

AMR tegevuskava ja seire perspektiivid

Liidia Dotsenko

Nakkushaiguste epidemioloogia osakond, Terviseamet

ELMÜ mikroboloogia sektsiooni koosolek Rakvere, 20.10.2023



Lühidalt ajaloost

- 2017 European Commision One Health Action Plan against antimicrobial resistance (AMR)
- 2019 Sotsiaalministri käskirjaga kinnitati AMR juhtrühma koosseis, eesmärk ja töökord
- 2019 ECDC country visit
- 2019 Valdkondadeülene visioon antimikroobse resistentsuse ohjamiseks 2020-2030 (draft)
- 2022 esimene pandeemiajärgne juhtrühma koosolek
- Juuli 2023 inimtervise valdkonna AMR töörühma koosolek
- September 2023 AMR ja infektsioonikontrolli tegevuskava inimtervisevalkonnas (draft)
- Oktoober 2023 WHO Joint External Evaluation onsite visit

WHO komisjoni hinnang. Antimicrobial resistance

| Level | P4.1. Multisectoral ²⁵ coordination on AMR | | | | |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--|--|--|
| Level 1 | No multisectoral national action plan for AMR and no formal multisectoral governance or coordination mechanism on AMR exists | | | | |
| Level 2 | Multisectoral national AMR action plan under development; multisectoral coordination mechanism has been established, with government leadership | Χ | | | |
| Level 3 | Multisectoral national AMR action plan developed; multisectoral coordination mechanism is functional with clear terms of reference and regular meetings | | | | |
| Level 4 | Multisectoral national AMR action plan approved and reflects GAP objectives, with a costed operational plan being implemented | | | | |
| Level 5 | Multisectoral national AMR action plan has identified funding sources, | Level | | | |
| Level 5 | is being implemented and has monitoring in place, and is updated and evaluated regularly | Level 1 | | | |

| Level | P4.2. Surveillance of AMR ^{26,27} | | | |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--|--|
| Level 1 | No or limited capacity for generating, collating, and reporting data (antibiotic susceptibility testing and accompanying clinical and epidemiological data) | | | |
| Level 2 | AMR data are collated locally for common pathogens in hospitalized and community patients ²⁸ , but data collection may not use a standard approach and lacks national coordination and/or quality management | | | |
| Level 3 | AMR data are collated nationally for common pathogens, but national coordination and standardization are lacking | Χ | | |
| Level 4 | There is a standardized national AMR surveillance system collecting data on common pathogens in hospitalized and community patients, with an established network of surveillance sites, designated national reference laboratory for AMR and a national coordinating centre (NCC) producing reports on AMR | | | |
| Level 5 | The national AMR surveillance system's data is analysed, interpreted and reported together with antimicrobial consumption and/or use data for human health, and analysis of similar data across sectors (human and animal health and agriculture) is attempted | | | |

WHO komisjoni hinnang. Antimicrobial resistance

| Level | P4.3. Prevention of multidrug resistant organism (MDRO) | | | | |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--|--|--|
| Level 1 | Priority MDRO pathogens (phenotypes and genotypes) have not been identified by national authorities, and MDRO pathogens are not detected | | | | |
| Level 2 | National strategy or guidance for MDRO containment exists and includes colonization screening priority MDRO pathogens (phenotypes and genotypes) have been identified by national authorities. Some health facilities can detect priority MDRO pathogens based on laboratory data | | | | |
| Level 3 | Selected health facilities have access to MDRO phenotype confirmation. Facilities notify national levels when priority MDRO pathogens are detected | X | | | |
| Level 4 | All health facilities ²⁹ have access to MDRO phenotype confirmation. Facilities notify national levels when priority MDRO pathogens are detected in a timely manner. Responses are tracked and supported at the national level | | | | |
| Level 5 | Functional system in place to rapidly communicate and track the detection, confirmation and notification of novel or priority MDROs within hospitals and to national levels. All hospitals are able to launch response activities to priority MDRO pathogens in a timely manner. Facilities regularly communicate pertinent MDRO data to local referral networks to inform prevention/containment efforts | | | | |

WHO komisjoni hinnang. Antimicrobial resistance

| Level | P4.4. Optimal use of antimicrobial medicines in human health | | | | | |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--|--|--|--|
| Level 1 | No or weak national policy and/or regulations on appropriate use, availability, quality and use of antimicrobials in human health | | | | | |
| Level 2 | National policy and regulations promoting appropriate antimicrobial use/ antimicrobial stewardship activities are developed for the community and health care settings | | | | | |
| Level 3 | Guidelines for appropriate use of antimicrobials are available and antimicrobial stewardship programs ³⁰ are established in some health care facilities. The "Access, Watch and Reserve" (AWaRe) ³¹ classification of antibiotics is adopted in the national essential medicines list | X | | | | |
| Level 4 | Guidelines and practices to enable appropriate use of antimicrobials are implemented in health care facilities nationwide. Functioning AMR stewardship programs in all major health care facilities. Monitoring of antibiotic consumption is being performed and based on the AWaRe classification of antibiotics | | | | | |
| Level 5 | Guidelines on optimizing antibiotic use are implemented for all major syndromes and data on use is systematically fed back to prescribers. The AWaRe classification of antibiotics is incorporated into antimicrobial stewardship strategies. Robust national monitoring of antibiotic consumption is being performed | | | | | |

