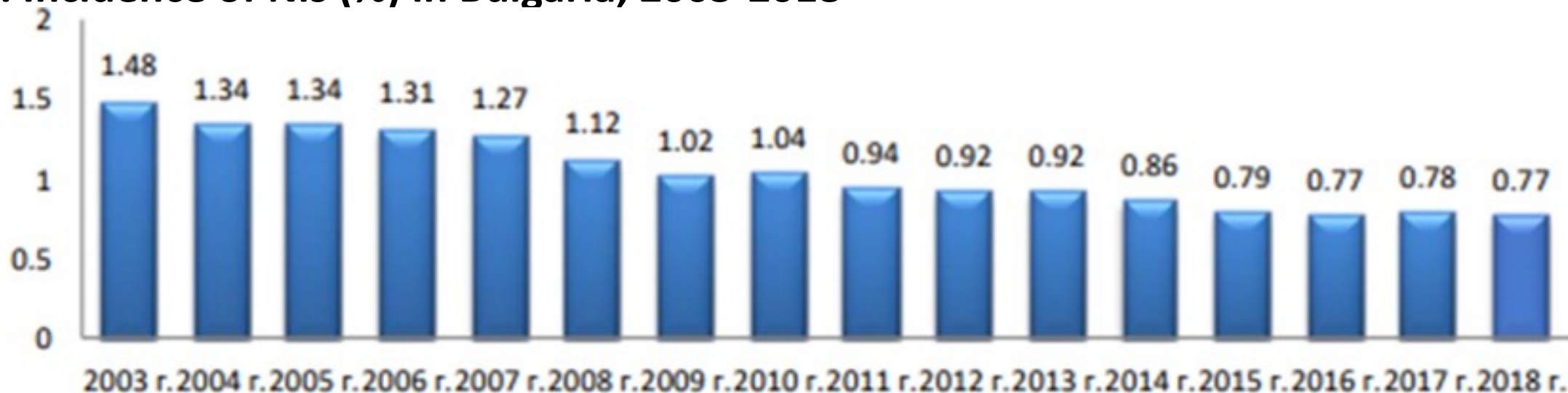


Hygiene policy for the prevention and control of nosocomial infections in Bulgaria

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Incidence and prevalence of nosocomial infections in Bulgaria

1. Incidence of Nis (%) in Bulgaria, 2003-2018*



Unpublished data for incidence, **2019 – 0,74%**

2. Prevalence of Nis (%) in Bulgaria, 2017 ** - 3.5 (95%CI: 1.7–6.8)

Estimated Incidence – **1,8** (95%CI: 0.9–3.8)

*DM Monov, PhD Thesis, 2019 [http://www.mu-varna.bg/BG/Research/Documents/2019-proceduri/doctor/d-monov/AVTOREFERAT%2005.2019%20%D0%94%D0%90%D0%9D%D0%98%D0%95%D0%9B%20%D0%9C%D0%9E%D0%9D%D0%9E%D0%92%20\(4\).pdf](http://www.mu-varna.bg/BG/Research/Documents/2019-proceduri/doctor/d-monov/AVTOREFERAT%2005.2019%20%D0%94%D0%90%D0%9D%D0%98%D0%95%D0%9B%20%D0%9C%D0%9E%D0%9D%D0%9E%D0%92%20(4).pdf)

** Suetens Carl, Latour K, Kärki T, Ricchizzi E, Kinross P, Moro ML, Jans B, Hopkins S, Hansen S, Lyytikäinen O, Reilly J, Deptula A, Zingg W, Plachouras D, Monnet DL, the Healthcare-Associated Infections Prevalence Study Group, Members of the Healthcare-Associated Infections Prevalence Study Group. Prevalence of healthcare-associated infections, estimated incidence and composite antimicrobial resistance index in acute care hospitals and long-term care facilities: results from two European point prevalence surveys, 2016 to 2017. *Euro Surveill.* 2018; 23(46):pii=1800516. <https://doi.org/10.2807/1560-7917.ES.2018.23.46.1800516> <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2018.23.46.1800516>

Overview of the healthcare system in Bulgaria

“In 2016, there were **321** hospitals with a total of just below **50 000** beds. The increase in both the number of hospitals and the number of beds is mainly driven by the private sector, whereas the number of public hospitals (under state and municipal ownership) has been comparatively stable.”*

“More than **120 000** people, or roughly **5.5%** of all full-time employees, are working in the health care sector in Bulgaria. The number of physicians per **1000 population** has been steadily growing from 3.27 in 1990 to **4.16** in 2016, which puts Bulgaria above the EU28 average (3.5 per 1000 population).” *

