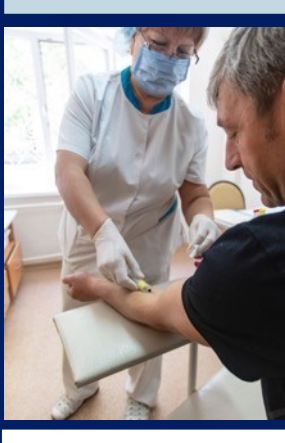


Situational Analysis of Core Components of IPC at 78 Hospitals in the Republic of Kazakhstan, 2021



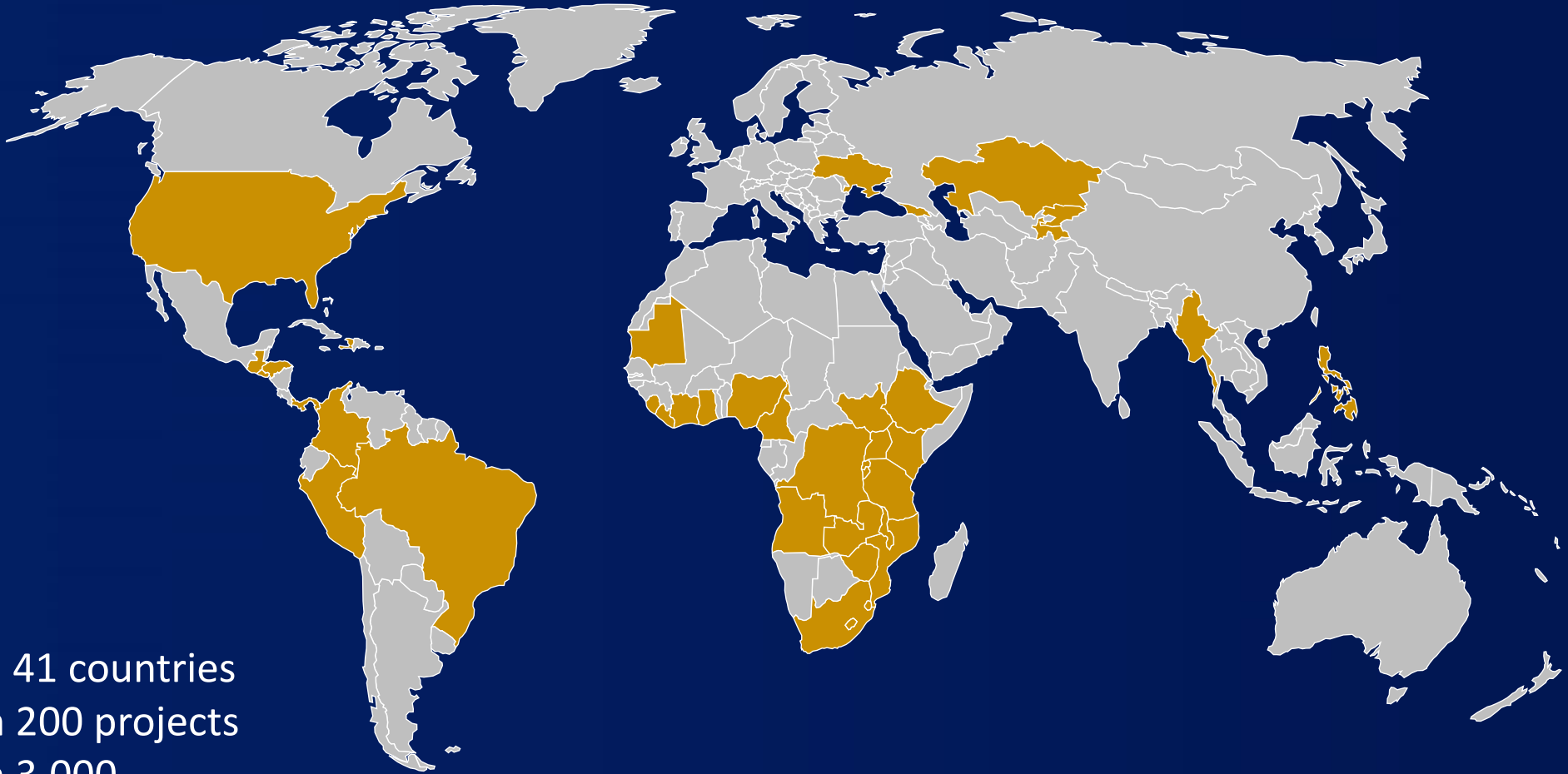
Anna Deryabina,
Regional Director, Eurasia