WHO komisjoni hinnang. Infection prevention and control

| Level | R4.1. IPC programmes | Choose one level |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Level 1 | An active ¹⁰² national IPC programme ¹⁰³ or operational plan according to the WHO minimum requirements ¹⁰⁴ is not available or is under development | |
| Level 2 | An active national IPC programme or operational plan according to WHO minimum requirements exists but is not fully implemented. National IPC guidelines/standards exist but are not fully implemented | |
| Level 3 | An active national IPC programme exists, and a national IPC operational plan according to the WHO minimum requirements is available including role of IPC in outbreaks and pandemic. National guidelines/standards for IPC in health care are available and disseminated. Selected health facilities are implementing guidelines using multimodal strategies, 105 including health workers' training and monitoring and feedback | X |

WHO komisjoni hinnang. Infection prevention and control

| Level | R4.2. HCAI surveillance | | | | | | |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--|--|--|--|--|
| Level 1 | No national HCAI surveillance programme or national strategic plan for HCAIs surveillance, including pathogens that are antimicrobial resistant and/ or prone to outbreaks is available or under development | | | | | | |
| Level 2 | A national strategic plan for HCAIs surveillance (including pathogens that are antimicrobial resistant and/or prone to outbreaks) is available but not implemented | X | | | | | |
| Level 3 | A national strategic plan for HCAIs surveillance (including pathogens that are antimicrobial resistant and/or prone to outbreaks) is available and implemented through a national programme and system for data collection, analysis and feedback. Selected secondary and tertiary health care facilities are conducting HCAIs surveillance (as specified above) and provide timely and regular feedback to senior management and health workers | | | | | | |
| Level 4 | A national strategic plan for HCAIs surveillance (including pathogens that are antimicrobial resistant and/or prone to outbreaks) is available and implemented nationwide in all secondary and tertiary health care facilities through a national system according to the WHO recommendations on IPC core components. Regular reports are available for providing feedback | | | | | | |
| Level 5 | A national strategic plan for HCAIs surveillance (including pathogens that are antimicrobial resistant and/or prone to outbreaks) are available and implemented nationwide in all secondary and tertiary health care facilities through a national programme and system according to the WHO recommendations on IPC core components. Data are shared and being used continuously and in a timely manner to inform prevention efforts. The quality and impact of the system are regularly evaluated, and improvement actions are taken ac | | | | | | |

WHO komisjoni hinnang. Infection prevention and control

| Level | R4.3. Safe environment in health facilities | one level |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Level 1 | National standards and resources for safe built environment ¹⁰⁷ e.g., WASH, screening, isolation areas and sterilization services in health care facilities, ¹⁰⁸ including appropriate infrastructure, materials and equipment for IPC; as well as standards for reduction of overcrowding and for optimization of staffing levels in health care facilities are not available or under development | |
| Level 2 | National standards and resources for a safe built environment e.g., WASH, screening, isolation areas and sterilization services in health care facilities, including appropriate infrastructure, materials and equipment for IPC; as well as standards for reduction of overcrowding and optimization of staffing levels in health care facilities, according to WHO minimum requirements, exist but they are not fully implemented through a national plan | |
| Level 3 | National standards and resources for safe built environment, e.g., WASH, screening, isolation areas and sterilization services in health care facilities, including appropriate infrastructure, materials and equipment fort IPC; as well as standards for reduction of overcrowding and optimization of staffing levels in health care facilities, according to WHO minimum requirements, exist and are implemented in selected health care facilities at a national level according to a national plan | X |
| Level 4 | National standards and resources for safe built environment, e.g., WASH, screening, isolation areas and sterilization services in health care facilities, including appropriate infrastructure, materials and equipment for IPC; as well as standards for reduction of overcrowding and optimization of staffing levels in health care facilities, according to WHO minimum requirements, are implemented at national and intermediate levels according to a national plan | |

- SUUND 1: JUHTIMISE, KOORDINEERIMISE JA KOOSTÖÖ TÕHUSTAMINE
 - 1-1 AMR ja IPC inimtervise töörühma moodustamine
 - 1-2 Inimtervise valdkonna AMR ja IPC tegevuskava välja töötamine
 - 1-3 Õigusruumi kaasajastamine
- SUUND 2: ANTIMIKROOBSETE AINETE MÕISTLIKU VÄLJA KIRJUTAMISE, KASUTAMISE ja KÄITLIMISE TÕHUSTAMINE
 - 2-1 Tõenduspõhiste antibakteriaalsete preparaatide väljakirjutamise juhendite välja töötamine (haiglatele ja esmatasandile)
 - 2-2 WHO AWaRe klassifikatsiooni järgimine haiglates ja esmatasandil
 - 2-3 Monitooringu mehhanismide välja töötamine
 - 2-4 Antibiootikumide väljakirjutamise andmete kogumine ja analüüs asutuse / perearsti tasandil
 - 2-5 Diagnostiliste protseduuride kasutamise soodustamine ja toetamine, eelkõige esmatasandil, et optimeerida antibiootikumide kasutamist
 - 2-6 Antibiootikumide kättesaadavuse tagamine

