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FOR ACTION AGAINST CANCER

Appendix 1: Plans for the development of national cancer control indicators

Cancer control statistics using a comprehensive ICT model

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National cancer control indicators

- Population burden indicators
  - Cancer epidemiology in the Czech Republic
- Indicators of prevention and early detection
  - Preventive check-ups at GP, gynaecologist, dentist
  - Coverage by cancer screening examinations
  - Vaccination
- Indicators of quality and performance of cancer centres (CC)
  - Regionally specific indicators – mapping of the catchment area (according to the Ministry of Health Bulletin)
  - Local indicators of CC's activity (according to the Ministry of Health Bulletin)
  - Indicators related to clinical guidelines specific to a particular cancer entity
- Performance indicators of end-of-life care

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Data sources

Cancer control statistics using a comprehensive ICT model

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Data sources and limitations

Data sources

- Information support for the evaluation of national cancer control indicators is provided by the national population registries, especially the National Registry of Reimbursed Health Services (NRRHS), Czech National Cancer Registry (CNCR), death certificates and demographic data from the Czech Statistical Office
- Apart from the CNCR, the key source of information is the NRRHS, which provides data for the monitoring of patients' pathway in the health care system.

Key limitations

- The diagnoses listed in the NRRHS are reported for the purpose of healthcare reimbursement and, from clinical point of view, may be preliminary or inaccurate, in many cases before the final histological confirmation of accurate diagnosis.
- NRRHS data do not include clinical data such as stage and morphology, identification of primary treatment or exact date of diagnosis; it is therefore rather indicative and linkage to the CNCR is essential for validated outputs.

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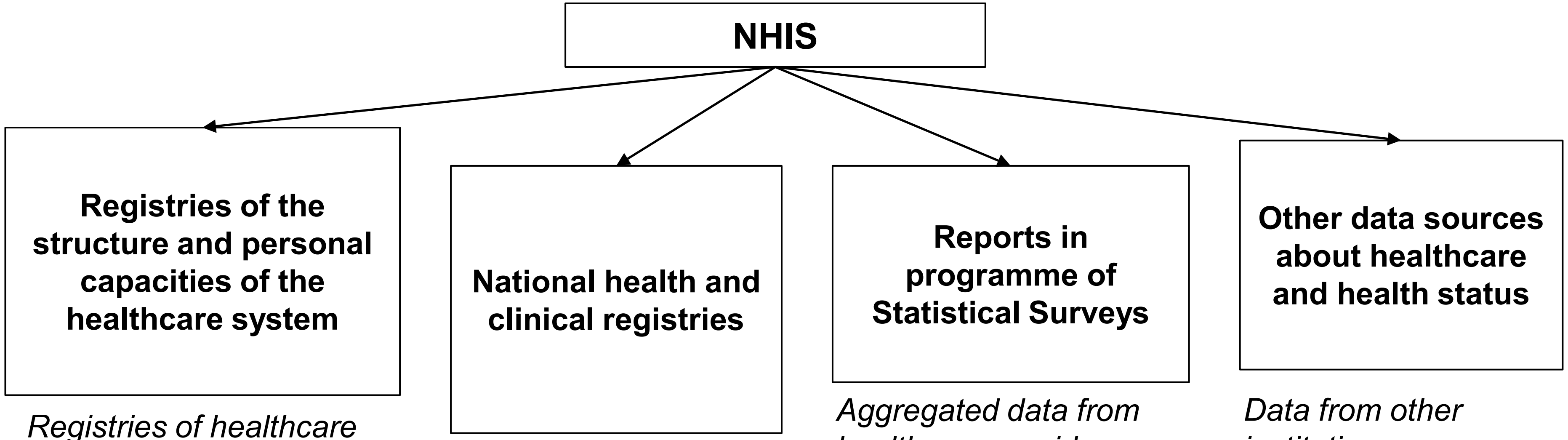
National Health Information System (NHIS)

- The National Health Information System (NHIS) includes several databases collecting data on health status of the population and on healthcare system capacities.



