



Implementation of the infection prevention and control (IPC) program in the in-patient department of the Central City Clinical Hospital of Almaty



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Central City Clinical Hospital of Almaty

Central City Clinical Hospital of Almaty (CCCH) is one of the largest urban multidisciplinary hospitals, which provides emergency and elective inpatient medical care, as well as inpatient hospital-replacing care, advisory and diagnostic services.

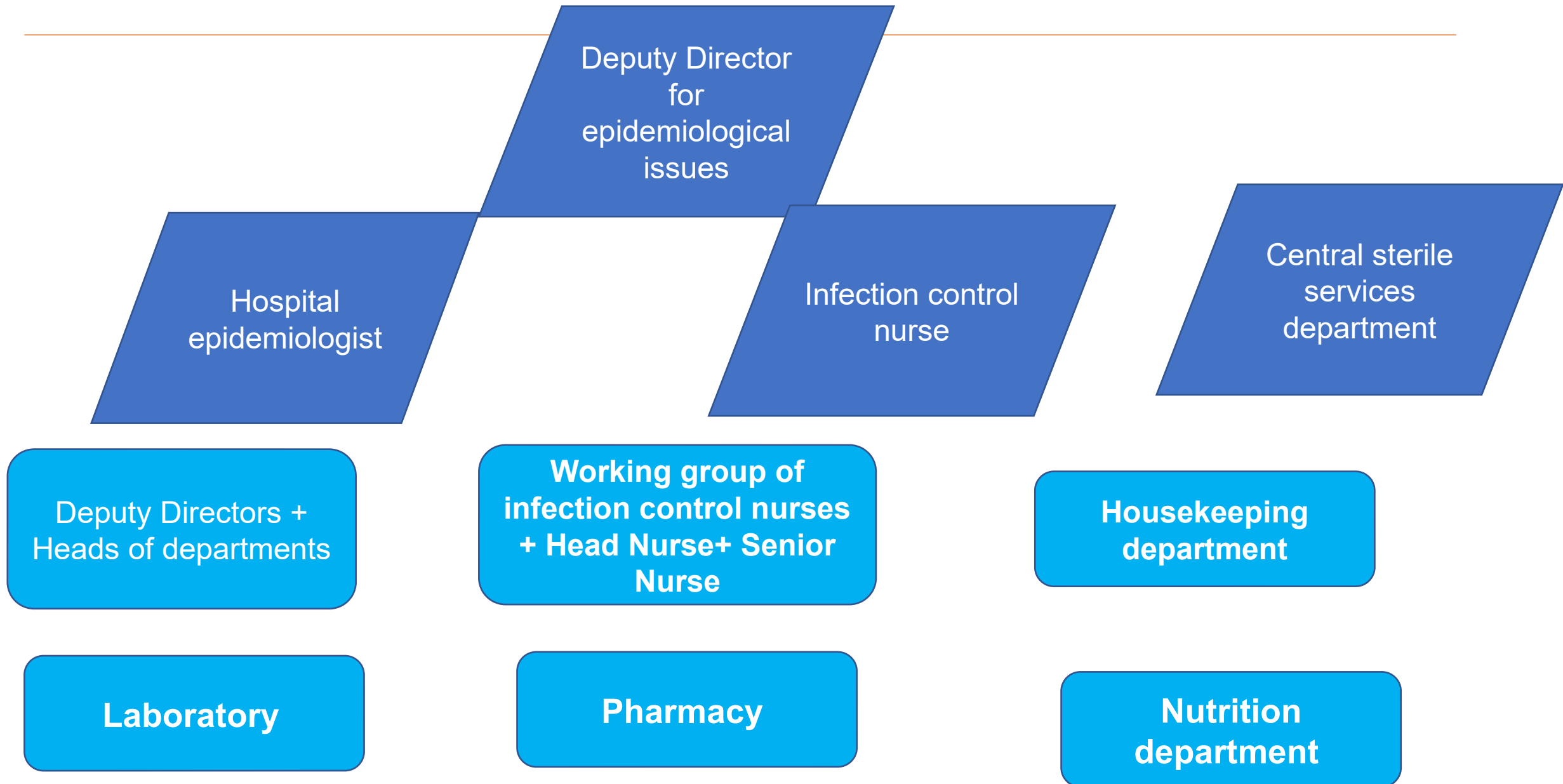
Hospital structure:

- round-the-clock in-patient unit for **460** beds;
- daytime in-patient unit for **35** beds;



- in addition, 27 extra-budget intensive care beds;
- 23 **clinical departments** are functioning in the hospital

INFECTION CONTROL STRUCTURE IN THE IN-PATIENT UNIT OF CCCH



FIRST STEPS TO REVISE THE INFECTION CONTROL SYSTEM IN OUR IN-PATIENT UNIT

In 2021, in the framework of the program of the National Center for Public Health of the Republic of Kazakhstan, WHO organized training at the I. Mechnikov North-Western State Medical University, St. Petersburg, to improve infection control

STEP 1.
**Evaluate the existing
infection control system in
the in-patient unit**



MY TABLE-TOP BOOKS

СОВЕРШЕНСТВОВАНИЕ ПРОФИЛАКТИКИ ИНФЕКЦИЙ И ИНФЕКЦИОННОГО КОНТРОЛЯ В УЧРЕЖДЕНИЯХ ЗДРАВООХРАНЕНИЯ

Предварительное практическое руководство
по содействию реализации Руководства ВОЗ
по основным компонентам программ профилактики
инфекций и инфекционного контроля



World Health
Organization

Система оценки мероприятий по профилактике инфекций и инфекционному контролю на уровне учреждений



Введение и инструкции для пользователя

Система оценки мероприятий по профилактике инфекций и инфекционному контролю (IPCAF) – это инструмент для внедрения в практику Руководства Всемирной организации здравоохранения (ВОЗ) по основным компонентам программ профилактики инфекций и инфекционного контроля на уровне учреждений экстренной медицинской помощи. Перед использованием этого инструмента пользователь должен ознакомиться с содержанием этого руководства, включая Предварительное практическое пособие по внедрению основных компонентов профилактики инфекций и инфекционному контролю (ПВИК) на уровне учреждений. IPCAF является инструментом для систематического использования, который позволяет провести исходную оценку программы и мероприятий по ПВИК в медицинском учреждении, а также периодические оценки с документированием прогресса и поддержкой мероприятий по улучшению качества.

Какова цель документа?

IPCAF – это структурированная анкета, состоящая из вопросов закрытого типа (не предполагает развернутый самостоятельный ответ) с соответствующей системой балльной оценки. Она в первую очередь предназначена для самостоятельного заполнения в медицинском учреждении (т.е. для самооценки), но может также использоваться для совместных оценок при тщательном обсуждении внешними экспертами (например, Министерством здравоохранения, ВОЗ или другими заинтересованными сторонами) и персоналом учреждения. Данный инструмент предназначен для учреждений неотложной медицинской помощи, но может быть использован и в других медицинских учреждениях стационарного типа. Хотя некоторые показатели разработаны преимущественно для стран с высоким и средним уровнем дохода, это глобальный инструмент, который может использоваться для оценки стандартов ПВИК в любой стране. Цель данного инструмента заключается в оценке текущей ситуации в области ПВИК в вашем учреждении, т.е. существующих видов деятельности/ресурсов ПВИК, и выявлении сильных сторон и пробелов, что может послужить основой для разработки будущих планов. Его можно рассматривать в качестве диагностического инструмента, позволяющего учреждениям выявлять проблемы или недостатки, требующие устранения, и выявлять области, которые отвечают международным стандартам и требованиям. Если IPCAF проводится в качестве самооценки, то ее полезность зависит от того, насколько объективно и точно она будет заполнена. Выявление существующих сильных сторон и достижений поможет укрепить доверие к программе и убедить лиц, которые могут принимать решения, в том, что успех и прогресс возможны. Честное признание пробелов поможет понять неотложность изменений, необходимых для улучшения ПВИК. По этим причинам

¹ Руководящие принципы Всемирной организации здравоохранения (ВОЗ) по основным компонентам программ профилактики инфекций и инфекционного контроля на национальном уровне и на уровне медицинских учреждений экстренной помощи 2016 <https://www.who.int/infection-prevention/publications/com-components.html>, по состоянию на 12 января 2019 г. ;
² Совершенствование профилактики инфекций и инфекционного контроля на уровне медицинского учреждения. Предварительное практическое руководство по содействию реализации руководящих принципов Всемирной организации здравоохранения (ВОЗ) по основным компонентам программ профилактики инфекций и инфекционного контроля. <http://www.who.int/infection-prevention/publications/whodoc-com-components.html>, по состоянию на 12 января 2019 г. ;

The infection control improvement program includes 8 main components. In addition, an assessment tool is provided for the for the existing infection control measures, which is improved on an ongoing basis.

