



# Infection prevention in hospitals in the Czech Republic: political developements and priorities

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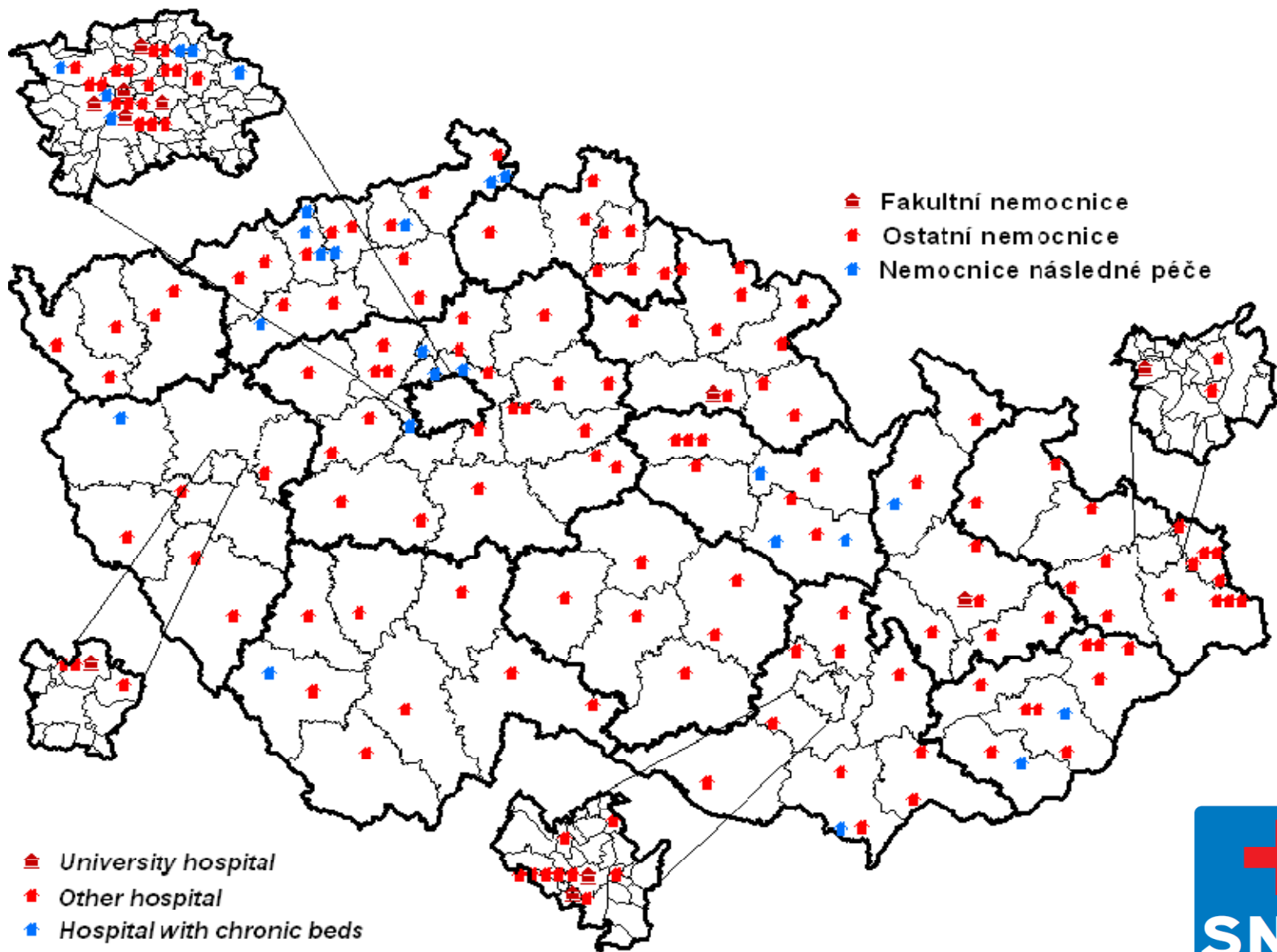
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# Hospitals in the Czech Republic



# 1. Terminology: **Surveillance**

## o EU:

*„Systematic collection and evaluation of the data“*

## o Czech Republic:

*„Complex and systematic **collection** of accesible information regarding spread of infection; **observation** of conditions and factors to develop the **system increasing incidence** of infections“*

### Basic elements:

- Reporting morbidity and mortality
- Results of epidemiological examination, clinical signs and laboratory tests
- Continual distribution of the acquired data to the all interested parties
- Proposal of the relevant preventative measures