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ICAP globally



- Projects in 41 countries
- More than 200 projects
- More than 3,000 employees globally

ICAP key areas of Focus



HIV/AIDS



**Global health
security**



Tuberculosis



**Maternal and
child health**



**Laboratory
service**



**Data collection
systems**



**Management and
policy**



**Education
and training**



**Quality
improvement**

Projects in Kazakhstan

1. Supporting national HIV programs to achieve sustainable HIV control - CDC
2. Almaty model for HIV epidemic control - Elton John AIDS Foundation
3. Evaluation of the effectiveness of pulse oximetry in the management of patients with COVID-19 in Kazakhstan - CDC
4. **Supporting national response to SARS-CoV-2 epidemic and strengthen infection prevention and control systems - Chevron**



Situational Analysis of Core IPC Components

Goal: Describe the current situation regarding implementation of the facility-level core IPC components in the Republic of Kazakhstan in order to provide information for the development of the National IPC Action Plan.

Objectives:

1. Describe the current situation on the IPC core components;
2. Evaluate the IPC systems of medical institutions and their effectiveness with regard to the WHO recommendations;
3. Evaluate the IPC methods in identifying and safe managing patients with symptoms that meet the COVID-19 definition, and in preparing for an increase in COVID-19 patients in the event of widespread infection and transmission in the community;
4. Identify common shortcomings and difficulties on the IPC faced by hospitals.

Methods

- A. Self-assessment performed online by healthcare providers
- B. In-depth assessment by a team of specialists during a visit
 - 1. Individual or small group interviews with specialists responsible for the IPC
 - General issues concerning the IPC
 - IPC in the period of COVID-19 epidemic
 - 2. Assessment of the level of competence of specialists responsible for the IPC
 - 3. Infrastructure assessment during field observation

