

**2nd Meeting of Western Balkans Road Safety Observatory
December 6-7, 2021 - Skopje**

Surveillance system for road safety in Republic of North Macedonia

Prof. Fimka Tozija MD PhD

Institute of Public Health of Republic of North Macedonia,
University "Sts. Cyril and Methodius" Faculty of Medicine, Skopje

Legislation - *Long tradition*

- **Law for evidence in health** “Official Gazette” No 20/2009, No 53/2011, No 164/2013, No 150/2015
- Law for evidence in health “Official Gazette of SFRJ” No 22/78 and 18/88
- Law for evidence in health “Official Gastec of RM” No 37/79, No 21/85 and No 15/95
- Guideline for unique methodological principles and statistical standards for evidence in health “Official Gazette of SFRJ” No 13/79
- Guideline for principles for evidence in health “Official Gazette of RM” No 21/85

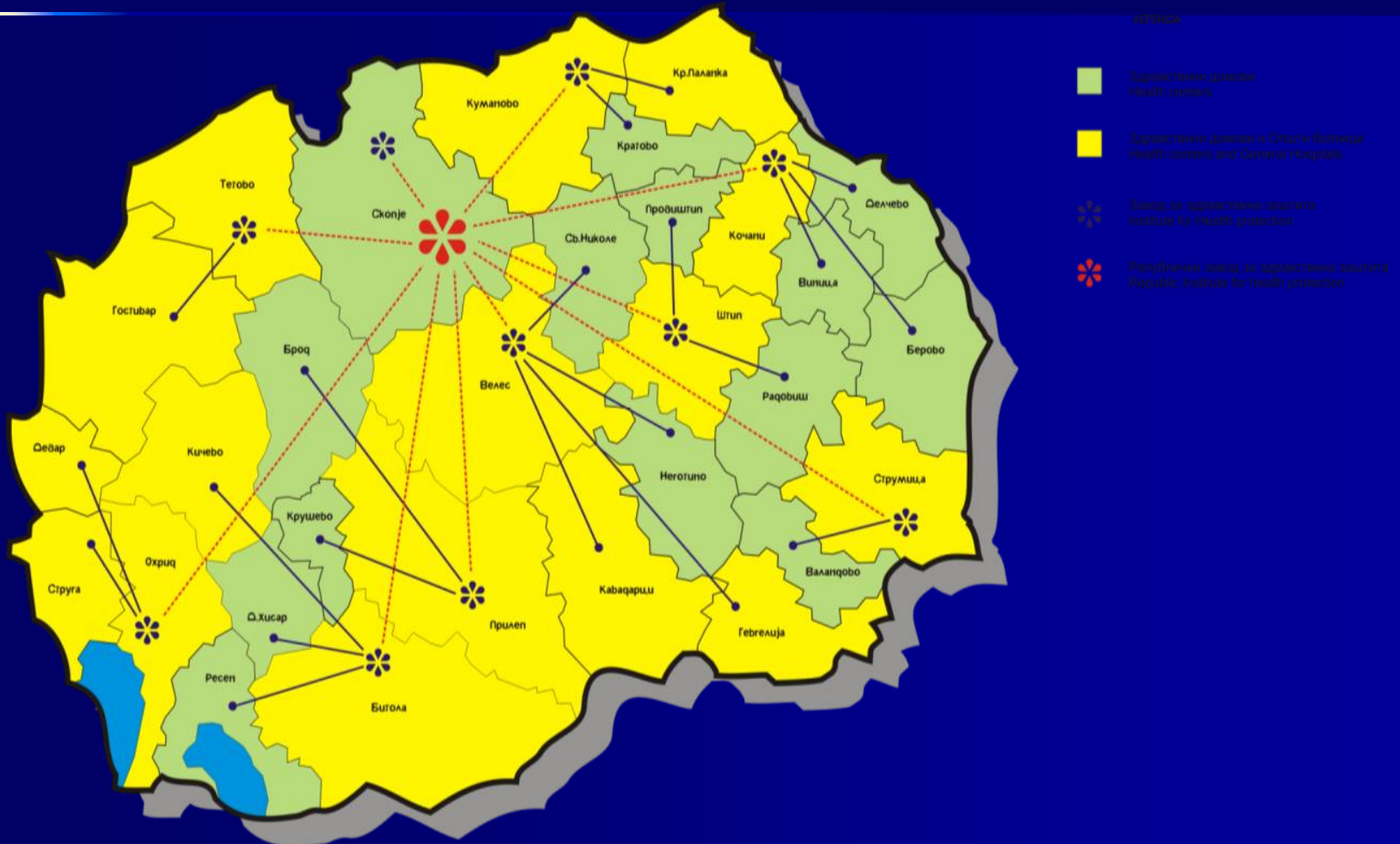
Legislation

- Law on State Statistics
- Law on Protection of Personal Data
- Law on data in the Electronic Form and Electronic signature
- Health Care Law
- Health Insurance Law
- Law on Protection of Patient Rights
- Law for Public Health
- Law on Interior
- Law for road traffic safety
- Criminal Code of Republic of Macedonia
- Statistical program for the Republic of North Macedonia
- National Public Health Program