### Act on Public Health 258/2000, § 16, part 2

„....person providing the health care is obliged to monitor any nosocomial infection and report on request the details to the Public Health Service .... “

### Regulation N° 195/2005

Detailing the conditions for the infection prevention and the operation of the health care centres and social institutions

*„...outbreak of the nosocomial infections or the nosocomial infections leading to the serious harm or death has to be reported immediately by phone or by fax, followed by the paper forms.... “*

# FORM - „Reporting of the infectious disease“

(not specific for NI)

## HLÁŠENÍ INFEKČNÍ NEMOCI

1. Příjmení: .....	
Jméno: .....	
Rodné číslo: .....	<input type="text"/>
Pohlaví: 1 - muž, 2 - žena <input type="checkbox"/>	
2. Trvalé bydliště (obec, ulice, číslo):	<input type="text"/>
3. Pracoviště:	Povolání: .....
4. Název a adresa kolektivního zařízení:	
5. Diagnóza:	
1 - potvrzená, 2 - podezření, 3 - nosičství, 4 - úmrtí	
dg slovně: .....	<input type="text"/>
6. Datum prvních příznaků (den, měsíc, rok):	<input type="text"/>
7. Obec onemocnění: .....	Okres: .....
8. Místo izolace:	
1 - doma, 2 - inf. odd., 3 - jinde, 4 - neznámo	
Datum izolace (den, měsíc, rok):	<input type="text"/>
9. Název zařízení a oddělení, ve kterém došlo k nákaze:	

DITIS 113 023 0

Tisk: KOVAŘÍK, Česká Třebová

### POZNÁMKY PRO EPIDEMIOLOGA

(Jména dětí ze společné domácnosti, škola a třída, zájezd, rekreace apod., zdroj onemocnění, onemocnění po očkování atd.)

### POKYNY K VYPLNĚNÍ:

(čitelně, hůlkovým písmem)

1. Rodné číslo - do předtíštěných okének (poslední dvojciferní roku, měsíc (u žen se připočte 50), den/viděn. č.)  
- u cizinců místo RC vyplnit datum narození/viděn. č. = 9999 a nakódovat pohlaví
2. Trvalé bydliště - uvést textem (nakódovat číslo obce podle číselníku obcí ČSÚ - kóduje v případě potřeby OHES)
3. Pracoviště - název včetně adresy  
Povolání - uvést se textem
4. Vyplní se u dětí a dorostu, které navštěvují předškolní nebo školní zařízení
5. Diagnóza  
- do předtíštěného okénka se zapíše příslušný kód  
- dg slovně i kódem podle MKN - 10
7. Vyplňuje se v případech, když obec onemocnění nesouhlasí s trvalým bydlištěm
8. Místo izolace - do předtíštěného okénka se zapíše příslušný kód
9. Použije se v případě nosokomiální nákazy

Datum:

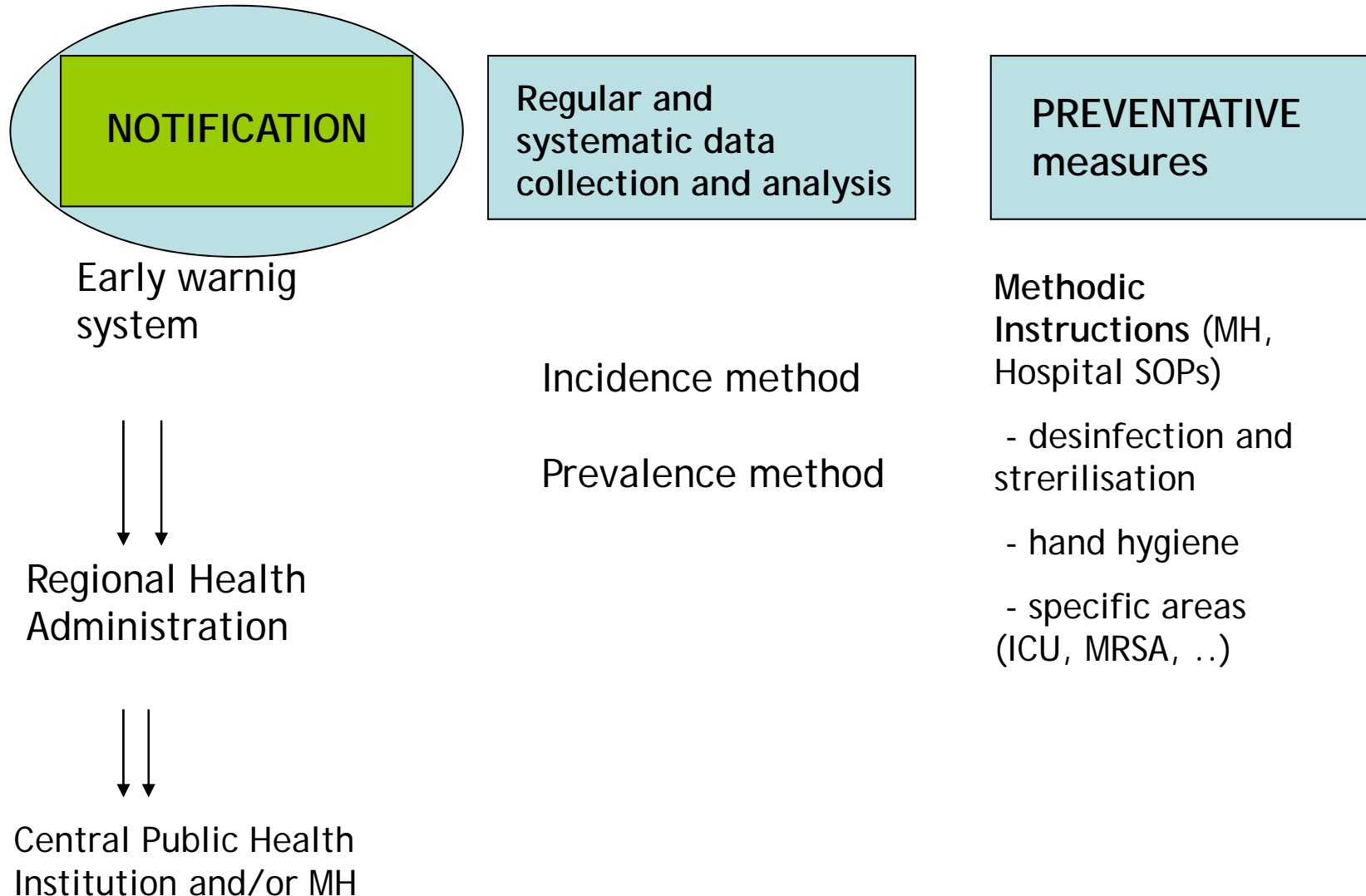
Razítko a podpis lékaře

Razítko zdravot. zařízení

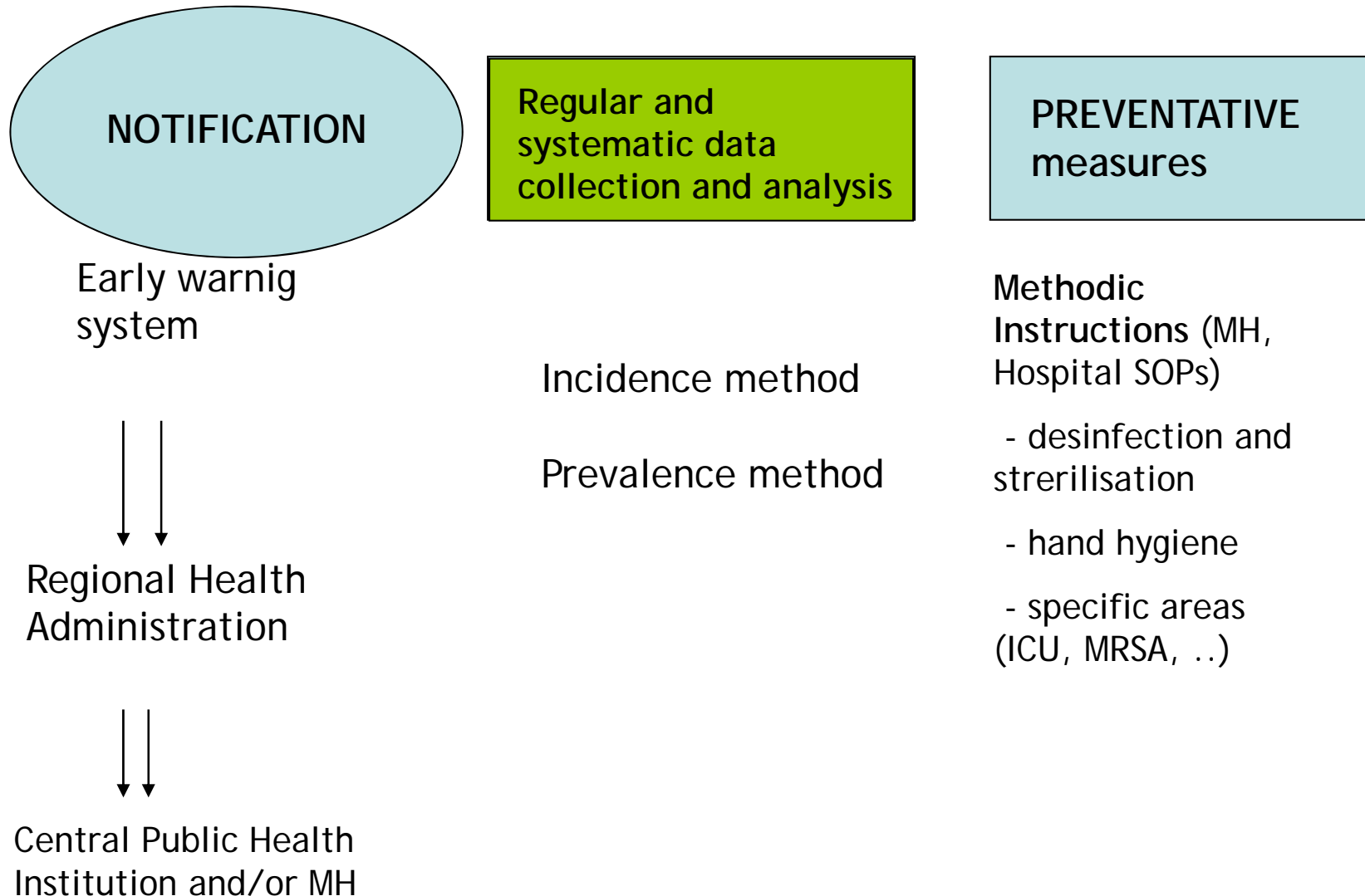
V případě závažného infekčního onemocnění, např. břišního tyfu, paratyfu, cholery, virové hepatitidy, diphterie, meningitidy, poliomyelitidy atd., či hromadných onemocnění je třeba neprodleně informovat příslušného epidemiologa.