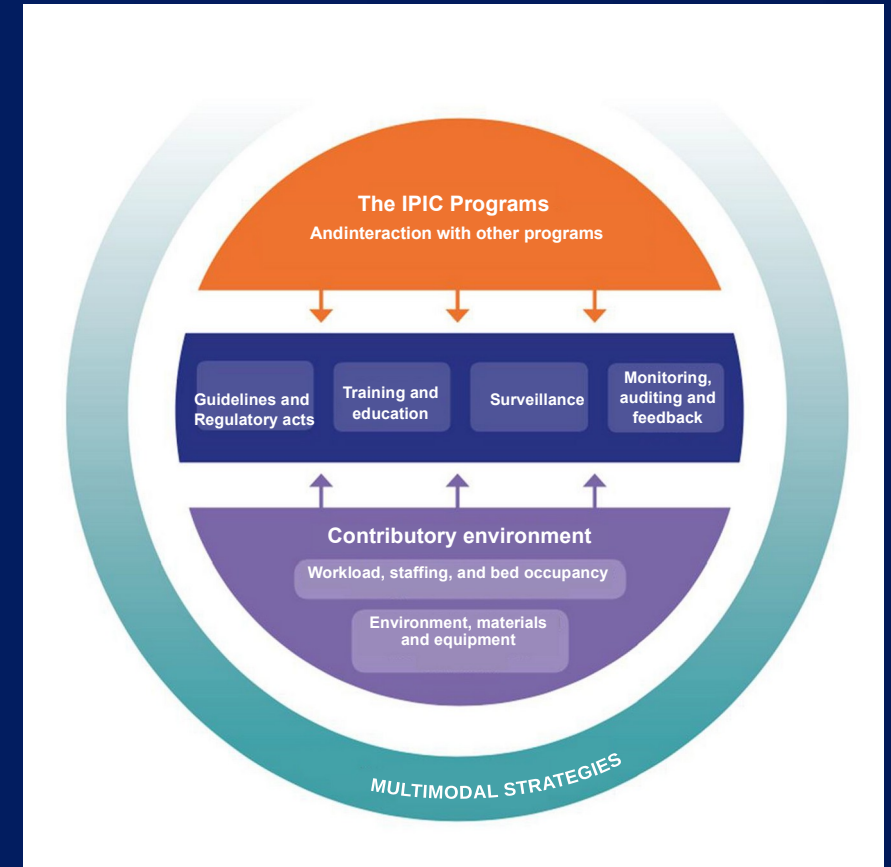


Stages

- Development of the protocol - January-April 2021
- Piloting questionnaires in 2 hospitals in Nur-Sultan - April 2021
- Approval of the protocol and all instruments - July 2021
- Research team training - August 2021
- Data collection - August-October 2021

Methodological Basis

- Guidelines on key components of infection prevention and control programs (IPC) (WHO, 2018)
- Minimum requirements for the IPC programs published by the WHO in 2019 (WHO, 2019)
- WHO questionnaire for assessing the main components of IPC (IPCAF)
- IPC assessment instrument of the Centers for Disease Control and Prevention (CDC) and the WHO for COVID-19 (WHO, 2020).



	Private	State	General
Akmola	1	2	3
Aktyubinsk	2	3	5
Almaty	2	4	6
Atyrau	1	2	3
East Kazakhstan	1	6	7
Karaganda	3	4	7
West Kazakhstan	0	3	3
Kostanai	1	3	4
Zhambyl	2	4	6
Kyzylorda	1	2	3
Mangystau	1	3	4
Pavlodar	1	2	3
North Kazakhstan	0	2	2
Turkestan	1	4	5
Nur-Sultan City	2	2	4
Shymkent City	3	2	5
Almaty City	3	5	8
	25	53	78



25 private and 53 state hospitals



ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДА МЕДИЦИНАЛЫҚ ҰЙЫМДАР
ДЕҢГЕЙІНДЕ ИНФЕКЦИЯЛАРДЫҢ АЛДЫН АЛУ ЖӘНЕ
ИНФЕКЦИЯЛЫҚ БАҚЫЛАУ БАҒДАРЛАМАЛАРЫНЫҢ НЕГІЗГІ
КОМПОНЕНТТЕРІ БОЙЫНША СИТУАЦИЯЛЫҚ ТАЛДАУ
НӘТИЖЕЛЕРІ ТУРАЛЫ

