Main aspects of management of medical assistance on the territories contaminated by radionuclides
Bragin District – one of the most affected districts of Gomel Region by Chernobyl disaster

from 80 settlements of Bragin District:

- 58 belong to the zone contaminated by Cs-137 from 5 to 15 KU/sq.km. (60% of district territory)
- 22 belong to the zone contaminated by Cs-137 от 1 до 5 KU/sq.km (40% of district territory)
- Length of the district 110 km
- Total square of the district 1950 km²
- Distance from Chernobyl NPP to the nearest district settlement 25 km
- The district is agricultural
- Population
  before Chernobyl disaster 34 thousands
  resettled 12,5 thousands
  current population 15 thousands
State system of public health created and successfully functioning in Belarus

- A new building of Bragin central hospital and upgrading of existing one made in 2006 by order of the President of the Republic of Belarus Alexander Lukashenko
Structure of public health system of Bragin District

- 1 central hospital
- 1 divisional hospital
- 13 first-aid stations
- 4 outpatients' clinics
- 1 district center of hygiene and epidemiology
Structure of population of Bragin District

- Rural population: 9,179 (60%)
- Urban population: 6,108 (40%)
Age structure of the population of the district

- Able-bodied population: 28%
- Population of retirement age: 51%
- Children: 21%
State register of people suffered by Chernobyl disaster is created

All the citizens of the district divided on 6 groups of the register:

- 1-st group: participants of the elimination of the consequences of the Chernobyl NPP accident
- 2-nd group: resettled, evacuated and people who leaved dangerous territories by themselves
- 3-rd group: population living on contaminated territories in zones of first-priority and following resettlement
- 4-th group: children
- 5-th group: population living on contaminated territories in zones with right of resettlement, and with periodic radiation control
- 6-th group: participants of the elimination of consequences of other radiation accidents and their children
Obligatory programme of special annual medical examination of population

- Medical examination by physician (general practitioner, for children – pediatrician)
- Medical examination by endocrinologist
- Ultrasonic scanning of thyroid
- Electrocardiography and fluorography of chest
- General analysis of blood and urine, analysis of lipids
- For woman:
  - Medical examination by obstetrician-gynecologist
  - Cytological analysis on cervical carcinoma
- Analysis of internal incorporation of radionuclides in the body
Obligatory programme of special annual medical examination includes

• Analysis of internal incorporation of radionuclides in the body (on spectrometer of human radiation)

• There are 3 spectrometer of human radiation in the district, accessibility of the analysis is provided

• 1 mobile spectrometer of human radiation is functioning
Screening medical programmes

- Mammography for woman over 50 (for earlier diagnostics of breast cancer)
- Detection of PSA level for man over 45 (for earlier diagnostics of prostate cancer)
- Blood analysis for people over 50 (for earlier diagnostics of colorectal cancer)
Number of diagnosed new cases of malignant neoplasms

- 2007: 66
- 2008: 88
- 2009: 75
- 2010: 98
- 2011: 75
Structure of cancers (%)
Structure of first-time diagnosed diseases of adults in 2011 (%)
Structure of general diseases of adults (%)
Structure of diseases of children in the district (%)

- respiratory apparatus diseases
- digestive apparatus diseases
- skin diseases, dermatoses
- injuries
- otorhinolaryngological diseases
- organ of vision diseases
Distribution of the population on health groups

<table>
<thead>
<tr>
<th>Health Group</th>
<th>Adults</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1 - apparently healthy</td>
<td>18.6%</td>
<td>15.0%</td>
</tr>
<tr>
<td>D2 - belong to group of risk</td>
<td>42.4%</td>
<td>60.5%</td>
</tr>
<tr>
<td>D3 - with chronic diseases</td>
<td>38.7%</td>
<td>24.4%</td>
</tr>
</tbody>
</table>
Average lifetime of man and woman (years)
Structure of mortality (%)
Structure of mortality of able-bodied population (%)
List of diseases caused by radiation is approved in Belarus

- Acute and chronic radiation sickness, local radiation injury, acute radiation thyroiditis
- Radiation cataract
Approved list of diseases potentially caused by Chernobyl disaster, other radiation accidents

- Thyroid cancer
- Acute leukemia, chronic myeloid leukemia, mieloplastic syndrome, multiple myeloma
- Cancer of stomach, colon, lung, bronchus, breast, urinary bladder, nephroma
- Congenital malformations
- Hereditary diseases
Radiation monitoring of food organised on the base of:

- District sanitary and epidemiologic service
- Centers of practical radiological culture in the educational and medical structures
- Veterinary service
Informing of the population

- Centers of practical radiological culture created in educational structures
- Local information center created with participation of representatives of the district executive committee sanitary and veterinary services, structures of education, culture, public health, village executive committees, local mass media
- Methodological support provided by Institute of Radiology, Chernobyl Department and Belarusian Branch of Russian-Belarusian Information Center on the Problems of the Consequences of the Catastrophe at Chernobyl NPP
Field medical assistance and informing of the population are organised (by mobile brigades)
The State guarantees constitutional right of citizens on free-of-charge medical care

State social standards (norms) in medicine are approved and strongly controlled:

- Norm of budget expanses for 1 person
- Norms of emergency brigades number (1 brigade for 12 thousand people), pharmacy number (1 pharmacy for 8 thousand people)
- In-patient hospital department places number (at least 9 places for 1000 people)
- Doctors number: local doctors (1 doctor for 1,7 thousand people), general practitioners (1 doctor for 1,2 thousand people), pediatricians (1 doctor for 0,8 thousand people)
- Vehicles number, etc.
Japan Embassy in Belarus provided (granted) for Bragin hospital a middle class ultrasonic scanner for early diagnostics of diseases of the affected population in the frame of international cooperation programme “Root of grass”
Opening of Republic Scientific and practical Center of Radiation Medicine and Human Ecology in Gomel gave the possibility to conduct extraordinary and free-of-charge treatments and diagnostics for the liquidators and population living on the contaminated territories.
THANK YOU FOR ATTENTION!

Welcome to cooperation