SCREENING TESTS FOR MONITORING THE WORKERS’ HEALTH

VOLHA KARDASH
REPUBLICAN UNITARY ENTERPRISE "SCIENTIFIC PRACTICAL CENTRE OF HYGIENE"
The Centre is the leading scientific and practical institution in the Republic on hygiene, toxicology and occupational medicine and carries out its activities in the field of hygiene and human ecology, preventive, clinical and occupational medicine.

The Centre was founded in 1927. Personnel staff consisted of 9 workers (7 researchers and 2 technicians) and studied the quality of drinking water and food, hygienic assessment of housing and construction materials.

Our staff consists of 325 workers, including 106 researchers (5 professors, 32 PhD, MD)

We cooperate with Belarussian clinical and scientific centers, Belarussian Academy of science, Medical University, Belarussian State University, Belarussian Medical Academy of post graduated education.

Our foreign partners are Russian Research Institute of Occupational Health, Alliance for Risk Assessment, European Respiratory Society.
Our activities are

fundamental and applied research in the field of hygiene, toxicology, preventive and occupational medicine and human ecology;

scientific validation of government measures on the health maintenance and promotion;

environmental, occupational, natural and living sanitation; arrangement of conditions ensuring hygienic health and safety;

scientific-methodological and advisory center within the system of sanitary and epidemiological service of the Republic ensuring the efficient activity in the area of state sanitary control, development and improvement of sanitary rules and standards;

sanitary and hygienic research with the purpose of state hygienic regulation and registration of products:

Certification of food, perfumes and cosmetics evaluation and examination of working environmental factors, indicators of workflow severity and intensiveness for the assessment of work places in connection with working conditions
LABORATORY OF OCCUPATIONAL MEDICINE

We study the etiology, pathogenesis and develop methods of diagnostics, treatment and prevention of diseases caused by environmental and occupational factors, professional selection criteria and professional competence.

We worked out National Guidelines for diagnostics, treatment and prevention of occupational lung diseases when performing research “To study the peculiarities of occupational and work-related respiratory diseases, and to develop preventive measures”

We have been working on

• prevention of noninfectious diseases;
• screening programme for industrial workers;
• diagnostics of genetic predisposition for respiratory pathology;
• development early markers of respiratory pathology.
• We published 247 articles, 3 monographies, 10 patents.
OUR PARTICIPATION

European Respiratory Congress 2012-2014,
Y Russian Congress of occupational medicine
VII Russian National Congress of nuclear diagnostics, therapy, radiology
XII Russian Congress «Occupation and Health»
VI scientific-practical conference Russia with international participation "Actual problems of functional diagnostics, diagnostic capabilities in practice physician"
topic: PHC 3 - 2015: Understanding common mechanisms of diseases and their relevance in co-morbidities

project idea: Early markers of respiratory diseases caused by exposure to industrial aerosol/ or smoking

The study will identify characteristic metabolic profiles in workers with occupational respiratory diseases caused by exposure to industrial aerosol, depending on the stage of the disease, including the preclinical stage. Identification of typical for this category metabolic profile may be used for noninvasive screening in groups of workers with dust exposure to detect early stages of occupational respiratory diseases. Working-out can be the basis for personalized prevention and rehabilitation.

Competence: we can provide identification of metabolomic serum markers, microbiomic and metabolomic changes of exhaled breath condensate

We are looking for partners for integrating our efforts for understanding mechanisms of lung disease origin.

topic: PHC 25 – 2015: Advanced ICT systems and services for Integrated Care

project idea: Screening tests for monitoring the workers’ health

The screenings should be designed to identify not only occupational diseases such as chronic respiratory illnesses, hearing loss, kidney or liver disease and some forms of cancer but noninfectious diseases. The developed support system will help physicians quickly analyzing different personalized data from a large number of employees, making prediction and decision in prevention, diagnosis or treatment due to risk stratification by European guidelines.

Competence: we can provide inquirer and development of decision-making system for industrial workers

We are looking for programmer of the EU - to provide storage and access to data, including protection of personal data in accordance with the EU regulations, a specialist in personalized medical data bases, telemedicine and physicians
BELARUSSIAN NATIONAL PROGRAMME

National program for accelerated development of services in the field of information and communication technologies

National program for prevention, diagnosis and treatment of cancer (slowdown in cancer incidence and mortality, through the prevention, diagnosis, treatment and rehabilitation.)

National program “Tuberculosis” (for prevention and reduction the spread of tuberculosis infection, improvement the epidemiological situation)

National program to create a barrier-free environment for people with physical disabilities (The decrease in the frequency and severity of disability, improvement quality of life of persons with disabilities, their social integration into society)

National Demographic Security Programme (improving reproductive health, maternal and child health; reduction in total mortality, especially from preventable causes, the increase in life expectancy at birth; improving the quality of life of patients with chronic diseases and disabilities by creating conditions for their realization of the existing (residual) of the potential health)
RESEARCH IN PULMONOLOGY

To study clinical and epidemiological features of tuberculosis of children and adolescents, to improve diagnosis and treatment

To study features pathogenesis of severe bronchial asthma and to develop a differential algorithm of therapeutic management of the disease

To develop a system of epidemiological audit for extensively drug-resistant pathogen and on this basis to improve the current system of surveillance of drug-resistant forms of tuberculosis.

Develop organizational and methodological forms of prevention, diagnosis and treatment of pneumonia and multidrug-resistant tuberculosis
BUSINESS IN PULMONOLOGY

SE “Belintelmed”

developed

- spirometer “MAS” with screening programme for COPD and healthy workers;
- Pulse oximeter with daily evaluation programme

Plan

- research “Develop and master the production of portable multifunction diagnostic complex for respiratory monitoring”
THANK YOU FOR YOUR ATTENTION!