“**Rapid ageing** and an **outflow of physicians** due to emigration result in large regional discrepancies and insufficient coverage in some fields. Although the number of nurses has stayed comparatively stable at a very low level, Bulgaria still records the lowest nurse per physician ratio of all EU Member States, with **1.1 nurses per physician**.”*

* Dimova A, Rohova M, Koeva S, Atanasova E, Koeva-Dimitrova L, Kostadinova T, Spranger A. Bulgaria: Health system review. Health Systems in Transition, 20(4): 1–256, <http://www.euro.who.int/en/about-us/partners/observatory/publications/health-system-reviews-hits/full-list-of-country-hits/bulgaria-hit-2018>

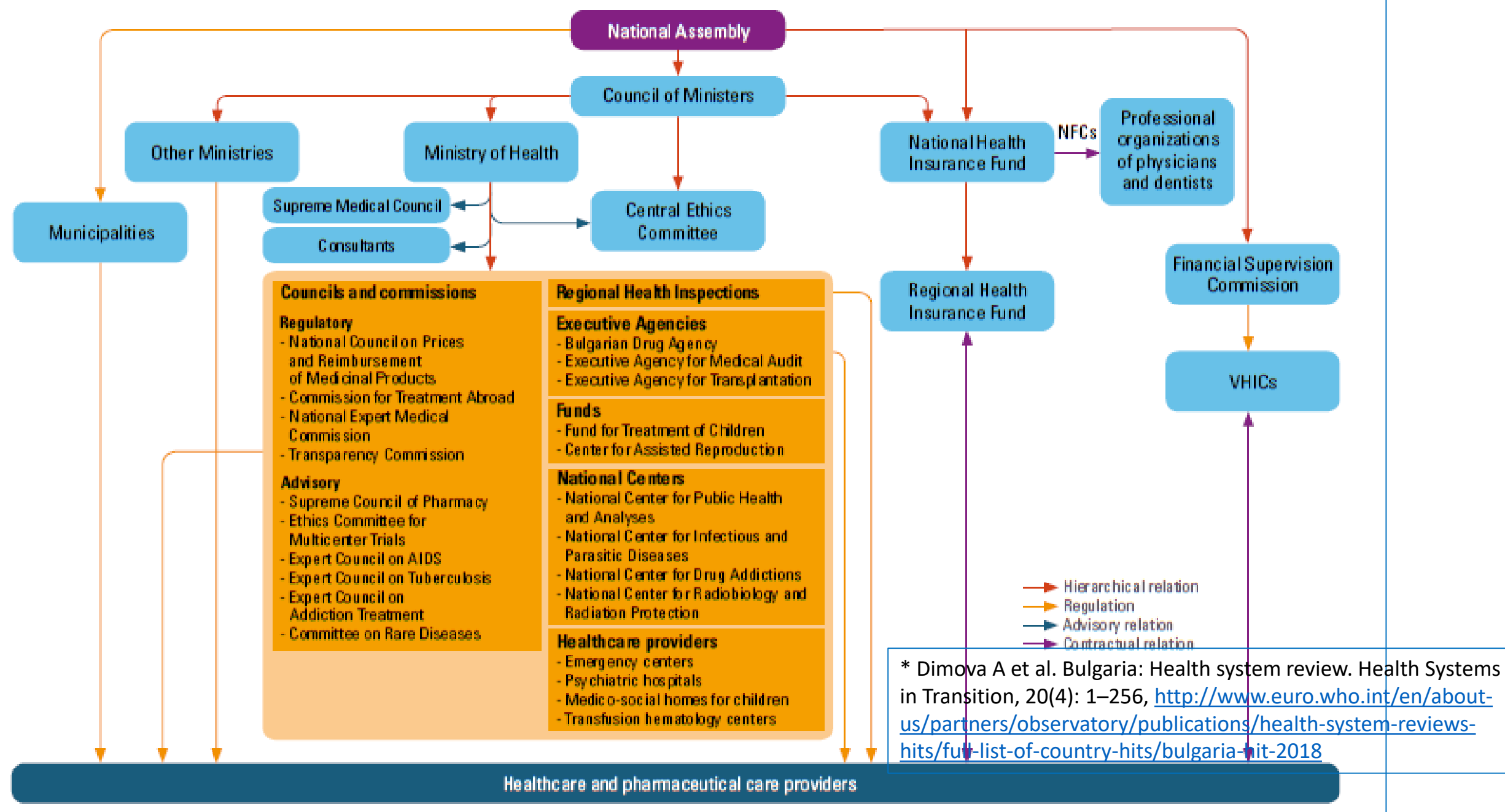
Overview of the healthcare system in Bulgaria cont.