ЕСЕП

АҚПАН 2022 | АЛМАТЫ ҚАЛАСЫ



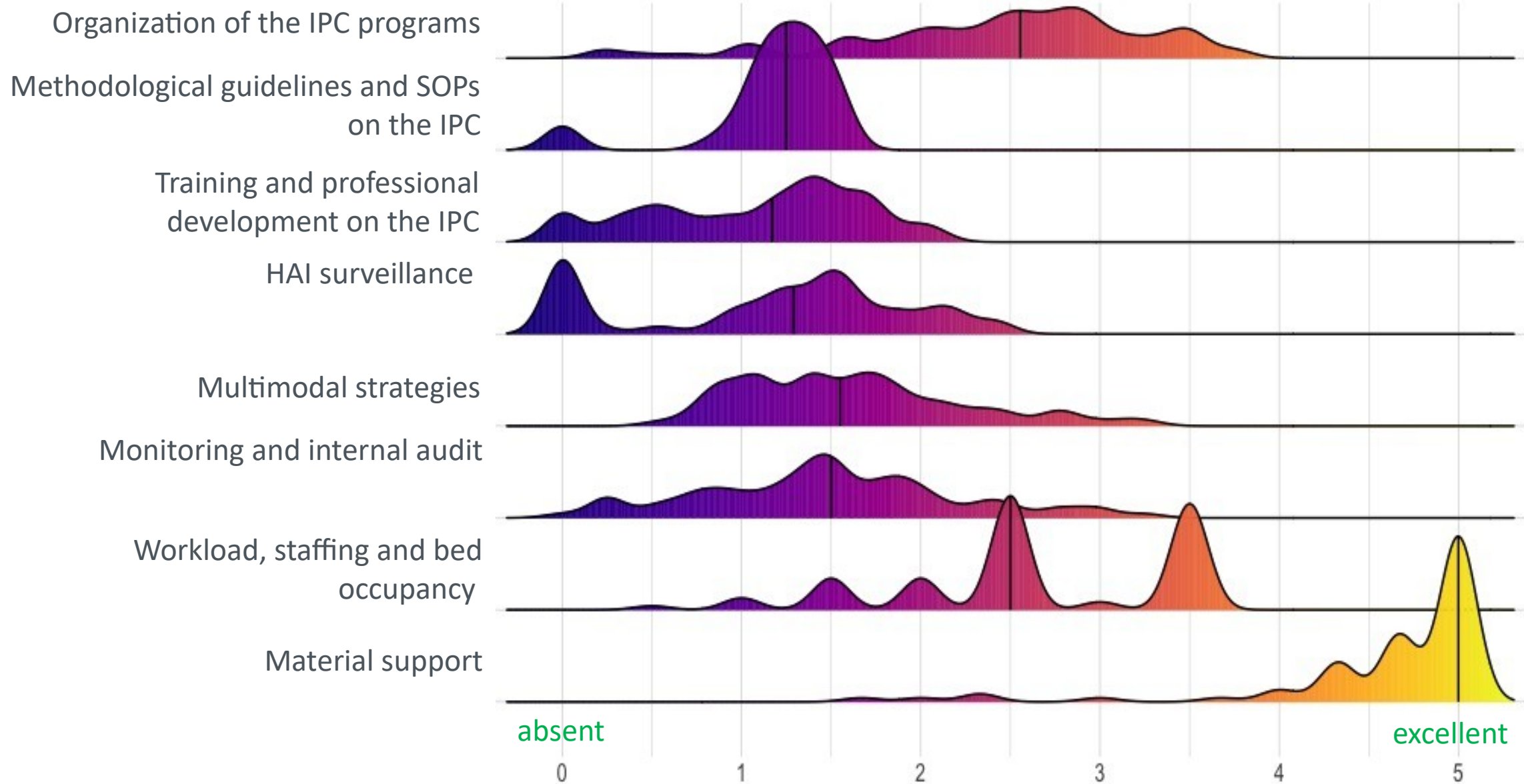
ОТЧЕТ

О РЕЗУЛЬТАТАХ СИТУАЦИОННОГО АНАЛИЗА ОСНОВНЫХ
КОМПОНЕНТОВ ПРОГРАММ ПРОФИЛАКТИКИ ИНФЕКЦИЙ И
ИНФЕКЦИОННОГО КОНТРОЛЯ НА УРОВНЕ МЕДИЦИНСКИХ
ОРГАНИЗАЦИЙ В РЕСПУБЛИКЕ КАЗАХСТАН