NHIS

Registries of the structure and personal capacities of the healthcare system

Registries of healthcare providers and professionals

National health and clinical registries

Databases of clinical characteristics of individual patients

Reports in programme of Statistical Surveys

Aggregated data from healthcare providers

Other data sources about healthcare and health status

Data from other institutions or surveys

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National Health Information System (NHIS) content and purpose

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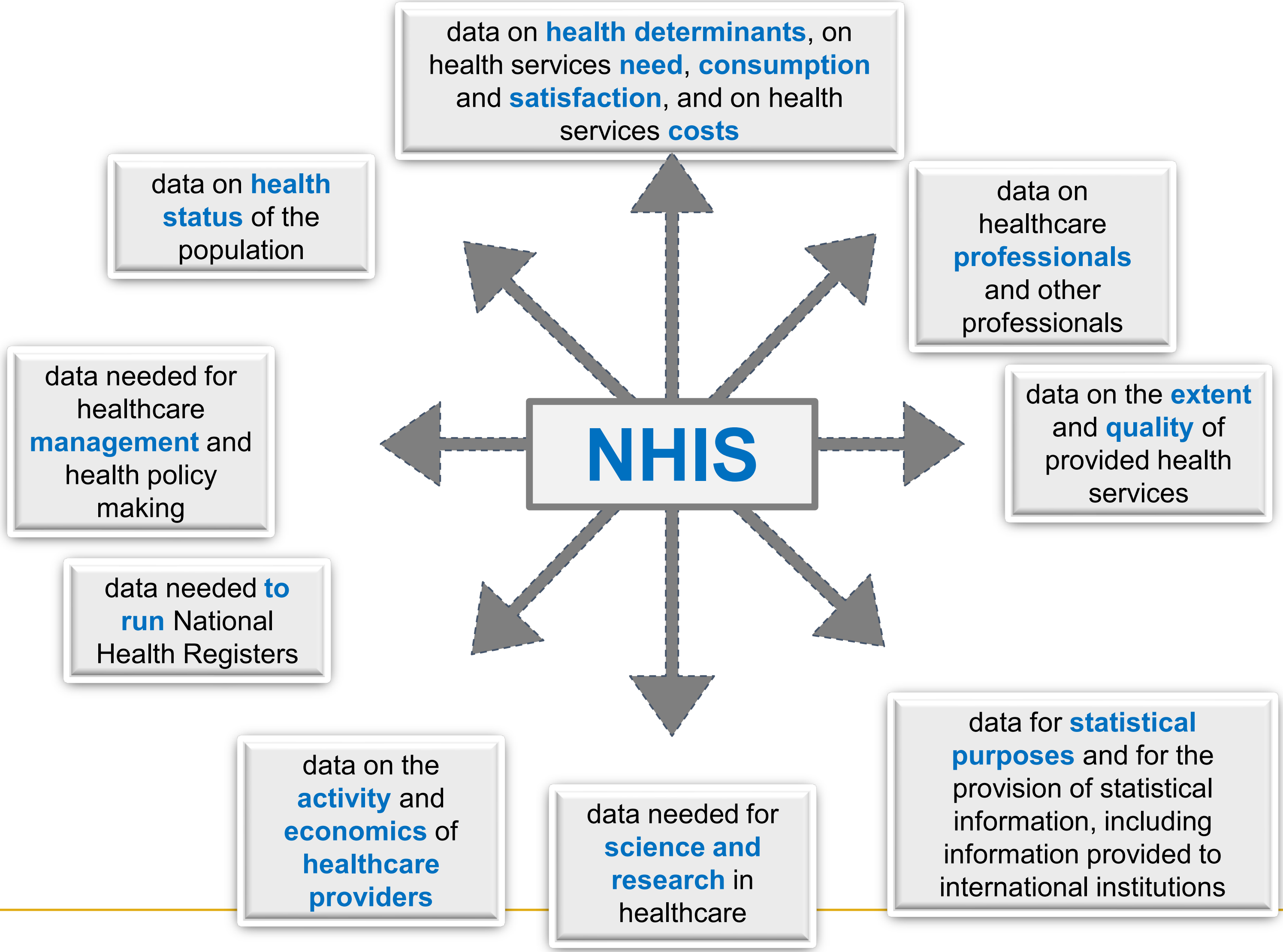