„Although new principles, such as autonomy, contractual relations and market regulation were introduced in the late 1990s, in practice, the **decision-making process in the Bulgarian health systems is highly centralized**. At the same time, the unstable political situation, the frequent turnover of health system leadership, as well as a lack of political consensus and long-term vision, have contributed to **discontinuous and inconsistent policy implementation**.

Some of the fundamental principles of the **health insurance system**, such as the independence of the NHIF, the equal participation of state, employers and insured individuals in the fund's management, and the use of evidence-based health policy, have been gradually abolished or never realized. The abandonment of these elements has also given rise to **instability, insecurity, distrust in the system and resistance to reforms**.“*

* Dimova A, Rohova M, Koeva S, Atanasova E, Koeva-Dimitrova L, Kostadinova T, Spranger A. Bulgaria: Health system review. Health Systems in Transition, 20(4): 1–256, <http://www.euro.who.int/en/about-us/partners/observatory/publications/health-system-reviews-hits/full-list-of-country-hits/bulgaria-hit-2018>

FIG. 2.1 Organization of the health system in Bulgaria, 2018*



* Dimova A et al. Bulgaria: Health system review. Health Systems in Transition, 20(4): 1–256, <http://www.euro.who.int/en/about-us/partners/observatory/publications/health-system-reviews-hits/full-list-of-country-hits/bulgaria-hit-2018>

Building blocks of the health and infection control in Bulgaria

- Legislative framework of health and infection control in the country:
 - Health Law (Act), 2005, Publ. SG Issue 70 of 10.08.2004
http://www.mh.government.bg/media/filer_public/2020/01/16/zakon_za_zdraveto.pdf
 - Health and Safety at Work Act, Publ. SG Issue 124 of 23.12.1997
 - Medical Devices Act (Law), Publ. SG Issue 46 of 12.06.2007
 - Waste Management Act, Publ. SG Issue 53 до 13.07.2012
 - Health Care Establishments Act, 1999, Publ. SG Issue 62 of 9.07.1999
http://www.mh.government.bg/media/filer_public/2020/01/16/zakon_za_lecebните_zavedeniq.pdf
 - Ordinance No. 36 on the conditions and order for the implementation of state health control, Issued by the Minister of Health/MoH, Publ. SG, Issue 63 of 7 August 2009 (requirements for public buildings, products and goods relevant for human health)
 - Ordinance No. 3 on the approval of a Medical Standard for the Prevention and Control of NIs, Issued by the MoH, Publ. SG issue 43 of 14 May 2013
 - Ordinance No. 15 on Immunizations in the Republic of Bulgaria, Issued by the MoH, Publ. SG issue 45 of 31 May 2005
 - Ordinance No. 21 on the Procedure for Registration and Reporting of Infectious Diseases, Issued by the MoH, Publ. SG issue 62 of 29 July 2005 – incl. definitions of Nis (ECDC)

Building blocks of health and infection control in Bulgaria cont.

- EU conceptual framework for patient safety
 - Council Directive 2010/32/EU of 10 May 2010 implementing the Framework Agreement on prevention from sharp injuries in the hospital and healthcare sector concluded by HOSPEEM and EPSU (Text with EEA relevance)
- Scientific, technical and research base
- System for registration of NIs
- Antibiotic resistance monitoring
- Registration of disinfectants/biocides - <http://www.mh.government.bg/bg/administrativni-uslugi/registri/registar-na-biotsidnite-preparati/>
- Education, postgraduate qualification of the personnel in the health control system and in healthcare facilities
- Health culture of the population in relation to health promotion, protection from communicable diseases and prevention of NIs.

2. Regulatory areas – Situation in Bulgaria

Specific key elements of hygiene policy for the prevention and control of nosocomial infections:

- hygiene policy – regulation presented on the slide "Building blocks of the health and infection control"
- political perception – mentioned at the slide "Overview of the healthcare system" and:
"According to the Health Care Establishments Act (1999), health care providers **are independent legal subjects** registered as trading companies or cooperative enterprises. Exceptions are some state-owned providers such as centres for emergency medical care, centres for transfusion haematology, psychiatric hospitals and homes for medico-social care for children, as well as health care establishments owned by other ministries."*
- structures for hygiene and infection prevention and control of nosocomial infections in Bulgaria

Regional level - Regional Health Inspectorates/RHIs: "In the mid-1990s, the establishment of regional health centres as local branches of the MoH (which merged with the former Regional Inspections for Protection and Control of Public Health to the currently existing RHIs) was meant to support decentralization, but their functions were limited to elementary administrative and bureaucratic responsibilities, while the most essential managerial functions, planning and regulation were performed entirely at the national level."*