ФЕВРАЛЬ 2022 | АЛМАТЫ



Summary, by component



IPC programs

Indicator	Number	% (N=78)
There was an order or regulation on the Infection Control Commission (ICC)	74	95
At least one ICC meeting was held during the last 12 months	60	77
In the last 12 months, a top manager participated in the work of the ICC	14	18
There were meetings of all ICC meetings for the last year	42	54
Appointed employees whose direct responsibilities included organizing, coordinating, and monitoring of the IPC (IPC specialists)	78	100
IPC specialists have received special training on the IPC	56	72
The workload of the IPC specialists was in line with WHO's recommendations	49	63
IPC specialists have had the opportunity to participate in the IPC seminars/conferences over the past 12 months	36	46



IPC programs in the context of COVID-19

- An emergency response plan for COVID-19 was available in 54 hospitals (69%).
- A special COVID-19 response committee was established in 53 hospitals (68%).
- In 20 hospitals (26%), this commission met at least once a week.

Technical guidelines and standard operating procedures (SOPs) on IPC

72 hospitals (92%) had orders and/or methodological documents (guidelines, SOPs, internal policies) for organization and implementation of IPC

- On hand hygiene - 70 hospitals (90%),
- On safe medical waste management, disinfection and sterilization - in 69 hospitals (88%),
- On providing protection and safety of medical workers - in 52 hospitals (67%).
- Rules of rational use of antibacterial drugs - 28 hospitals (36%),
- Prevention of multidrug-resistant pathogens - 8 hospitals (10%).

IPC guidelines and SOPs in the context of COVID-19

SOPs subject	Number	%
Reporting and notification of COVID-19 cases among inpatients and healthcare workers	51	65
Rational use of personal protective equipment	50	64
IPC measures in the care of suspected and confirmed COVID-19 cases	43	55
COVID-19 testing and sample transportation	39	50
Screening incoming patients for COVID-19 (triage and patient flow management)	37	47
Screening visitors for respiratory diseases	35	45
Screening personnel for COVID-19	33	42
Screening inpatients for COVID-19	33	42
Monitoring of healthcare workers who have been in contact with and/or have COVID-19	25	32
Return of healthcare workers to work after COVID-19	18	23
Organization of work with corpses of people who died of COVID-19	18	23

Dissemination of information on IPC guidelines and SOPs to health care workers

Indicator	N	%
There was no structured or systematic approach to informing healthcare workers	10	13
Updated/developed SOPs and guidelines were posted on bulletin boards accessible to all employees	12	15
Informing was done orally during routine meetings	41	53
Informing sometimes included interactive sessions	7	9
Informing always included interactive sessions	2	3

IPC Training and Professional Development

Indicator	N	%
Kept records of their employees' training in ICP issues	54	69
<u>Briefed and trained healthcare workers</u> on the ICP issues when they entered the workplace	55	71
Required <u>healthcare workers</u> to attend annual IPC seminars	39	50
Conducted at least one IPC seminar for <u>healthcare workers</u> in the past 12 months	63	81
<u>Briefed and trained non-healthcare workers</u> on the ICP issues when they entered the workplace	44	56

Trainings on hand hygiene

Indicator	N	%
Required healthcare workers (HCWs) to undergo training on hand hygiene		
At least once, but at no regular schedule	24	31
At least once every year	18	23
Mandatory training at commencement of employment, then ongoing regular training (at least annually)	34	44
Had a process in place to confirm that all HCWs complete this training	54	69
Trainings included interactive training sessions	46	59
Dedicated time for staff training on hand- hygiene was formally including in tasks of at least one medical staff or nursing staff trained in IPC or Infectious Diseases	16	21