Dodávka DITIS, s. r. o., PS 31, Oldřichovice 24, 562 06 Ústí nad Orlicí, tel. 465 524 027, fax + seznamník 465 525 701

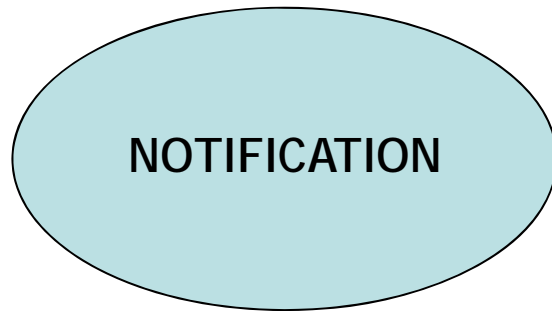
# NI - surveillance



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# NI - surveillance



Early warning system



Regional Health Administration



Central Public Health Institution and/or MH

Regular and systematic data collection and analysis

Incidence method

Prevalence method

**PREVENTATIVE measures**

Methodic Instructions (MH, Hospital SOPs)

- disinfection and sterilisation

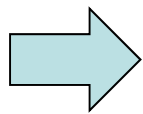
- hand hygiene

- specific areas (ICU, MRSA, ..)

# The regular and systematic data collection and evaluation

## Aim?

- o to detect the potential changes in the trends
- o to improve the quality of the health care services
  - positive impact on mortality, invalidisation,
  - shortening of hospitalisation