Local level - presented on the next slide

* Dimova A, Rohova M, Koeva S, Atanasova E, Koeva-Dimitrova L, Kostadinova T, Spranger A. Bulgaria: Health system review. Health Systems in Transition, 20(4): 1–256, <http://www.euro.who.int/en/about-us/partners/observatory/publications/health-system-reviews-hits/full-list-of-country-hits/bulgaria-hit-2018>

Infection prevention and control – structures

- Regional and local levels:
 - Regional Health Inspectorates/RHIs – State Health Inspectors
 - Hospitals – Infection Prevention Team, Hospital Committee on NIs
- National level:
 - Ministry of Health, Health Control Directorate assists the Minister in managing the national health system in relation to the control of activities related to the prevention and control of infectious diseases and NIs
 - Expert Council on the Prevention and Control of NIs - specialized advisory body of the Ministry of Health / No order at present
 - Reference National Center for NIs- coordinates activities, related to the surveillance of nosocomial infections, maintains a constant readiness for immediate response and response organization in case of severe NIs and epidemic outbreaks – part of the National Centre for Infectious and Parasitic Diseases/NCIPD (https://www.ncipd.org/index.php?option=com_content&view=featured&Itemid=730&lang=en)
 - NCIPD and Medical Universities/MUs and Colleges - conduct NIs research, responsible for the qualification and continuing training of medical personnel
 - BulNoso Academy - Information and Training Activity of the Bulgarian Association of Prevention and Infection Control “BulNoso”, <http://bulnoso.org/1/index.php>
 - The National Center for Health Information and Analysis /NCPHA - manages, controls, monitors and coordinates health information activities - <http://ncphp.government.bg/index.php/en/>

2.1 Regulatory Organization in Bulgaria for Hospital Hygiene and Infection Prevention

- There are legal regulations regarding the hospital hygiene and infection prevention? – recommendations are best addressed in detail in the Medical Standard for the Prevention and Control of NIs (Ordinance No. 3/2013, Issued by the MoH, Publ. SG issue 43 of 14 May 2013) – shortly MS-NIs
- The core areas regulated in the MS-NIs are presented on the next slide
- What is the legal quality of the corresponding recommendations? – Mandatory by law, but in the court sometimes it happens these not to be binding for the HC facilities
- There are sanctions for non-compliance (act of administrative violation, closure of a ward, deletion of registration of the HC facility). They are applied by the RHIs or by the Executive Agency Medical Supervision <https://iamn.bg/en/home/> (former Executive Agency for Medical Audit)

Sections of the Medical Standard for the Prevention and Control of NIs

- I. Basic characteristic of the prevention and control of nosocomial infections (NI)
- II. Requirements for the persons with professional activities in prevention and control of NI – IC team, IC physician, IC nurse, link-doctors, link-nurses
- III. General requirements for the implementation of NI surveillance, prevention and control – categories of the preventive measures, definitions of NIs
- IV. Requirements for the implementation of activities on surveillance of NI and antimicrobial resistance (AMR) – surveillance of indicator NIs, monitoring of sharp injuries
- V. Requirements for carrying out the activities on prevention of NI – risk assessment, disinfection, sterilisation, isolation precautions, structural-functional recommendations, water and air quality etc.
- VI. Requirements for carrying out the activities on limiting the spread of AMR – monitoring of AB use and resistance, recommendations for empiric therapy, AB policy
- VII. Requirements for the implementation of activities on NI control – outbreak management, types of isolation
- VIII. Specific requirements for the prevention and control of NI in dental practice

Criteria for Accreditation of Health Care Facilities

Accreditation is performed to evaluate basic training opportunities of the HC facilities. There were criteria for Nis control and surveillance (Ordinance No. 18 of June 20, 2005 on the Criteria, Indicators and Methodology for Accreditation of Health Care Facilities, Issued by the MoH, Publ. SG. issue 54 of 1.07.2005, canceled in Nov. 2019):

“2.1. Reference values of registered NIs by department category:

2.1.1. for anesthesia and / or intensive care clinic (ward) - $30\% \pm 10$;

2.1.2. for risk clinics- surgical, hematological, urological, obstetrics, neonatology, hemodialysis - $10\% \pm 5$;

2.1.3. for other wards - 1%.

2.2. Septic adverse reactions and complications during diagnostic, treatment, and rehabilitation procedures have been documented.

