

Water safety in healthcare as condition for sustainability pathway (Vojvodina, Serbia)



Marija Jevtic^{1,2,3}, Sanja Bijelovic^{1,2}, Emil Zivadinovic²

1 University of Novi Sad, Faculty of Medicine

2 Institute of Public Health of Vojvodina

3 Université Libre de Bruxelles (ULB), Research Centre on Environmental and Occupational Health, School of Public Health



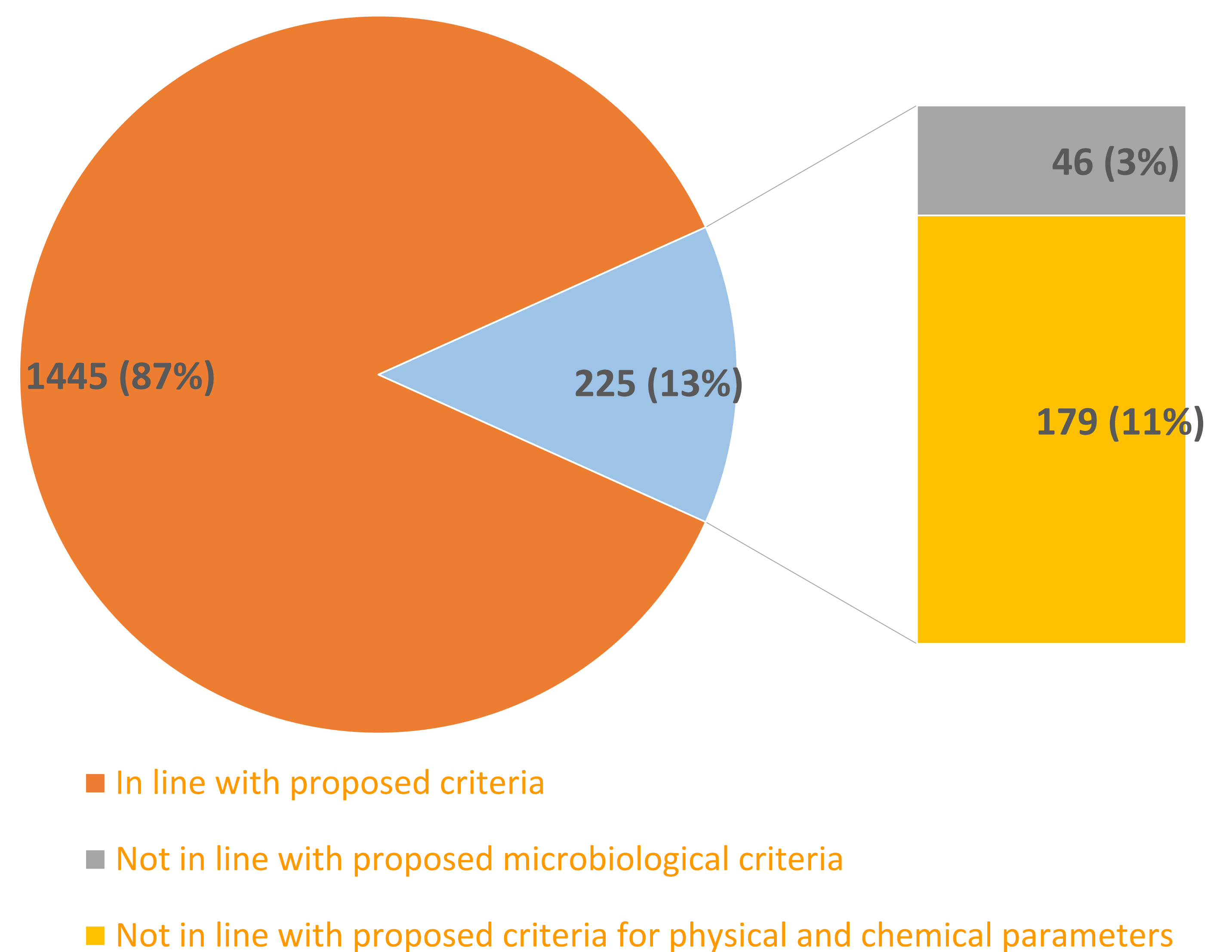
Context:

- Water and sanitation are essential to sustainable development with strong links to other Sustainable development goals (SDGs).
- SDG 6 is the main goal related to water and sanitation - "ensure availability and sustainable management of water and sanitation for all".
- The targets within SDG 6 are interconnected with other SDGs and across sectors.
- One of the crucial driver towards the sustainability pathway of our health care systems is ensure supply of quality and safe water.
- Water safety in healthcare facilities (HCF) is essential for safe patient care, especially for maternal and child health, hand washing, and cleaning of medical devices.
- Water is one of the essential environmental determinants of health and well-being recognised as human rights, and its fulfilment is in the focus of the 2030 Agenda for Sustainable Development, specifically under SDG 6 and SDG 3.
- The Serbia has a regulatory framework for the provision of water safety in HCF, but complementary standards and guidelines providing practical definitions are scarce.