NEXT STEPS TO IMPROVE INFECTION CONTROL IN THE IN-PATIENT UNIT:

ORDER OF THE INFECTION CONTROL UNIT

PREVIOUSLY:

COMPOSITION OF THE INFECTION
CONTROL UNIT:

- HEADS OF DEPARTMENTS
- ADMINISTRATIVE STAFF
- PHARMACY, HOUSEKEEPING
DEPARTMENT

AFTER MAKING ADDITIONS:

+ A WORKING GROUP CONSISTING OF
DEPARTMENT NURSES (WITH SPECIAL
DELEGATED POWERS)

FIRST STEPS REVISE THE INFECTION CONTROL PROGRAM

In March-April 2022, the National Center for Public Health of the Ministry of Health of the Republic of Kazakhstan, together with WHO, organized practical IPC training for part-time epidemiologists of the Republic of Kazakhstan with the expected result of **developing an infection control program**

Conclusion!
Revision of the existing infection control program is required



NEXT STEPS TO IMPROVE INFECTION CONTROL:

STEP 1

1. IPC PROGRAM

PREVIOUSLY:

- the program exists, but for the most part it is ineffective

AFTER MAKING CHANGES:

The program was revised, and a new program was approved for 3 years with long-term and short-term actions

NEXT STEPS TO IMPROVE INFECTION CONTROL:

STEP 2

2. IPC guidelines

PREVIOUSLY:

- SOP adaptation to the hospital

Goal of achievement:

Implementation of SOP into practice. The work is under way....

REMEMBER TO WASH YOUR HANDS BEFORE WORK:



SAVE LIVES
Clean **Your** Hands

NATIONAL ASSOCIATION OF SPECIALISTS IN CONTROL OF
HEALTHCARE-ASSOCIATED INFECTIONS (NASCI)
(НП «НАСКИ»)

Implementation guidance

Guidelines for the implementation of the WHO Multimodal
Strategy to improve hands hygiene



World Health
Organisation

AUDIT OF EPIDEMIOLOGICAL SAFETY OF MEDICAL
TECHNOLOGIES
AUDIT OF HAND PROCESSING TECHNOLOGY

Methodological recommendations

February 2020

CLINICAL RECOMMENDATIONS

**PREVENTION OF CATHETER-ASSOCIATED
BLOODSTREAM INFECTIONS AND CARE OF THE
CENTRAL VENOUS CATHETER (CVC)**

ICD 10: T80.2, T.82.7, R65.0, R65.1

Year of approval: 2021 (revision every 3 years)

Professional associations:

- Interregional public organization "Society of Doctors and Nurses "Sepsis Forum"
- National Association of Specialists in Control of Healthcare-Associated Infections

2021

Five components of the WHO Multimodal Strategy to improve hands hygiene

1a. Changing the system - an alcohol-based medicine for antiseptic hygienic treatment of hands at the place of providing medical care



1b. Changing the system — access to safe running water, availability of soap and towels