Training on injection safety

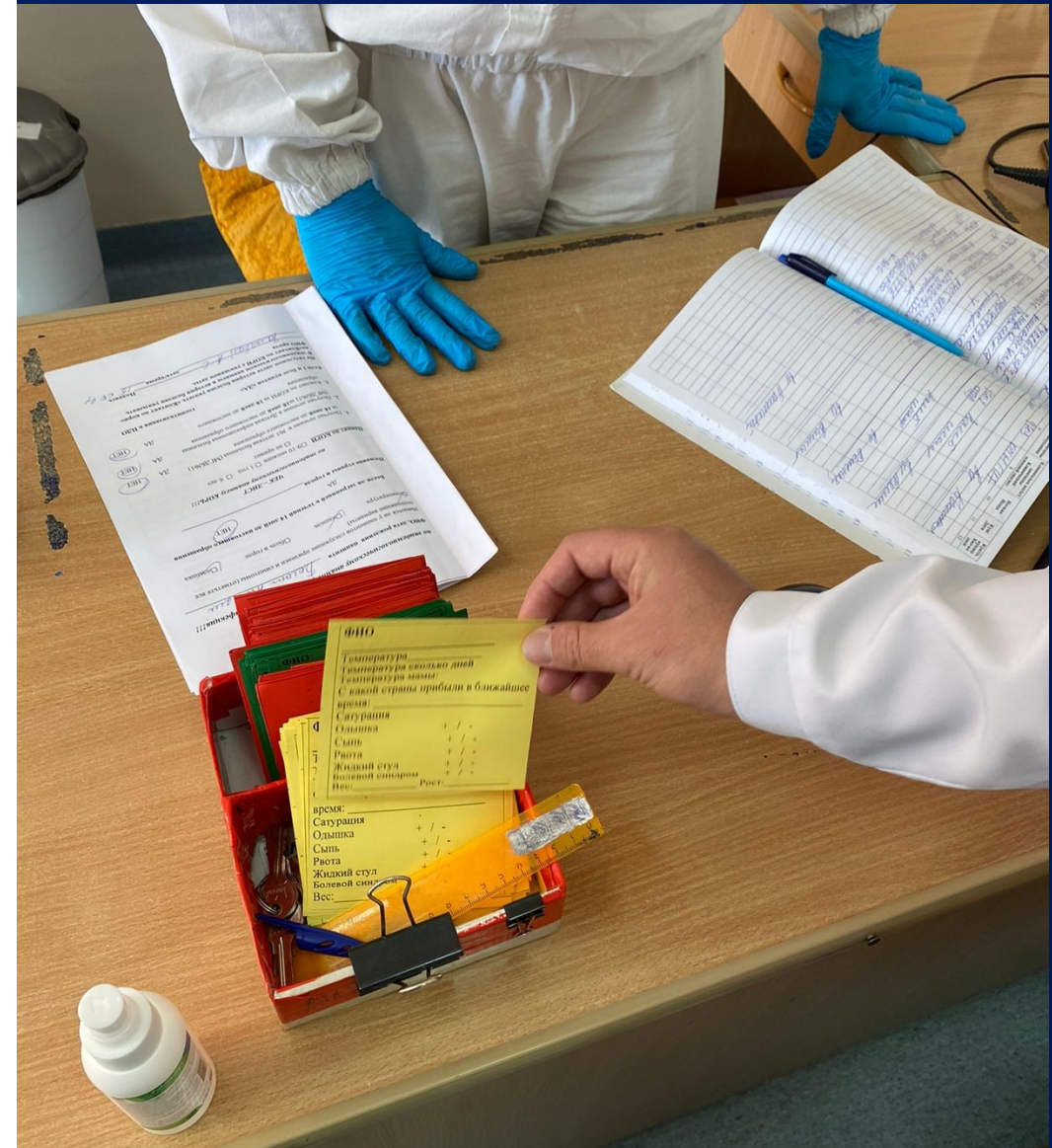
Indicator	N	%
Required healthcare workers (HCWs) to undergo training on injection safety		
At least once, but at no regular schedule	11	14
At least once every year	5	6
Mandatory training at commencement of employment, then ongoing regular training (at least annually)	5	6
Dedicated time for staff training on injection safety was formally including in tasks of at least one medical staff or nursing staff trained in IPC or Infectious Diseases	2	3

Training on Issues Related to Working in the Context of COVID-19

All healthcare workers were trained on the issues:

- COVID-19 symptoms, how to identify and isolate suspected or confirmed COVID-19 cases - in 64 hospitals **(82%)**
- Standard precautions and precautions based on transmission routes in the context of COVID-19 - 62 hospitals **(79%)**
- PPE putting on and taking off policy - 69 hospitals **(88%)**

In 62 hospitals (79%), all nursing staff were trained to clean rooms or areas where patients with suspected or confirmed COVID-19 had previously been present.



