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ПРИНЦИПЫ «МЕДИЦИНЫ 4П» В ГИГИЕНЕ ТРУДА: ЭТИЧЕСКИЕ ПРОБЛЕМЫ (НА ПРИМЕРЕ ПРОФЕССИИ «СТАНОЧНИК ПО МЕТАЛЛООБРАБОТКЕ»)

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В последнее время всё большее распространение получает абсолютно новая модель здравоохранения – так называемая 4П-медицина, медицина будущего. Свое название она получила от четырех основополагающих принципов: персонализации, предикции, превентивности и партисипативности. Данная модель является приоритетной для всей системы здравоохранения нашей страны, в том числе для такой отрасли профилактической медицины как гигиена труда. При этом реализация принципов «Медицина 4П» в гигиене труда затруднена в связи с наличием комплекса этических проблем. В связи с этим необходима разработка новых методических приемов и нормативных документов, регламентирующих данную деятельность в условиях реального производства.

Ключевые слова: предикция, персонализация, превентивность, партисипативность.

PRINCIPLES OF «4P MEDICINE» IN OCCUPATIONAL HYGIENE: ETHICAL PROBLEMS (ON THE EXAMPLE OF «MACHINE TOOL OPERATOR IN METALWORKING»)

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According to studies carried out in recent years, an absolutely new model of health care is becoming more common – the so-called 4P medicine, the medicine of the future. It is based on 4 fundamental principles: Personalization, Prediction, Prevention and Participation. This model is a priority for the entire healthcare system of our country, which includes such branch of preventive medicine as occupational hygiene. At the same time, the principles of «4P Medicine» in occupational hygiene are difficult to achieve due to the complex of ethical problems. The necessity of new methods and regulations's development for governing such research in the conditions of real production is revealed.

Key words: prediction, personalization, prevention, participation.

Prediction allows to predict respondents' predispositions and the health status. The scientific basis for predicting the health status changes of workers is a risk assessment method in occupational health, which allows to obtain quantitative values of possible damage to public health from harmful factors exposure of the working environment. Occupational risk assessment is carried out in the implementation

of the state sanitary and epidemiological supervision, production control, social and hygienic monitoring according to the requirements by Rospotrebnadzor representatives [7]. At the same time, it is necessary to take into account all risk factors for workers' health: social, behavioral, lifestyle factors in order to make an objective forecast of changes in the worker's health status. Thus, the changes in treatment management are discussed in State of Health Report in Europe, it is underlined the importance of «complex protection and maintaining the health at work» but not only the preventing measures, including occupational diseases (quoted after M. Darisheva) [2].

The behavioral risk factors identification for the workers' health poses a number of ethical problems, since a number of questions (for example, the survey method) are personal, sometimes intimate. Often, respondents are embarrassed and unwilling to answer, as this survey does make sense for them. To obtain true, reliable results, a special trust relationship is obligatory between the respondent and the interviewer. Thus establishing contact with the respondents is also very important, since the workers have no obligation to discuss the proposed topics, especially such as «bad habits», «family characteristics», «reproductive behavior», and etc. There is also no respondents' interest and, often, effective conviction of this survey due to the insufficient level of education and motivation of the respondents. The way out is to issue «bonuses», but it presents some ethical difficulties for the occupational hygienist. While conducting study among «machine operator for metalworking» such bonuses were: the prolonged break time for rest in agreement with the employer and presents (pens).

Personalization is fully focused on the respondents. Personalized medicine – is generally assumed to be a new direction in medicine. In fact, medicine began as a personalized one, only this term was not known before [8]. Similarly, in occupational health, a personalized approach has always been presenting when assessing the health status of workers performing their professional duties in specific conditions of the working environment. This approach is also carried out through preliminary and periodic medical examinations in accordance with the requirements of order № 302 [6], the purpose of which is to dynamically monitor the workers' health, timely detection of diseases, initial forms of occupational diseases, early signs of exposure to harmful and (or) hazardous production factors, the risk groups formation for the occupational diseases. Such examinations are mandatory, carried out at the expense of the employer.

At the same time, nowadays it is important to identify and assess risk factors (occupational, behavioral, social), and to predict disorders in the workers' health on their basis. The implementation of this principle touches the number of ethical problems and requires special efforts to involve the respondent in hygienic research. First of all, there are no obligations, normatively enshrined, to be examined for the identification of risk factors; the existing documents are of advisory nature [4]. Conducting risk assessment, the researcher must have the conviction skills to persuade in the importance of such work, as he has to deal with potentially healthy people. For example, when assessing the behavioral risk factors of machine operators for metalworking, about 11% of workers refused to participate in this study due to its lack of obligation. It is also difficult to obtain permission with the employer to conduct this study; they believe it may adversely affect the «image» of the production. Another peculiarity of research in occupational health is that the results of the survey are issued in the form of «impersonal» protocols, since one of the conditions for consent to participate in the physiological and hygienic experiment is confidentiality and anonymity. For example, performing a complex of functional tests that characterize the degree of physical fitness, the machine operators of a young age (18–29 years old) were extremely reluctant to experiment, suggesting that the results might become known to other participants. At the same time, the machine operators of the older age group (30–49 years old) did not bother the problem of a possible «leakage» of information. Therefore, it is necessary to take into account the age of workers in the formation of the observation groups.

Prevention – preventive measures, the next stage after determining the risk factors. It consists either in the complete prevention or reduction of the risk of functional deviations and workers' health disorders in a particular profession. Undoubtedly, this is the main principle of 4P medicine in occupational health; the priority is to increase the effectiveness of primary prevention – measures aimed to prevent the occurrence of the disease, i.e. the identification and correction of risk factors.

Individuals are forced to make personal decisions which include the proposed preventive measures in the current social and economic conditions; it means the transfer to an open society, unlike a closed (collectivist) one [5]. According to V.R. Kuchma [3], the prevention of epidemics remains the only collective preventive interest. The personal interests, the idea of which is determined by the psychological characteristics of the worker, the level of his education, the absence of restrictions and prohibitions imposed by society are the rest.

Participation is focused on a respondent and involves him directly in the research process. The fourth P is also sometimes treated as a «partnership». The implementation of the whole concept becomes possible due to this partnership between the occupational health worker (the researcher) and the worker. The respondent must be motivated to participate in prevention and must make an informed choice. In order to establish such partnerships, a great literacy is needed

about possible occupational and behavioral risks to the worker's health, promoting a healthy lifestyle; this is the basis of 4P medicine.

Thus, the 4P model is a priority for the entire healthcare system of our country, which includes such branch of preventive medicine as occupational hygiene. The principles of «4P Medicine» as a whole will allow to organize medical care in a way that maximum efforts are transferred to prevent the disease, rather than build up super-expensive technologies for treating patients, which will lead not only to an increase in the number of healthy people, but also to a significant economic benefit from the use funds allocated for the provision of medical care [1]. At the same time, the principles of «4P Medicine» in occupational hygiene are difficult to achieve due to the complex of ethical problems, which cause the importance to develop new methods and regulations for governing such research in real production.

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