2.3. Conducting an annual NI incidence study at the hospital - yes, no.

2.4. For anesthesia clinic and / or intensive care unit - performing microbiological tests on at least 30% of the patients.

2.5. Percentage of medical professionals working in / for the intensive care unit and other risk units immunized against viral hepatitis B (those with contraindications are not included in the total) - over 80%.”

No criteria in the new Ordinance No.8 of November 13 2019, for the requirements for medical establishments providing training for students and postgraduate students. Issued by the MoH. Publ. SG. Issue 91. Nov. 2019

2.2 Training and further education

Training in hospital hygiene and infection prevention for students (not counting microbiological diagnostics and clinical infectious diseases) – mandatory 4-10 hours; as optional subject – 30 hours in some Dept. of Epidemiology; but in addition - there are mandatory 4-10 hours for disinfection and sterilization.

- Are there any binding regulations for medical schools in regard to hospital hygiene training? – No, MUs are autonomous.
- Is there a fixed number of hours stipulated for hospital hygiene training? – Yes, for each Medical Faculty.
- Is hospital hygiene and infection prevention an examination subject at medical school or when training nursing staff? – No, only 1 question from the Syllabus of Epidemiology Exam, except for the question for disinfection, sterilisation, immune prophylaxis.

Postgraduate education and training in the fields of hospital hygiene and infection prevention?

- Only *for nurses* there is a **specialty “Hospital Hygiene(Prevention and infection control)”**, according to REGULATION No. 1 of January 22, 2015 on the acquisition of specialty in the health system, Issued by the MoH, SG. Issue 7 of 27.01.2015, amend. and ext. SG. Issue 83 of 27.10.2015, Suppl. SG. Issue 88 of 8.11.2016, amend. and ext. SG. Issue 58 of 23.07.2019).

2.2 Training and further education cont.

Postgraduate education and training in the fields of hospital hygiene and infection prevention *for doctors*:

- Courses "Epidemiology of Healthcare associated infections" at the Medical Universities and the NCIPD - 30 hours, paid by the participant, no interest lately
- Specialization of ***Epidemiology of infectious diseases*** (MU-Sofia -<http://www.mu-sofia.bg/wp-content/uploads/2018/08/Epidemologia-programa.pdf>) – one module on Epidemiology of Healthcare associated infections for 2 months:
 - Theoretical training - 5 days (40 hours)
 - Practical training - 1 month and 25 days

Training during the BulNoso Academy Seminars – for doctors and nurses

- This further education and training is not binding

According to the Article 78 each Hospital Committee for the Control of Nis should develop programs for Postgraduate training in hospital infections for the personnel (Health Care Establishments Act 1999)

2.3 Use of Antibiotics

- For the outpatient treatment of community-acquired infections antibiotics are available not only on prescription but also over the counter
- Are there any mandatory regulations on the use of antibiotics? – No, except the once written in the MS-NIs
- Is there a national antibiotic stewardship program? – Work in progress, there is published a project of the NCIPD, created in 2016
<https://www.ncipd.org/images/UserFiles/File/Antibiotici/NAtional-Programme-on-AMR-Bulgaria-2016- 1 BG.pdf>
- BulSTAR (Bulgarian Surveillance Tracking of Antimicrobial Resistance)
<https://www.bam-bg.net/index.php/bg/bulstar> Data can't be converted to EARS-Net
- The situation in the country is well described in the Final Report of ECDC Bulgaria Country Visit, AMR, 2018
<https://www.ecdc.europa.eu/sites/default/files/documents/antimicrobial-resistance-country-visit-Bulgaria.pdf>

2.4 Hygiene Personnel – Infection Preventionists

- There are binding requirements for the deployment of hygiene personnel – described in the Medical Standard for the Prevention and Control of Nis:
 - physicians responsible for hygiene management - doctors with specialty in epidemiology, infectious diseases or clinical microbiology
 - hygiene specialists or nurses – with additional postgraduate qualification in this area or with specialty hospital hygiene and infection prevention
 - hospital hygienists or consultants for hygiene and environmental medicine, public health microbiology –rarely, there is only a requirement to have a specialist in occupational medicine/ or contract with an external occupational health service
- What are the tasks of the hygienic personnel? – they are described following the recommendations of the experts from Germany and Switzerland during the Bulgarian-Swiss Hospital Hygiene Programme (BSHHP)
- Do cleaning and housekeeping personnel receive further education and training in matters of hospital hygiene and infection prevention? – Yes, on the spot

2.5 Staffing

What is the patient/nursing staffing ratio in Bulgaria?