System for health statistics - Partners

- Ministry of Health
- Agency for E-health
- National Institute of Public Health
- 10 Centers for Public Health
- Health Insurance Fund
- State Statistical Office
- Institute of Occupational Health
- Institute of Epidemiology at Faculty of Medicine Skopje
- State agencies for:
 - Personal data protection
 - for free access to public information
- Health organizations
- Ministry of interior

Institute of Public Health and 10 Centers of Public Health



Functions

National Institute of Public Health

- coordination of the 10 Centers of Public Health
- a reference centre for health statistics
- a training centre for Public Health
- an affiliated basis for Public Health to the Medical Faculty in Skopje

Department for Violence and Injury Control and Prevention

10 Centers for Public Health:

- collecting, processing and analysis of data including injuries

Law for evidence in health

- record - keeping
- data collection (digital and manual)
- 35 individual evidences and registers
- data flow and exchange
- reporting and publishing
- data quality and protection
- rights and responsibilities

Individual evidences for road traffic injuries

- **Road traffic injury record**
- **Occupational injury record**
- **Hospital admission record**
- **Sick leave record**
- **Death certificate**

Individual evidence for road traffic injuries

WHO injury surveillance guideline

Information for:

- Injured
- Road traffic crash: cause, risk, mechanism, place, time
- injury: medical data for injury, treatment and outcome
- WHO ICD 10 (4 or 5 digits) for nature (S/T) and external cause (V/Z)

Individual evidence for road traffic injuries

- **Compulsory** for all health organizations (HO)
- Paper Data flow
 - from HO to CPH (by 5th)
 - **CPH to IPH (by 10th in the month)**
- Digital Data flow – online through web register within health information system linked with “my term” application

Mortality

State Statistical Office

Death Certificate

- ICD10 – 4 digits for nature and external cause of injury
- provides national information disaggregated by age, sex, region
- Web site, on request
- Exchange of data with MOH, MOI, HIF
- Exchange of aggregated data with IPH (not individual)
- **Problems:**
 - Under reporting
 - Poor quality of data (missing data for external cause of injury)

Hospital Admission

National Institute of Public Health

10 Centers of Public Health

Individual Evidence for Hospital Admission

- ICD10 – 4 digits for S/T and V/Z (5 digits with new form)
- provides national information disaggregated by age, sex, region
- HIF DRG
- Web site, on request
- Exchange of data with MOH, MOI, HIF
- Exchange of aggregated data with SSO (not individual)
- **Problems:**
 - Under reporting
 - Poor quality of data (missing data for external cause of injury)

Emergency Department Data

National Institute of Public Health

10 Centers of Public Health

- All individual evidences for road traffic injuries should be filled by EDs
- There is no ED injury register
- There are no available routine data for RTIs from EDs (they have data in their record books)

Information Technology

Ministry of Information

Ministry of Health, Agency for E-health

Health Insurance Fund

Institute of Public Health, 10 Centers for Public Health

- National Strategy for Health Information System
- Integrated Health Information System – in process
- **Software application “ my Term”**
- **Electronic referral**
- National Software development for individual evidences for RTIs – in process
- ICD 10 software
- DRG Grouper
- Computerised at entry point available (HOs)

Data sharing

Institute of Public Health

10 Centers of Public Health

Ministry of Health

Agency for e-health

Health Insurance Fund

Ministry of Interior

State Statistical Office

Health organizations

Problems

- Overall **underreporting** even though it is compulsory
- **Low motivation** of health professionals FOR reporting
- **Poor quality** of data
- **Poor exchange** of primary information between sectors

Recommendations

- **Legislation Enforcement**
- **Better control** by the State Sanitary and Health Inspectors on health statistics
- **Motivate** health care providers - data producers
- **Improve reporting**
- **Improve quality of data**
- Development of **guidelines** for data collection
- **Training of health providers at different levels**

Recommendations

- Development of **software application for RTIs data** collection, processing, analysis and exchange
- Develop **web register for RTIs**
- **Establish Health Integrated Information System**
- **Improve information exchange** between different sectors and stakeholders
- **Further support** from WHO EU and country office
- **Regional cooperation** through SEE Health Network, Transport Community, WBRSO