HAI Surveillance

- Two (3%) hospitals (3%) did not have access to laboratory services, 48 (61%) hospitals used the services of laboratories of other organizations on a contractual basis, and 28 hospitals (36%) had their own laboratory.
- 57 hospitals (73%) reported having HAI surveillance.
 - respiratory infections that can lead to epidemics (COVID-19, influenza) - 51 hospitals (65%)
 - infections associated with potential occupational risk for healthcare workers (HBV, VHC, HIV) - 49 hospitals (63%)
 - postoperative wound infections - 28 hospitals (36%)
 - Infections related to medical devices - 13 hospitals (17%)
 - Infections or colonization caused by pathogens with MDR - 8 hospitals (10%)
- In 33 of 57 hospitals (58%), employees received special training
- 13 of 33 did not have a description of the surveillance methodology
- **51 of 78 hospitals (65%) included in the situational analysis did not carry out effective HAI surveillance**



Monitoring and Audit

- There was no internal plan for monitoring or auditing of the IPC measures - 55 organizations (70%)
- 35 organizations (45%) have never conducted structured monitoring of the IPC procedures, or did so more than 12 months ago.
- Of the 43 organizations that have conducted an audit in the past 12 months, 6 did not maintain any documentation of the process and the results of that audit

Monitoring of hand hygiene compliance

Indicator	N	%
Frequency of direct observation of hand hygiene compliance performed using the WHO Hand Hygiene Observation tool (or similar observation tools)		
Never/not conducted	21	27
Periodically but no regular schedule	36	46
At least monthly	19	24
At least quarterly	2	3
Frequency of monitoring/auditing consumption/usage of alcohol-based hand rub or soap		
Never/not conducted	21	27
Periodically but no regular schedule	36	46
At least monthly	19	24
At least quarterly	2	3
At least 2 times per year	1	1
Frequency of feedback on hand hygiene indicators with demonstration of trends over time given to HCWs		
Never	41	53
Irregularly	16	21
Annually	4	5
At least 2 times per year	17	22

Monitoring of injection safety compliance

Indicator	N	%
Frequency of direct observation of injection safety using WHO Injection Safety Assessment Tool (or similar observation tools)		
Never/not conducted	64	82
Periodically but no regular schedule	14	18
Frequency of assessment of health care worker knowledge of injection safety principles		
Never/not conducted	63	81
Periodically but no regular schedule	12	15
At least quarterly	1	1
Annually	2	3
Frequency of feedback on injection safety indicators with demonstration of trends over time given to HCWs		
Never	41	53
Irregularly	16	21
Annually	4	5
At least 2 times per year	17	22

Workload, Staffing and Bed Occupancy

Indicator	Number	%
Availability of a system to respond to a decrease in the number of healthcare workers relative to the number of patients	70	90
Availability of a system to respond to exceeding the maximum allowable number of beds in individual departments or in the hospital as a whole	69	40
Beds with patients outside the wards		
According to a survey of the workers of the infection control service	4	5
According to observation data	3	4
Maintaining bed spacing of 1 meter or more in all wards, including pediatrics and ICU		
According to a survey of the workers of the infection control service	35	45
According to observation data	27	35