- ICUs – ➤ 1:2-1:3-1:4 (nurse:patients)
- Surgical units – somewhere between
- Therapeutic units – 1:10-1:20-1:30

Some nurses work at two different units/hospitals, because of the understaffing/underpayment

2.6 Surveillance

Surveillance of nosocomial infections or nosocomial infectious agents is carried out mandatory for all the hospitals (REGULATION No 2 of January 10, 2005 on the organization of prevention and control of nosocomial infections, issued by the Ministry of Health (SG. Issue 8 of 21.01.2005, amend. SG. Issue 69 of 3.09.2010))

- Nosocomial infections are registered according to the ECDC definitions since 2011.

Pathogens, e.g. carbapenem-resistant pathogens, are recorded only for patients with Ni since 2019, but data are aggregated for all the Nis after statistical procession of the NCPHA

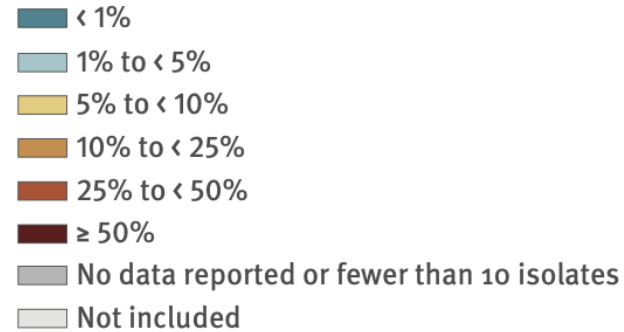
<http://ncphp.government.bg/index.php/en/>

Cases of antimicrobial resistance to antimicrobial agents, 2019, Unpubli.data

| Clinical Resistance to AM agents | | | | Microbiology Resistance | | | |
|----------------------------------|-----|------|-----|-------------------------|--------|------------|------------|
| (S) | (I) | (R) | PDR | (WT) | (NW T) | (+) R gene | (-) R gene |
| 3719 | 678 | 1984 | 44 | 626 | 723 | 14 | 1 |

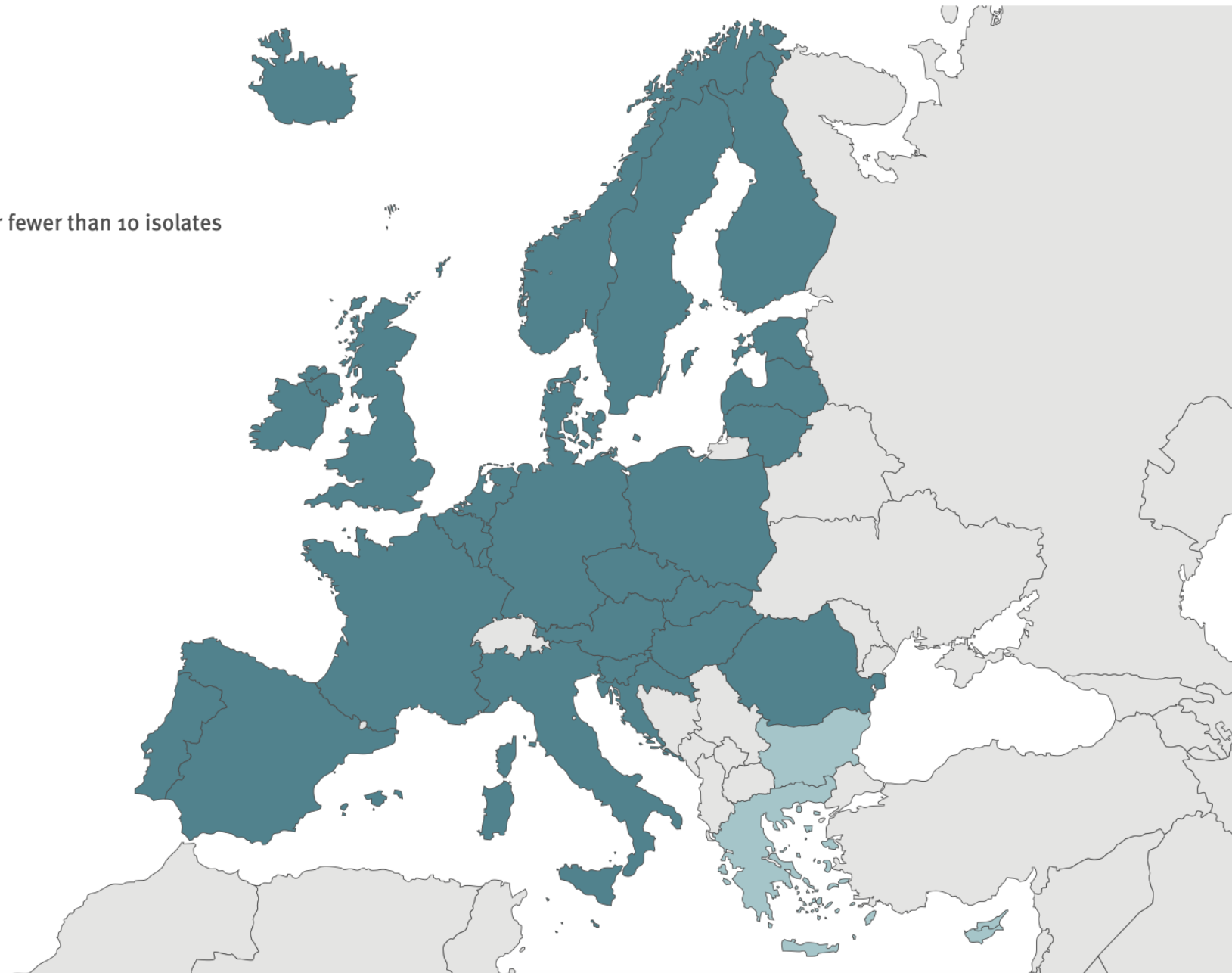
- The results per hospital and per country are consolidated annually (Presented for the country on the slide “Incidence and prevalence”)
- For the epidemiological situation with regard to e.g. carbapenem and carbapenemase-producing pathogens - EARS-Net Annual Report 2018 on the next slide