2. Training and education



3. Assessment and feedback



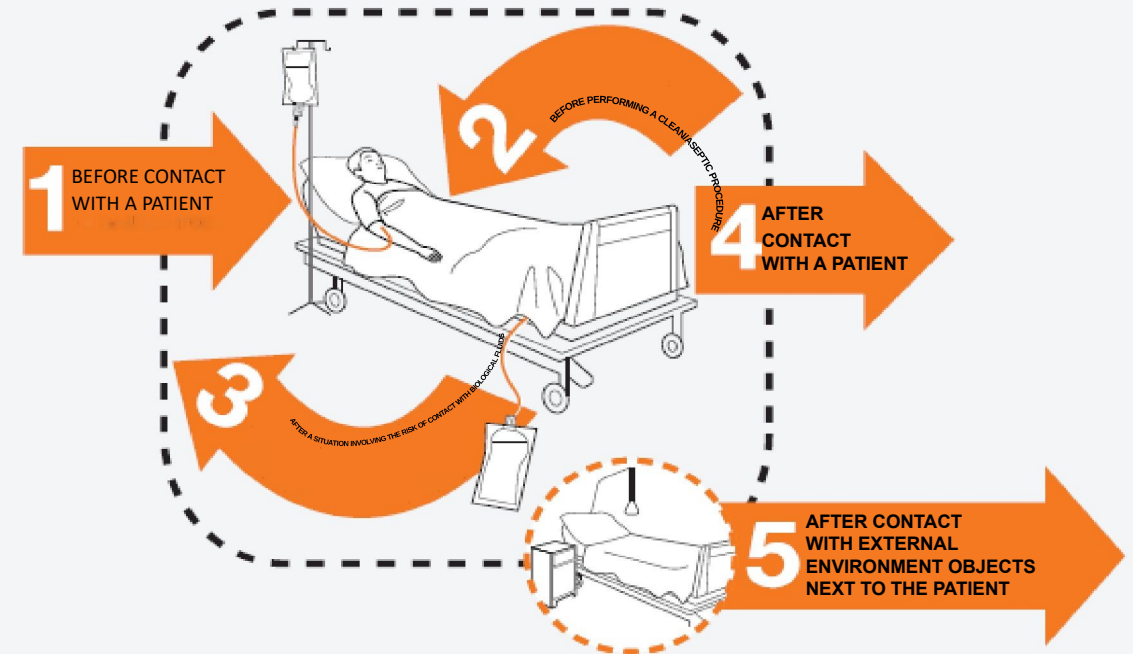
4. Workplace memos



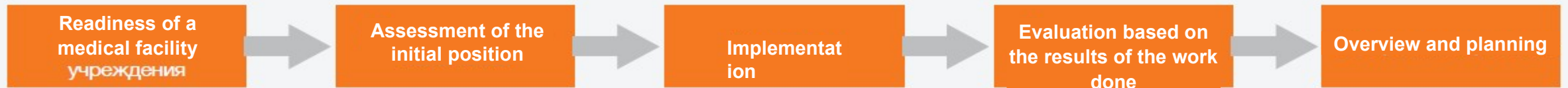
5. Ensuring safe conditions at the institutional level



My 5 Points for Hands Hygiene



Step-by-step implementation method



RESULTS:

PREVIOUSLY:

- Absence of antiseptics in wards
- Lack of proper understanding of the importance of hand disinfection among employees
- The composition of antiseptics did not always comply with WHO recommendations
- The conditions for hand disinfection did not meet the requirements

Changing the system:

- Antiseptic dispensers are installed in all wards
- The composition of antiseptics meets WHO requirements
- Step-by-step changes in conditions for hand disinfection
- Systematic monitoring of the hand hygiene treatment among employees during medical manipulations

NEXT STEPS TO IMPROVE INFECTION CONTROL:

STEP 3

3. Education and training in the field of IPC

PREVIOUSLY:

- We conducted training traditionally in the zoom mode or gathered as many employees as possible

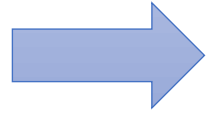
Changing the system:

- At general meetings, we discussed only the most important and relevant issues
 - Training is conducted individually for each department. Providing personal material for the department



Education and training in the field of PIC:

**Training program and
schedule**



**Schedule: only one
department (doctors
+ nurse) and training
time**



**We inform the
department personnel
about the time of the
training one day before.**

Subject of training:

1. Infectious diseases subject to registration.
2. The form of transmission of emergency notifications and the correct procedure for preparing emergency reports.
3. Standard definition of healthcare-associated infections.



**Certification in 2
months in online
mode
In the future the
offline mode will be
used**

NEXT STEPS TO IMPROVE INFECTION CONTROL:

STEP 4

4. HAI epidemiological surveillance

PREVIOUSLY:

- In fact, epidemiological surveillance was not carried out, except for CVI

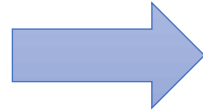
Changing the system:

- Considering the absence of control over the epidemiological surveillance, we decided to conduct an analysis in the context of each department. Manual method.