• SUUND 3: AMR SEIRE TÕHUSTAMINE

- 3-1 Efektiivse IT lahenduse välja töötamine AMR seiresüsteemi toimimiseks TIS andmete põhjal
- 3-2Tervishoiutekkeliste nakkuste seire süsteemi loomine
- 3-3 Hetkleviuuringute korraldamine haiglates ja hoolekande asutuses (riiklikul tasandil)
- 3-4 Seirealane valdkondade vaheine koostöö tõhustamine
- 3-5 Puhangute uurimine

- SUUND 4: INFEKTSIOONIKONTROLLI TÕHUSTAMINE
 - 4-1 Infektsioonikontrolli nõuete kaasajastamine ning nõuete järgimise kontrollsüsteemi loomine
 - 4-2 Riiklike infektsioonikontrolli juhendite kaasajastamine / välja töötamine
 - 4-3 Kätehügieeni soostumuse järelevalve tervishoiuasutustes (sh esmatasand,, hoolekandeasutused)
 - 4-4 Tervishoiu- ja hoolekandeasutuste töötajate vaktsineerimis hõlmatuse suurendamine

- SUUND 5: LABORATOORSE VÕIMEKUSE TÕSTMINE
 - 5-1 Ulatusliku AMR referentslabori teenuse tagamine inimtervise valdkonnas
 - 5-2 Täisgenoomi sekveneerimise juurutamine ja selle tulemuste efektiivne kasutamine epidemioloogilistel eesmärkidel
 - 5-3 Digitaliseerimine
 - 5-4 Laborite vaheline koostöö tõhustamine
 - 5-5 Esmase diagnostika tõhustamine (laborite kvaliteet, akrediteerimine)

- SUUND 6: SPETSIALISTIDE AMR ALASE KOOLITUSE JA VÄLJAÕPPE PARENDAMINE, ELANIKKONNA TEADLIKKUSE TÕSTMINE JA INFOVAHETUS
 - 6-1 Infektsioonikontrolli valdkonna spetsialistide ressurss ja väljaõpe
 - 6-2 Tervishoiutöötajate AMR, AMS ja IK teemaline baas- ja täiendõpe (e-koolitus)
 - 6-3 AMR, AMS ja IK teemade kajastamine tervishoiutöötajate õppekavas
 - 6-4 Hoolekandeasutuste töötajate IK teemaline koolitamine
 - 6-5 Tervishoiutöötajate teadlikkuse ja kompetentsi regulaarne seiramine
 - 6-6 Elanikkonna teadlikkuse tõstmine ja seiramine

TIS vs NAKIS. Karbapeneemresistentse K. pneumoniae näitel

NAKIS Jaanuar – september 2023

| Materjal | Isollatide arv | ESBL-A | OXA-48 | OXA-48, MBL(NDM) | OXA-48, MBL(NDM), ESBL | MBL(VIM) |
|-------------------------------|----------------|--------|--------|---------------------|------------------------------|----------|
| Täisveri | 1 | 1 | | | | |
| Uriin | 15 | 1 | 6 | 3 | 1 | 1 |
| Kõhuõõnevedelik | 5 | 1 | 3 | | | |
| Haavaeritis | 5 | | 2 | 1 | | 1 |
| Roe | 1 | | 1 | | | |
| Hingamisteede materjal | 3 | | | | 2 | 1 |
| Muu (mädä, abstsessimaterjal) | 2 | 1 | | | 1 | |
| Kultuur | 3 | | 3 | | | |
| Isolaate kokku | 35 | 4 | 15 | 4 | 4 | 3 |

TIS Jaanuar – iuuni 2023

| Ertapeneem R |
|--------------|
| 26 |
| 3 |
| 7 |
| 11 |
| 5 |
| 1 |
| 4 |
| 57 |
| |

NAKIS Jaanuar – detsember 2022

| Materjal | Isollatide arv | OXA/181 | OXA-48 | OXA-48, MBL(NDM) | MBL(OXA-181), ESBL | MBL(VIM) |
|----------------|----------------|---------|--------|---------------------|-----------------------|----------|
| Täisveri | 2 | | | 1 | | 1 |
| Uriin | 12 | | 3 | 1 | | 1 |
| Haavaeritis | 3 | | 1 | | | 1 |
| Hingamisteede | | | | | | |
| materjal | 9 | 1 | 2 | 2 | 1 | 3 |
| Kultuur | 2 | | | | | |
| Isolaate kokku | 28 | 1 | 6 | 4 | 1 | 6 |



Tänan kuulamast!