NHIS

data on **health determinants**, on health services **need**, **consumption** and **satisfaction**, and on health services **costs**

data on healthcare **professionals** and other professionals

data on the **extent** and **quality** of provided health services

data for **statistical purposes** and for the provision of statistical information, including information provided to international institutions

data needed for **science and research** in healthcare

data on the **activity** and **economics** of **healthcare providers**

data needed **to run** National Health Registers

data needed for healthcare **management** and health policy making

data on **health status** of the population

Czech comprehensive ICT model integrating multiple data sources

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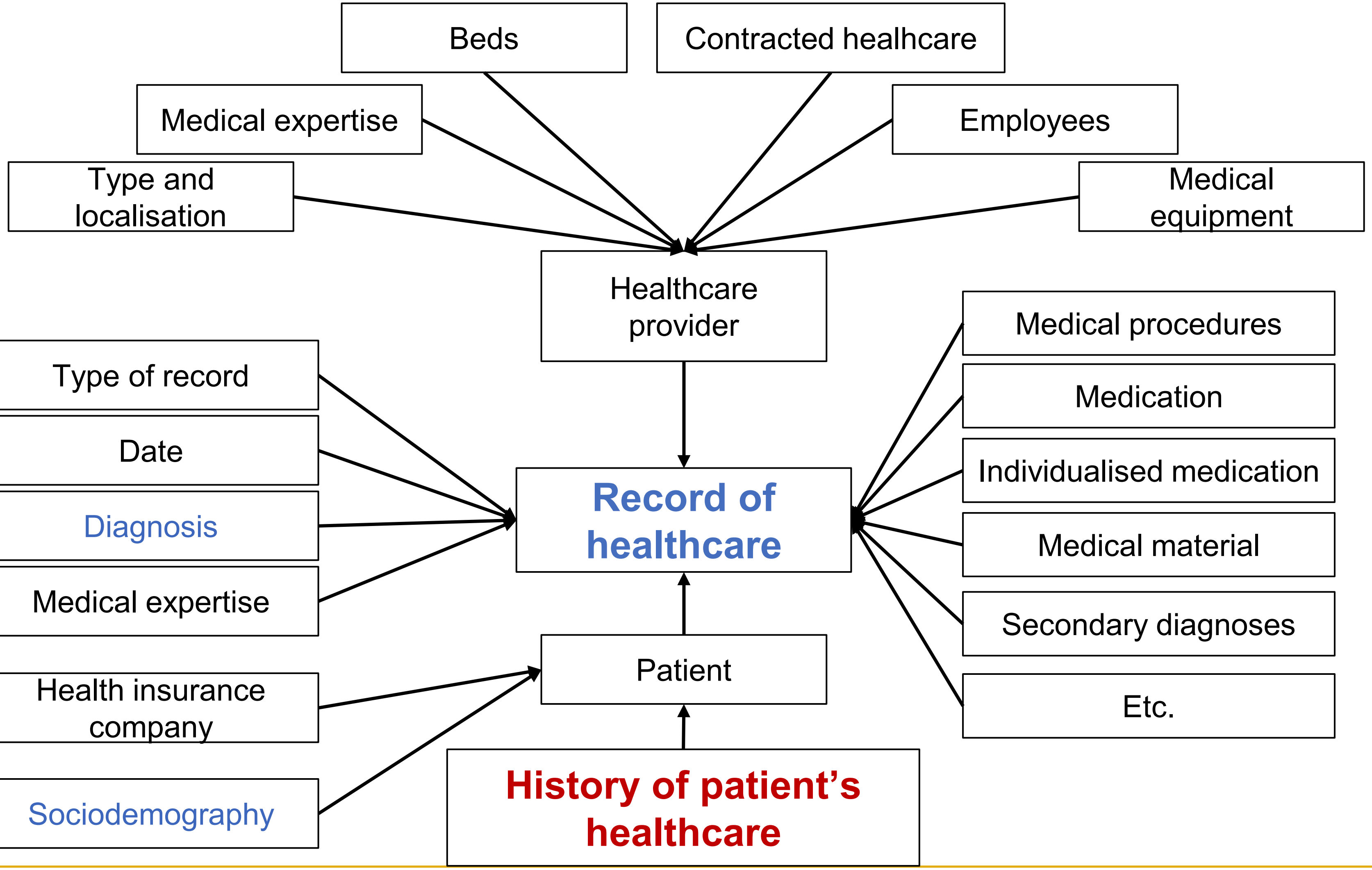
Data structure of National Registry of Reimbursed Health Services (NRRHS)