Preliminary results of epidemiological surveillance in the department:

Evaluate the microbial landscape in the department



Study the main risk factors of HAI



Solve problems to reduce HAI

Bacteria	Antibiotic susceptibility	Resistance
Acinetobacter b.	<u>Only tigecycline</u>	Carbapenemam, cef, gentamicin, levofloxacin, tikarcillin
Klebsiella pneumoniae	<u>Amikacin, levofloxacin, doripenem</u>	Amoxiclav, ampicillin, ticarcillin, cef, meropenem
Escherichia coli	<u>Amikacin, meropenem, chloramphenicol</u>	Ceft, gentamicin
Candida albicans	<u>Itraconazole, Ketoconazole, Nystatin</u>	

Preliminary results of epidemiological surveillance in the department:

Purpose:

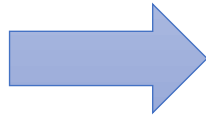
- **determining the microbial landscape in surgery departments among emergency hospitalized patients;**
- **timely performance of perioperative antibiotic prophylaxis;**
- **identification of HAIs**

Criteria

- 1. Inoculation of microorganisms from patient's biological material taken during surgery**
- 2. Records of the perioperative antibiotic prophylaxis in the surgical report or in the appointment of Damu Med information system.**

Laboratory results of the conducted monitoring:

Performance of perioperative antibiotic prophylaxis



Total	Sampling for analyses	%
119	56	47

Yes	No	Total
54 (45.4%)	65 (54.6%)	119

Total analyses	Negative result	e.Coli	Pseudomon as a
56	22 (39.2%)	16 (28.5%)	4 (7.1%)

Antibiotics	R	S	All
Amikacin	13 (46.4%)	15	28
Amoksiklav	21 (95.4%)	1	22
Ampicillin	18 (90%)	2	20
Levofloxacin	3 (10%)	26	29
Meropenem	0	25	26
Imipenem	0	13	13

Antibiotics	R	S	All
Ceftazid	14 (82.3%)	3	17
Cefazolin	11 (73.3%)	4	15
Ceftriax	22 (66.6%)	11	33
Cefurox	9 (60%)	6	15
Ciprofloxacin	7 (31.8)	15	22
Piperacillin	16 (100%)		16

PROBLEMS IN HAIs ACCOUNTING AT THE DEPARTMENT LEVEL:

- 1. INFORMATION SYSTEMS AND CHECKLISTS ARE REQUIRED FOR HAIs ACCOUNTING**
- 2. TRAINING OF THE DEPARTMENT STAFF IN RESPONDING TO HAIs IS REQUIRED**
- 3. TIMELY RESPONSE AND MAKING DECISIONS TO REDUCE HAIs**
- 4. DISCUSSION OF PROBLEMS TOGETHER WITH THE DEPARTMENT STAFF + ADMINISTRATION + CLINICAL PHARMACOLOGIST + LABORATORY EMPLOYEE + PHARMACY**
- 5. INTERACTION OF THE IN-PATIENT UNIT + MICROBIOLOGICAL LABORATORY**
- 6. NEW CHALLENGES RELATING TO ANTIBIOTICS**

NEXT STEPS TO IMPROVE INFECTION CONTROL:

STEP 5



5. Multimodal strategies

PREVIOUSLY:

- Each department worked independently on HAI issues. Analysis of the problem is not conducted and the source is not identified. Physicians are left alone with HAIs

Changing the system:

- after analysing HAI issues, each employee has increased alertness and responsibility. We work and solve problems together!
We invite departments to participate in detecting HAI cases



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NEXT STEPS TO IMPROVE INFECTION CONTROL:

STEP 7

7. WORKLOAD, STAFFING AND BED OCCUPANCY



IPC team selection,
development of KPIs,
training, motivation

STEP 8

8. CREATION OF THE ENVIRONMENT, MATERIALS AND EQUIPMENT FOR IPC



Teamwork on making
decisions relating to the
provision of equipment and
improving conditions for IPC

CHALLENGES AND THREATS FOR EPIDEMIOLOGISTS:

- **MUTATION OF THE CORONAVIRUS INFECTION STRAIN: FROM BRITISH STRAIN TO STELSOMICRON – AND THIS IS ONLY THE START!**
- **NEW INFECTIONS THAT POSE A THREAT TO HUMANITY**
- **ANTIMICROBIAL RESISTANCE**
- **NEW VACCINES – NEW MYTHS AND PREJUDICES**
- **HOSPITAL STRAINS**
- **LOW ADHERENCE TO THE OBSERVANCE OF INFECTION CONTROL IN ROUTINE TREATMENT AMONG CLINICIANS**

WISHES:

**In any case, with maximum of difficulties,
The approach to the problem is still one:
Desire is a set of possibilities,
And unwillingness is a set of reasons...**

Eduard Assadov



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