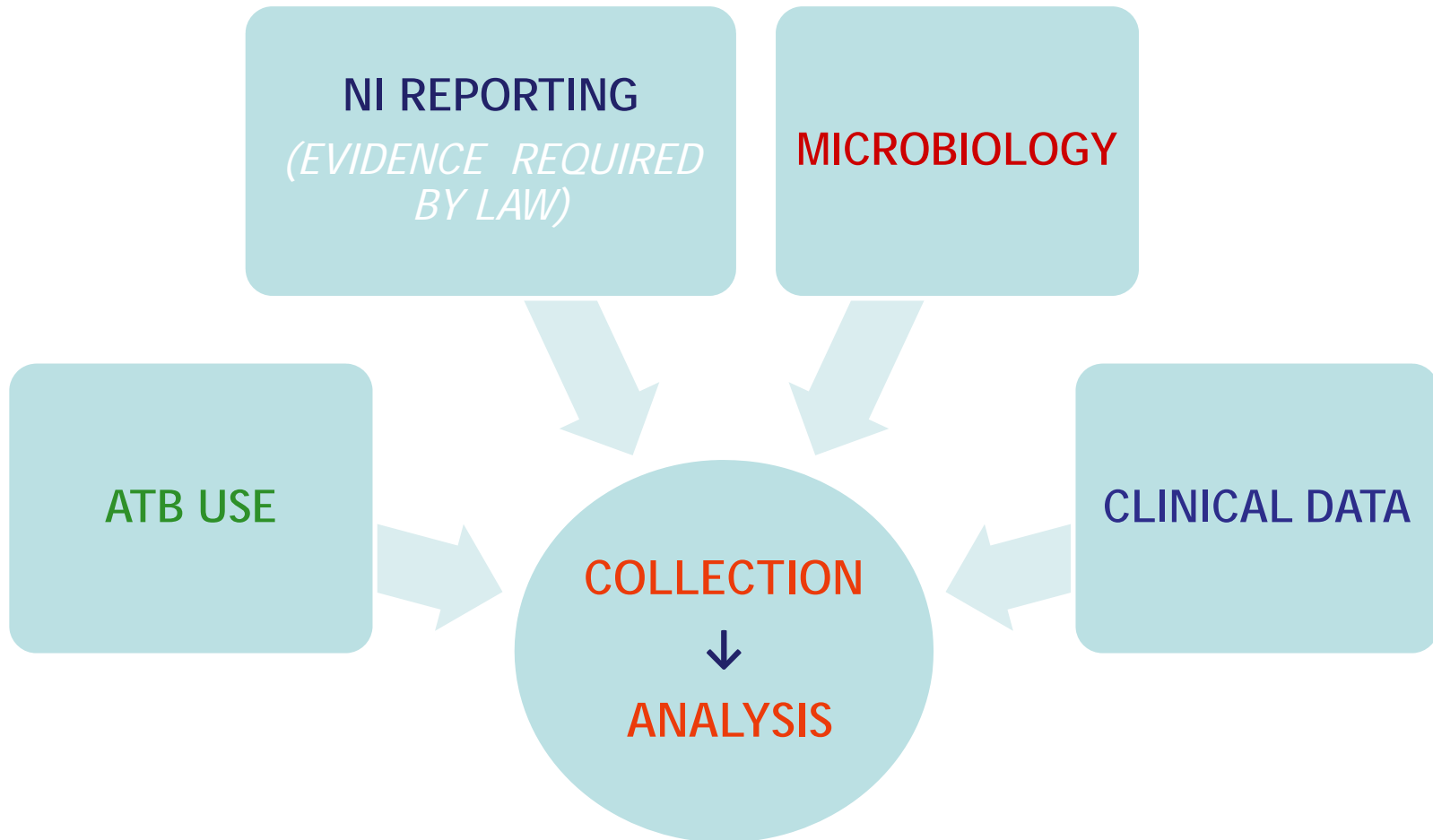
to protect the **patient's safety**



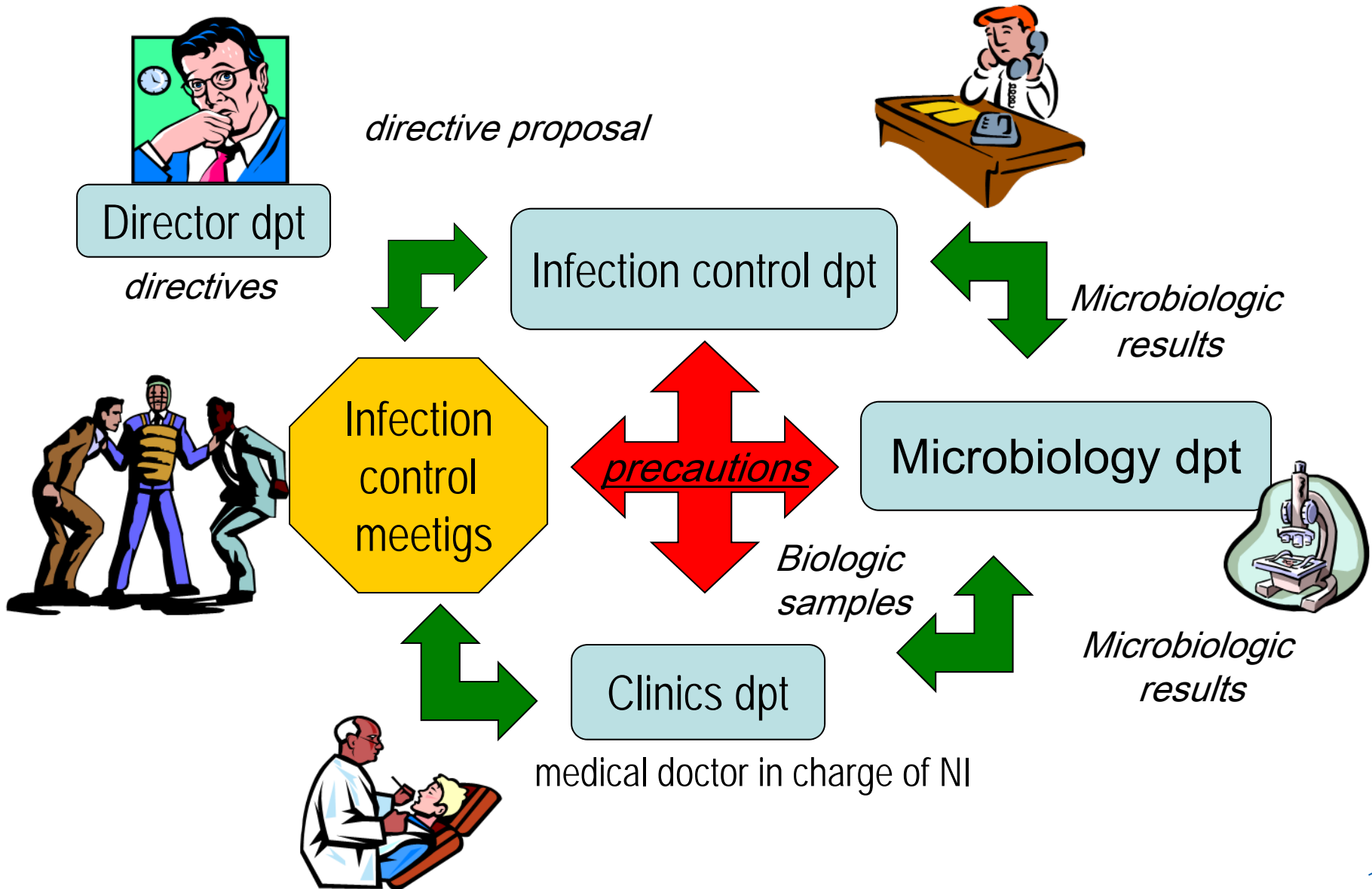
*...plus on the national level:*

- o to follow up the trends :
  - NI incidence
  - incidence of problematic ATB resistant strains of bacterias
- o immediate reaction to the emergence of dangerous/resistant strains with epidemic potential
- o adequate action in case of serious violence of the hospital „GAEP“

### 3. Hospital level - information channels



# Information circulation



# Actual situation

- Most of the health facilities do not have an internal system for monitoring NI
  - *If exist, the systems differ substantially*
- Unique system is not defined
  - *Improvements could be made through prevalence studies, which could eventually provide one universal system.*
- Regional hospitals do not have a hygienist/epidemiologist
  - *Not required by the law*
- Management (procedure/treatment) of NI is not specified
  - *Only the evidence and reporting (serious, epidemic) to the local public health authority is mandatory by law*

# Infectious Control and Prevention (ICP) Staff

<b>ICP Staff</b>			
<b>Type of Hospitals of acute care</b>	<b>YES</b>	<b>NO</b>	<b>TOTAL N° of hospitals</b>
<b>University/Faculty Hospitals</b>	11	0	11
<b>Others Hospitals</b>	10	14	24
<b>Regionals Hospitals</b>	13	2	15
<b>Districts Hospitals</b>	26	20	46
<b>Specialised Hospital</b>	2	2	4
<b>TOTAL</b>	62	<b>38</b>	100