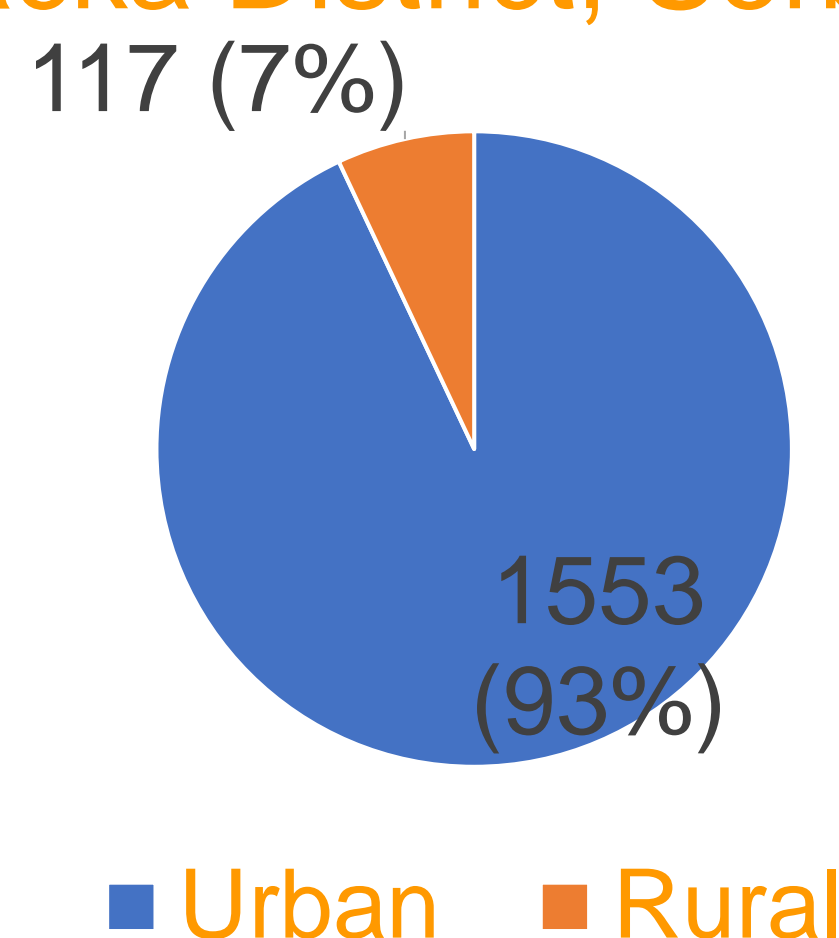
Results:

- The results have shown that 46 (2.75%) samples were not in line with proposed microbiological criteria, where the main hazards were *Pseudomonas aeruginosa* (isolated in 11 samples only in urban settlement Novi Sad), *Enterococcus faecalis* and *Escherichia coli* (isolated in 3 and 1 sample, respectively, mostly in rural settlements).
- According to chemical and physical parameters, 179 (12.05%) samples were not in line with proposed criteria, mainly due to concentration of manganese, iron, total organic compounds, ammonia, and sensory characteristics of water.
- Among hazards, arsenic and nitrites were found in a drinking water samples from rural settlements.

Drinking water samples from health care facilities in South Backa District which are not in line with proposed criteria with emphasis the main hazards



Origin of controlled drinking water samples from health care facilities in South Backa District, Serbia, in 2019



Methodology:

- During 2019 in the South Backa District of Serbia (1 urban settlement and 8 rural settlements) 1670 samples of drinking water samples from HCF were analysed, mostly (93%) from the urban settlement Novi Sad. All of the analysed HCF are connected to municipality water piped systems.
- Sampling and analyses were done by accredited and authorised Public Health Institute of Vojvodina, in line with proposed external monitoring of drinking water safety considering main set of microbiological, chemical and physical parameters.

Conclusion:

- The results are indicated the necessity of drinking water treatment in order to achieve SDG 6 and 3.
- From 2020 there is a new regulation in Serbia which recognises the necessity of monitoring water safety and management of water piped system in HCF, which further encourages the implementation of water safety plan procedures in order to establish controlled water safety management in HCF.
- The new regulation encourages improvements in quality management of the health sector and decreases the risk to the patient.
- These binding procedures indirectly contributes to the achievement of certain sub-objectives primarily within SDGs 6 and also within SDGs 3.

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