Figure 3.5. *Escherichia coli*. Percentage (%) of invasive isolates with resistance to carbapenems, by country, EU/EEA countries, 2018



Non-visible countries

- Liechtenstein
- Luxembourg
- Malta



European Centre
for Disease
Prevention and
Control.
Surveillance of
antimicrobial
resistance in
Europe 2018.
Stockholm: ECDC;
2019.
<https://www.ecdc.europa.eu/sites/default/files/documents/surveillance-antimicrobial-resistance-Europe-2018.pdf>

2.6 Surveillance cont.

- What are the most common nosocomial infections and infectious agents?- Statistical processing of officially registered HCAs for the period **2011-2016** shows that the incidence of registered NI among hospitalized patients in Bulgaria* is below 1% with relative weight of:
 - Surgical site infections - 20.67%
 - Lower respiratory tract infections (including pneumonia) - 19.41%
 - Urinary tract infections - 15.42%
 - Primary sepsis - 6.74%

The high relative share – 21.73% of „other“ clinical forms is associated with the dropout of the upper respiratory tract infection registration as a separate clinical form over the period considered.

- Is it mandatory to report it when patients with antibiotic-resistant pathogens are transferred to another hospital? - No
- Are there any recommendations for the preventive isolation and screening of patients from abroad? – No

* Y. Mitova, S. Angelova, V. Doicheva, G. Donkov, Ts. Mincheva. Clinical and Etiological Structure of Nosocomial Infections in Bulgaria for the Period 2011-2016, Oct. 2017, Acta Medica Bulgarica 44(2), <https://content.sciendo.com/view/journals/amb/44/2/article-p26.xml>

2.7 Cleaning, Disinfection, Sterilisation

- There are recommendations for cleaning, disinfection and sterilisation – in the Medical Standard for the Prevention and Control of Nis
- There are recommendations for the reprocessing of medical devices (instrument disinfection)- again in the MS-NIs
- Are there any recommendations for how to carry out surface disinfection? - Yes
- Are there disinfectant lists? – No, only a list of biocides on the site of the MoH
- Is there a means to ensure the efficacy of the process, e.g. using environmental tests or through process monitoring? – there are recommendations written in the MS-NIs

2.8 Hygienic-Microbiological Environmental Tests

- There are no written recommendations for hygienic-microbiological environmental tests. Usually performed by the RHIs – once a year for all hospital units, more often for the ICUs and other risk departments
- The main recommendations for the evaluation of hygienic-microbiological environmental studies are described in the MS-NIs
- The specific measures to be taken in the event of deficiencies identified during environmental tests are up to the ICT competency or are recommended by the health inspector from the RHIs

2.9 Structural-Functional Criteria

The recommendations regarding structural-functional aspects are mainly described in the

