

ERO WG «INTEGRATION»

Prof. ILSHAT YULDASHEV

**I. K. Akhunbaev Kyrgyz State Medical Academy
Stomatological Association of the Kyrgyz Republic**

**03-09 September, 2026
Prague, Czech Rep.**

WG «INTEGRATION»



Ilshat YULDASHEV (Kyrgyz Rep.)

Oleg Gladkov (Bulgaria)

Michèle AERDEN (Belgium)

Maria Laura BONDI (Italy)

Ugur Ergin (Turkey)

Abdyrakhman ESHIEV (Kyrgyz Rep.)

Abibilla KALBAEV (Kyrgyz Rep.)

Vladimer MARGVELASHVILI (Georgia)

Borislav MILANOV (Bulgaria)

Dana OSPANOVA (Kazakhstan)

Khachatur TUSTSULYAN (Armenia)

Bedros YAVRU-SAKUK (Armenia)

Lazar YESSAYAN (Armenia)

Saule YESSEMBAYEVA (Kazakhstan)

Alexander KOREN (Israel)

Rumen ILIEV (Bulgaria)

Radosław MAKSYMOWICZ (Poland)

Issues, addressed in the INTEGRATION group



Sterilization of Dental Instruments



Sterilization is the complete removal of microorganisms from a substance or object—that is, the destruction of vegetative and spore forms, both pathogenic and nonpathogenic, by exposing it to physical or chemical agents.

A comparative study was conducted on the extent to which this issue has been addressed in the new member countries of ERO-FDI: Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan, Uzbekistan, and Ukraine.

All countries have orders and government decrees outlining the sanitary standards, rules, and hygienic requirements applicable to the sterilization of medical instruments..

These standards:

Have been approved by the Chief State Sanitary Doctors and cover:

- **requirements for premises,**
- **documentation procedures,**
- **equipment requirements,**
- **personnel requirements,**
- **safety regulations.**

In some countries (such as Kazakhstan and Ukraine), requirements for the sterilization of dental instruments are set out in separate orders—distinct from the general medical regulations governing the sterilization of medical instruments.

When addressing this issue, it would be desirable to have a similar, dedicated document for dentists..

A Brief Overview of Sterilization Methods

-PHYSICAL (121°C)

- hot air
- pressurized steam
- glass bead
- filtration (for liquids)

CHEMICAL

- gas
- liquid
- plasma

STAGES OF STERILIZATION

- ***PRE-CLEANING.*** *Cleaning reusable instruments immediately after use—without allowing them to dry—to remove visible contaminants (blood, residual filling materials).*
- ***Stage I — instrument*** **DISINFECTION** ***is carried out using physical or chemical methods. Among physical methods, the most common is***
- ***boiling in water for 30 minutes, or for 15 minutes with the addition of baking soda (20 g/L).***
- ***The chemical disinfection method involves fully immersing the instruments in a container filled with a disinfectant solution.***

- The second stage of processing instruments intended for sterilization—**PRE-STERILIZATION CLEANING**—aims to remove protein, fatty, and mechanical contaminants, as well as residual traces of medicinal products.
- The third stage of processing medical devices is **STERILIZATION**.
- Steam method
- Dry-heat method
- Glass bead method
- Gas method

STERILIZATION EQUIPMENT

- Hot-air sterilizer (dry-heat oven)
- Autoclave,
- Plasma and gas sterilizers (STERRAD 100S),
- Ozone sterilizer

Sterilization Monitoring

- Sterility testing of products is performed by immersing the entire product or part of it in nutrient media.
- Quality control of pre-sterilization instrument processing is performed by performing the following tests:
 - Azopyram test
 - Amidopyrine test
 - Phenolphthalein test
 - Sudan-III test

Monitoring sterilizer operation

Bacterial tests using **Bacillus stearothermophilus** spores are used to monitor the performance of steam sterilizers, whereas tests using **Bacillus licheniformis** (strain B-6) spores are used for hot-air sterilizers.

TASKS:

- Ensuring the widespread implementation of preventive programs, educating the public, especially children of pre-preschool and school age – Governmental preventive programs, responsible attitude to oral health,



A national prevention programme has been developed in Bulgaria, Uzbekistan and the Kyrgyz Republic

Funding for healthcare and dental care



- Healthcare and dental care systems in the countries of the Commonwealth of Independent States (CIS) share common historical roots (the Soviet Semashko model) but have undergone significant changes during the years of independence. Distinct financing models have emerged in the various states..

Main sources of healthcare financing

- **State budget (taxes):** Funds are derived from national taxes. These typically finance emergency medical care, the treatment of diseases of major public health importance (such as tuberculosis and cancer), and the maintenance of basic infrastructure.
- **Compulsory medical insurance (CMI):** A system of compulsory medical insurance has been implemented in several CIS countries (e.g., Russia, Kazakhstan, and Kyrgyzstan). Employed citizens or their employers make regular contributions to special funds, which subsequently cover the cost of treatment for insured individuals.
- **Personal funds (out-of-pocket):** Direct payment for services by patients at the clinic's payment counter. This source plays a significant role, particularly in dentistry and the purchase of medications.
- **Voluntary health insurance (VHI) and paid services:** Corporate insurance plans often arranged by large companies for their employees.

Specifics of dental care financing

- **Limited scope of free services:** In public clinics, coverage under compulsory medical insurance or basic state-funded programs typically guarantees only a minimal list of procedures: emergency care for acute pain, simple tooth extractions, and basic cavity treatment using low-cost materials.
- **Dominance of the private sector:** Aesthetic dentistry, orthodontics (bite correction), prosthetics, and dental implantation have shifted almost entirely to a commercial basis in most CIS countries. Patients pay for these services out-of-pocket or through voluntary health insurance.
- **Disparities in accessibility:** In major cities, the dental services market is highly competitive and well-developed, whereas in regional and rural areas, public clinics often face a shortage of modern equipment and qualified personnel.

Common features shared by most countries of the former USSR



- **Two-tiered market:** There is a clear division between the public sector (basic insurance- or state-funded services) and the commercial sector (high-tech care, aesthetic procedures, and implants).
- **High share of out-of-pocket expenses:** Dentistry is one of the most commercialized sectors of medicine. A significant portion of dental treatment costs is paid directly by patients out of pocket.
- **Limitations of basic programs:** State guarantees (compulsory medical insurance or budget funding) primarily cover emergency care (acute pain), basic cavity treatment using low-cost materials, and simple tooth extractions.
- **Development of private infrastructure:** Cities across CIS countries are saturated with private dental clinics that compete on the basis of service quality and modern equipment.

Ensuring the widespread implementation of prevention programs

Main sources of healthcare financing

- State budget funds (tax revenues):
- Compulsory medical insurance (CMI): compulsory medical insurance system

Specifics of dental care financing

- Limited scope of free services: in public medical facilities, compulsory medical insurance (CMI) programs typically cover preventive measures.
- Dominance of the private sector. It is necessary to engage private organizations (through public-private partnerships) and make the limited funds of the CMI system attractive to them.

**Thanks
for
attention!**