Environment, Materials and Equipment for IPC

Had an adequate supplies for 1 month or more of the following consumables:			
Non-sterile gloves		75	96
Overall		76	97
Cover-sluts		69	88
Eye protection (protective shields or goggles)		71	91
Medical masks		77	99
KN95, FFP2 or similar respirators		66	85
Neutral detergent, liquid soap or soapy detergent for washing		75	96
Rags to wash the surfaces		76	97
Disinfectants for medical use (e.g., sodium hypochlorite)		77	99
Liquid hand soap		71	91
Paper hand towels		57	73

Environment, Materials and Equipment for IPC (2)

Indicator	Number	%
Had alcohol-based hand sanitizer containing either 75% isopropyl alcohol or 80% ethanol alcohol at all healthcare points	8	10
Had soap at every sink		
according to a survey of the workers of the infection control service	48	62
according to observation data	45	58
Had disposable towels at every sink		
According to a survey of the workers of the infection control service	30	39
According to observation data	26	33



	Reported an adequate supply of disposable towels for 1 month or more	Reported a deficient supply of disposable towels for 1 month or more	Total
Did not have disposable towels at every sink	30 (53%)	18 (86%)	48
Had disposable towels at every sink	27 (47%)	3 (14%)	30
Total	57 (100%)	21 (100%)	78

Organization of admission and accommodation of patients with COVID-19

Indicator	Number	%
There were clearly marked separate entrances for patients and staff	48	62
There were highly visible materials in front of the entrance with information that visitors should not enter the hospital through the main entrance if they had fever or other symptoms similar to COVID-19	20	26
Patients were admitted according to the scheme: sanitary inspection room (screening > waiting area > triage) > departments	59	76
There was a separate waiting area for patients with suspected COVID-19	54	69
The waiting area for patients with suspected COVID-19 had a separate patient toilet	47	60
The waiting area for patients with suspected COVID-19 was well ventilated or equipped with mechanical ventilation	46	59
Separate rooms were available for examinations for patients with COVID-19 symptoms	65	83

Challenges implementing IPC at the hospital level, interview data

Shortage of qualified personnel

- lack of an epidemiologist on staff;
- low qualifications of the infection control service (IC) staff;
- load of the IC service staff with work not directly related to the IPC;
- low salaries for hospital epidemiologists and IC nurses;
- staff turnover; low level of knowledge of healthcare workers;
- limited opportunities for professional development on the ICP issues;
- lack of methodological support from higher services.

Imperfect infrastructure

- old buildings required repair;
- lack of mechanical ventilation and central sewage system;
- impossibility to properly organize the flow of patients and healthcare workers due to improperly designed buildings (adapted buildings or old standard buildings that do not take into account modern requirements for IPC);

Insufficient integration of ICP into quality control work

- low commitment to the IPC issues on the part of hospital management and staff;
- low involvement of other specialists in improving the IPC work;
- lack of systematic work to improve the IPC;

Deficit in funding for ICP measures

- inadequate accounting of IPC costs when calculating payment for a treated case;
- lack of sufficient funds for hospitals to purchase consumables, hire qualified staff responsible for ICP and carrying out repairs.

Challenges related to HAI monitoring, interview data

- Penalties and other punitive actions, including fines, fear of punishment and negative publicity
- Suboptimal knowledge and skills of healthcare workers on HAI surveillance
- Lack of clear technical guidelines and tools on HAI surveillance
- Limited access to timely and quality microbiological lab results

Conclusions

Strengths

- Availability of IPC committees and the IPC personnel
- Supplies IPC purposes
- Availability of orders, internal rules and SOPs for basic IPC procedures

Opportunities for improvement

- Initial and advanced training of personnel, access to methodological and mentoring assistance on the ICP issues, exchange of experience
- Methodology and system of HAI surveillance. Changing attitudes toward the provision of HAI data.
- Methodology and system for routine internal monitoring and auditing of knowledge and core practices (measures) on the ICP, including monitoring the level of knowledge and practices of healthcare workers on the ICP.
- Zoning and organization of proper flows of patients and staff in medical organizations.








Appreciation

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- Chevron

Thank you!

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