

# KHARKIV NATIONAL MEDICAL UNIVERSITY

# ISIC-2020



**KHARKIV NATIONAL  
MEDICAL UNIVERSITY**



# INFECTION

## INFECTIOUS DISEASES





BNT162b2 (vaccines is in trial phase 3 and will be used on 30,000 people from US, Brazil, Germany and Argentina ), University of Oxford in UK - ChAdOx1 nCoV-19 (vaccine is in phase 3 and will be used on 50,000 participants from UK, US, Brazil and South Africa), Sinovac in China - CoronaVac (trials are in phase 3 and will be used on 9000 volunteers from Indonesia, Bangladesh, China and Brazil), Sinopharm in UAE (trial is in phase 3 and will be used on 15000 participants from UAE, Peru and Bahrain), Mudroch Children's Research Institute in Australia - Bacillus Calmette-Guerin BRACE trial (trial is in phase 3 and will be used on 10,000 volunteers from Australia), Cansino Biologics in China and Russia - Ad5-nCoV (Trials are in phase 2 in China and in phase 3 in Russia), The Gamaleya National center of epidemiology and microbiology in Russia – Sputnik V (trial is in phase 1). Some countries have already started to use their vaccine for people, but the results of these measures are still not known today.

To conclude, we can say that kids have substantial epidemiological role as a potential carrier of COVID-19 and they can transmit infection directly to their family members. Some percentage of sick children can suffer from PMIS (Pediatric Multisystem Inflammatory Syndrome) which includes: rash, shortness of breath, fever at the beginning of the disease, to respiratory insufficiency, severe inflammation of multiple organs including brain, kidney, heart, lungs and skin then. So, nowadays only developing of an effective vaccine against COVID-19 will save humanity.

*Berezhna Antonina , Nechyporuk Iryna*

## **IMPLEMENTATION OF INTRAVASCULAR CATHERERS BUNDLES TO IMPROVE PATIENT SAFETY**

Kharkiv National Medical University

Department of Epidemiology

Kharkiv, Ukraine

Scientific advisor: prof. Chumachenko Tetyana

Introduction: Intravascular catheters (IVCs) are often used in medicine for therapeutic and diagnostic purposes. The use of IVCs may be accompanied by adverse effects, for



example, catheter-related bloodstream infections (CRBSIs). Thirty seven per cent of bloodstream infections episodes in intensive care units (ICUs) in Europe in 2017 were associated with using IVCs (ECDC, 2019). New strategies must be used to prevent CRBSIs. A prime example is the use of bundles. Bundle is a set of actions that must be performed by a medical worker during insertion and maintenance of IVC. Efficiency of CRBSIs bundles implementation has been proved in studies conducted in ICUs (D. Entesar-Tatafi et al., 2015; E. Ista et al., 2016). The purpose of the work is to estimate the process of implementation of bundles as a part of complex plan of prevention infections associated with IVC in hospitals in Kharkiv, Ukraine.

**Materials and Methods:** A prospective epidemiological observational study was carried out in 2018-2019 in 3 hospitals in Kharkiv, Ukraine.

**Results:** It was established that patient medical records and central vascular catheterization protocols contain insufficient information: there are no data about indications for catheterization, expected duration of catheterization, daily assessment of catheter insertion site, replacement of dressings. Organization of monitoring of CRBSIs and prevention and control of infectious complications of invasive procedures are difficult. Low compliance to implementation of new technologies such as using checklists among hospital staff was found. The medical staff thought it was a useless procedure that took extra time. The lack of regulatory documentation on infection control of CLABSIs in Ukraine is a barrier to bundles implementation of clinical practice.

**Conclusions:** The study showed that there are problems with bundles implementation in hospitals in Kharkiv. Bundles don't use in medical practice by reason for lack of knowledge about CRBSIs bundles, of low compliance with the apply bundles for vascular catheterization among hospital staff. The bundles implementation for the use of IVC in the work of hospitals is a necessary step to prevent adverse effects related with vascular catheterization. There is a need to develop and implement trainings on the correct use of IVCs and bundle technology for hospital staff in Kharkiv hospitals.



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