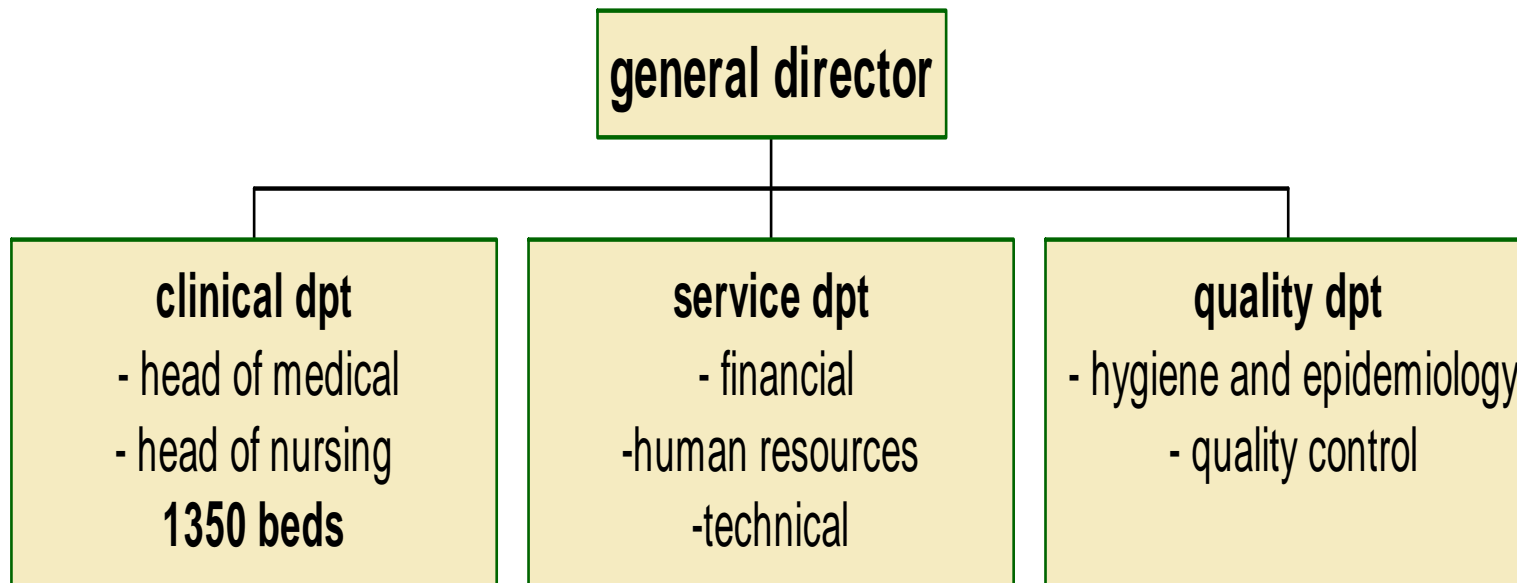
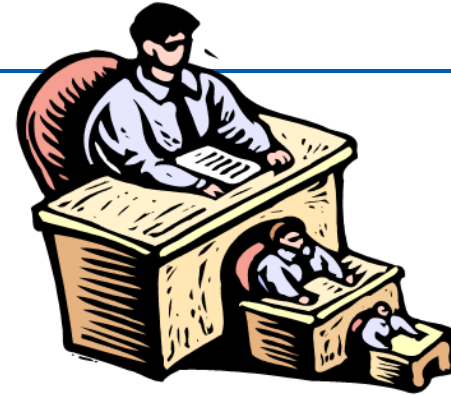
*(Survey in 11/2009, 100 hospitals in the Czech Republic)*

# ICP staff - education and professional specialisation

VZDELANI_	Vzdělání ve vztahu k odbornosti							Celkem
	Asistent OVZ	Epidemiolog	Hygienik	Infektolog	Jiná odbornost	Mikrobiolog	Zdravotní sestra	
SS bakalářské	7	0	0	0	0	0	3	10
SS jiné	5	0	1	0	0	0	3	9
SS ukonč. maturitou	9	0	2	0	4	0	23	38
VS jiné	5	0	0	0	4	1	1	11
VS lékařské	0	20	13	3	4	7	0	47
VS přírodovědné	0	0	2	0	0	4	0	6
Celkem	26	20	18	3	12	12	30	121

*(Survey in 11/2009, 100 hospitals in the Czech Republic)*

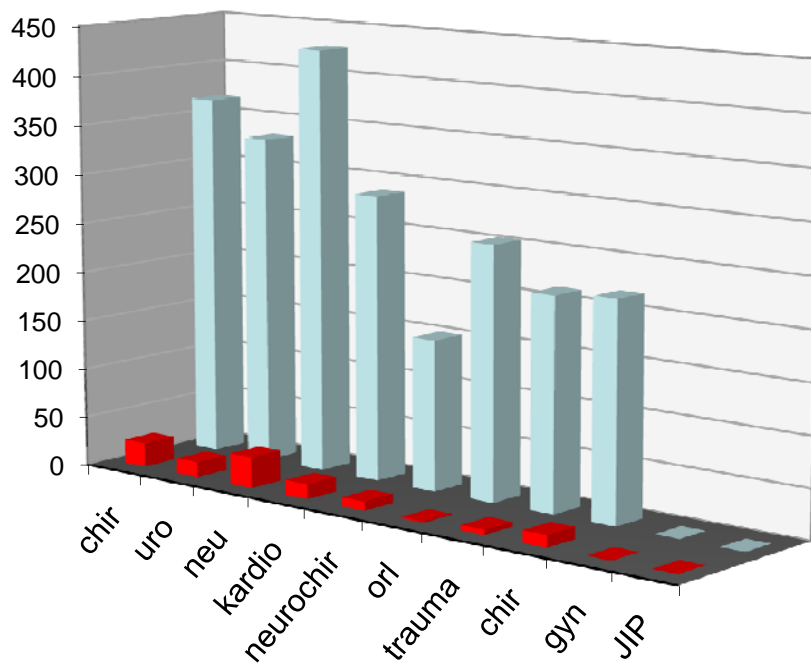
# Organisation structure (example)