- “REGULATION/Ordinance No 49 of 18.10.2010 on the basic requirements for the structure, activities and internal order of hospital facilities and institutions for medical-social care”, issued by the MoH, (State Gazette, Issue 83 of 22.10.2010)
 - Annex No. 1 to Art. 13 (Am. - SG, iss. 92 in 2010) Health requirements for the premises of the medical establishments for hospital care and the homes for medico-social care, as well as provision of anti-epidemic regime in them, pp. 9-13. http://www.mh.government.bg/media/filer_public/2015/04/17/naredba49-ot-18-10-2010-lechebni-zavedenia-za-bolnichna-pomosht.pdf
- Some recommendations are given in the Medical Standard for the Prevention and Control of Nis
- Structural-functional criteria implemented for new buildings are addressed in the REGULATION No. RD-02-20-3 of 21.12.2015 on the design, implementation and maintenance of public service buildings in the field of education and science, health care, culture and the arts”, issued by the Ministry of regional development and welfare (State Gazette, issue 5 of 2016), pp.48-70. <https://www.mrrb.bg/bg/naredba-rd-02-20-3-ot-21-12-2015-g-za-proektirane-izpulnenie-i-poddurjane-na-sgradi-za-obstestveno-obslujvane-v-oblastta-na-obrazovanieto-i-naukata-zdraveopazvaneto-kulturata-i-izkustvata/>
- What is the national legal mandate? – “Based on the laws passed by the National Assembly, the CoM adopts legislative acts such as decrees, ordinances or decisions, regulating various aspects of health care (for example, structural changes in the health system, or changes in the budget of the MoH). The Minister of Health has the right to issue ordinances, regulations, instructions and orders in cases that are explicitly regulated by health laws and concern the functioning of the health system (for example, the adoption of medical standards).”
http://www.euro.who.int/data/assets/pdf_file/0005/383054/HiT-Bulgaria-2018-web.pdf?ua=1

Structural-Functional Criteria

There are specific recommendations for the construction of different units in the regulations mentioned on the previous slide and also in the medical standards for:

- surgical units – for different types of units
https://www.mh.government.bg/media/filer_public/2015/11/18/obsht-med-standart-grudna-nevro-kardio-sudova-detska-licevo-chelustna-hirurgiq.pdf
- intensive care units - medical standard “Anesthesia and intensive care” canceled in 2017
- haemato-oncological wards - medical standard “Clinical Haematology”
http://www.mh.government.bg/media/filer_public/2019/07/24/klinichna-hematologiq.pdf medical standard “Medical oncology”
http://www.mh.government.bg/media/filer_public/2018/06/22/med-standart-med-onkologiq.pdf

Structural-Functional Criteria

- neo-natological wards -
https://www.mh.government.bg/media/filer_public/2015/11/18/neonatologiq.pdf
- neurological early rehabilitation facilities – medical standard "Physical and rehabilitation medicine",
https://www.mh.government.bg/media/filer_public/2015/11/18/fizikalna-rehabitalicionna-medicina.pdf
- normal wards - in the regulations already mentioned

There are detailed recommendations in the regulations:

- on the number of beds / rooms
- for water supply and sewage systems
- for sanitary facilities

2.10 Outbreak Management

The criteria for the preparation of a systematic outbreak management are described in the Medical Standard for the Prevention and Control of Nis

- There are criteria for outbreak detection - depending on the causative agent and number of cases
- There is an obligation to report outbreaks – mentioned also in the REGULATION No 2 of January 10, 2005 on the organization of prevention and control of nosocomial infections, issued by the Ministry of Health
- There are fixed rules for outbreak management – steps for outbreak investigation are described in the MS-NIs
- There are requirements regarding the typing of identified pathogens to compare pathogens from the patient and those from the environment, but not followed in all cases
- There are no requirements regarding disinfection lists in the event of an epidemic

3. Causes, Deficit Analysis and Need for Optimisation

- What are the most important problems and their causes regarding nosocomial infections in my country?
 - More detailed regulation in some areas, incl. AMR, list of disinfectants, environmental controls etc.
 - Training and education in the field of Hospital Hygiene and Prevention of Infections
 - Information System for surveillance of NIs

“As of 2018, health care providers, the MoH and the NHIF, are still operating fragmented information systems. Health care establishments operate parallel information technologies and databases, and exchange data electronically with the NHIF and the NCPHA. The latter two institutions (among others) consolidate this information into databases at the national level. However, there is no unified system in place that enables communication between different information systems and databases (Salchev, 2016).”

http://www.euro.who.int/_data/assets/pdf_file/0005/383054/HiT-Bulgaria-2018-web.pdf?ua=1

- What would need to be improved most urgently? - To motivate people to stay in the country and to provide the necessary funds for reform, incl. e-system
- Could the EU, other European institutions or organizations, or consulting companies support your country in a deficit analysis? – Hopefully, yes
- Would this be accepted and/or would this impact regulation in your country? – Hopefully, yes

Thank you for your attention!