Beds

Contracted healthcare

Medical expertise

Employees

Type and localisation

Medical equipment

Healthcare provider

Type of record

Date

Diagnosis

Medical expertise

Record of healthcare

Medical procedures

Medication

Individualised medication

Medical material

Secondary diagnoses

Etc.

Patient

Health insurance company

Sociodemography

History of patient’s healthcare

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Dimensions of cancer control indicators

Cancer control statistics using a comprehensive ICT model

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1. Population burden indicators

- Cancer incidence
  - according to diagnoses and stages
  - crude and standardised rates
- Cancer mortality
  - according to diagnoses
  - crude and standardized rates
- Cancer prevalence
  - according to diagnoses and stages
  - crude and standardised rates
- Cancer survival
  - 5-year relative/net survival

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2. Indicators of prevention and early detection

(in cooperation with the National Screening Centre, UZIS)

- Coverage of the target population by preventive check-ups
  - Coverage of the target population by a preventive check-up by a general practitioner
  - Coverage of the target population by a preventive check-up by a gynaecologist
  - Coverage of the target population by a preventive check-up by a dentist
- Coverage of the target population by screening examinations
  - Coverage of the target population by breast cancer screening examination
  - Coverage of the target population by colorectal cancer screening examination
  - Coverage of the target population by cervical cancer screening examination
- Vaccination
  - Coverage of the target population by HPV vaccination
- Lifestyle risk factors
  - smoking, alcohol consumption

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3. Indicators of quality and performance of cancer centres

a) Regionally specific indicators – mapping of the catchment area

- Incidence of treated patients from the region
- Incidence of treated patients from other regions
- Prevalence of treated patients from the region
- Prevalence of treated patients from other regions
- Completeness of the report to the Czech National Cancer Registry

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3. Indicators of quality and performance of cancer centres

b) Local indicators of the CC's activity

- Volume of MDT consultations
- Volume of innovative pharmacotherapy according to indications
- Time from first contact to start of treatment
- Total time and form of completion of hospitalisations
- Mortality of hospitalized patients
- Survival

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3. Indicators of quality and performance of cancer centres

c) Indicators related to clinical guidelines specific to a particular cancer entity

Potential indicators focused on recommended procedures specific to a given cancer diagnosis, an example of colorectal cancer

- Percentage of colon cancer patients detected by screening
- Percentage of colon cancer patients diagnosed by endoscopy who received a complete colonoscopy
- Percentage of stage III resected colon cancer patients treated with (neo)adjuvant chemotherapy
- Percentage of metastatic cancer patients treated with targeted therapy
- Percentage of resected cancer patients who died within 30/90 days from surgery

Source: Protocol of the pilot study 7.2 of WP7, Integrating Cancer Registry Data on Care with Administrative and Health Information Sources in Europe

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4. Indicators of quality of care at the end of life

Potential indicators, focused on the quality of end-of-life care, e.g.

- A new hospital admission in the last 30 days of life;
- An intensive care unit (ICU) admission in the last 30 days of life;
- Chemotherapy use in the last 2 weeks of life;
- Percentage of deceased cancer patients with the information on place of death;
- Enrolment in specialist palliative care programme.

Source: Protocol of the pilot study 7.2 of WP7, Integrating Cancer Registry Data on Care with Administrative and Health Information Sources in Europe

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