# Prevalence study on NI in the faculty hospitals the Czech Republic

2005-2010

- based on the protocol **HELICS**
- performed by the hospital IC staff (hygienists/epidemiologists)
- comparable among the involved hospitals



Prevalence  
**4,7**  
ptns with NI/  
100 ptns hospitalised

 patients with NI

## 4. National Level

### o NATIONAL PREVELANCE STUDIES

- 1989 - urology and gynecology
- 2010 - ICUs

### o METHODS OF INCIDENCE STUDIES OF NI

#### o Existence of **REGISTRIES**:

##### o Microbiologists - **Blood Stream NI**

*- detected by microb. report*

##### o **Perinatology** society - Registry of NI

*- reports sent by clinical physicians*

##### o Czech cardiology society - **Cardio-invasive procedures** and their complications

*- reports sent by clinical physicians*

#### o **HYGIENIC SERVICE**

- o no method to observe the incidence, even for the cases defined in the current legislation

# Legal aspects of prevention:

## *Article 1, §15 Code n.258/2000*

- o *„The party using non-state facilities, or an institute for social care (the party providing care) has to carry out hygienic and anti-epidemic care in preventing the emergence and spread of NI“*

## *Article 2, §15 Code n.258/2000*

- o *„The party providing care has to establish the specific measures, defined in the standardized procedures. Proposed standardised procedures, and their changes, are approved by the local public health authority“*

## *Article 1, §16 Code N.258/2000*

- o *„The party providing the health care is obliged in case of the emergence of NI, or even their suspicion, immediately implement the anti-epidemic measures in order to determine the source of the infection and method of the spread, to prevent further spread, and to treat the infected patients, as well as those suspected of having the infection“*

# Legal aspects of prevention

## Regulations in the other areas with impact on HCS

- o Local environment, ecology aspects
- o Water, healthcare waste, sewage
- o Occupational health
- o Laundering
- o Food handling and production
- o Hospital kitchens
- o Construction of buildings ( and reconstruction)
- o Air-conditions, ventilation systems

Public health administration body provides the advice  
and perform the audits

# Guidelines

National guidelines in force:

- *Prevention of viral hepatitis*
- *Securing of reports, diagnostics and treatment of CJD and the new forms of this disease*
- *Program of Legionellosis surveillance*
- *Hands hygiene in the health care*
- *Methodic instruction on rotaviral disease*

Guidelines and Methodic Instructions designed by the hospitals

- different level of quality and complexity (mainly accredited hospitals)

# Legal aspects of prevention

## Legally binding duties of the health care facilities:

- o adherence to the **hygienic programs**, including disinfection, sterilization,
- o compliance with barrier precautions and hands hygiene,
- o **safe use** of the medical supplies,
- o safe use of the medical appliance.

## The supervision/control is carried out by:

- o by the **Public Health** administration body
  - *located in each region*
- o *by the State Institute of the Drugs Control (decvices, drugs,..)*
  - *inspections*
- o *-by the Insurance Companies*
  - *mainly concerning the adequate treatment management (financial aspects)*

# PHA tasks in patient safety related aspects:

- Carry out inspections to ensure the compliance of laws pertaining to hospital hygiene.
- Deal with the situations where there is an increase in NI incidence.
- Deal with the situations where there is an emergence of serious infectious disease
  - *only in cases when the facility does not have its own appropriate IC staff*
- Approval of the local code of good practice procedures
- Provide opinion on building and reconstruction projects of the health care facilities.



## MINUS

- IC staff positions in the health facilities is not required by the local regulation
  - established mainly in the University type hospitals
  - proportion of IC staff/number of hospital beds (or any other criterium) is presently not defined in the current legislation
- Education level for the IC staff is not defined
  - pre- and/or postgradual system does not exist for this specialisation

## PLUS

- **The Czech Society for the Hospital Epidemiology and Hygiene**
  - Established 10/2009 ([www.sneh.cz](http://www.sneh.cz))
  - Organisational Unit of the **Purkyne Czech Medical Society** ([www.cls.cz](http://www.cls.cz))
  - *Performing prevalence studies in Faculty Hospitals since 2005*
- „Open - minded“ professionals exist
  - cooperation and ongoing discussions on multidisciplinary levels

# THANK FOR YOUR ATTENTION!



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