every respondent gives their informed consent, which includes the information about the research. Within the protection of respondents, any personally identifiable data and other information will be pseudonymised. Online questionnaires will be assigned through a certified platform.

## ● 5 CONCLUSION

The image of education in addictology in the Czech Republic is connected with its perception through the education system. The Czech qualification framework uses three categories – knowledge, skills, and competence – for the description of the learning outcomes of graduates of university programme (Vondrová, 2018). The concept of the addictology profession can vary in various countries depending on the different education systems, the social and political development of the particular country, the cultural context, and other specific aspects (Pavlovská et al., 2017).

The aim of the course is not only to follow the letter of the law, but also to create a functional model useful for physicians and their patients which will help them to identify the symptoms of addiction behaviours and send these patients to a specialist in time. The course is integrated into the lifelong education of physicians in the field of addictology. The quality and success of the course can be assessed using the information and data gained: whether the course participants achieved the required knowledge and competences and whether the goals of the course were met. The results of the study will clearly show if the knowledge and competences acquired are used in practice and the relationship between the perceived usefulness of the course and its practicality and benefits for professional development have been proved.

An undisputable advantage of the study is its e-learning form, which enables the testing of quite a large sample of people with the minimum economic demands for organisation and immediate and continuous checks on the results and their

actual analysis. A certain disadvantage of this way of testing is the difficulty involved in the identification of a respondent, especially in the control group not participating in the course. The evaluation and determined learning outcomes from the course performed in an e-learning format can help to set the future form of education in addictology and the use of the same education model in other fields as well. The measurement of the attitudes of the sample of physicians that is examined can be used for comparison to those of the general public in the Czech Republic.

The results of the course evaluation can also be compared to other countries implementing identical models in addictology education, together with possible participation in international programmes and comparison of the outcomes from the individual countries and universities.

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**Authors' contributions:**

TSZ wrote the article and collaborated with MM on revisions, drafting, and proofreading and approved the final form of the text.

**Declaration of interest:**

No conflict of interest.

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