Agência Nacional de Vigilância Sanitária
(Brazilian Health Regulatory Agency)

NATIONAL PROGRAM FOR THE PREVENTION AND CONTROL OF HEALTHCARE ASSOCIATED INFECTIONS (2016-2020)

Health Services General Office
-GGTES

Brasilia, November 04th, 2016.

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LIST OF ABBREVIATIONS

ABIH Brazilian Association of Hospital Infection Control
AMR Antimicrobial Resistance
ANVISA Brazilian Health Regulatory Agency
BSI Bloodstream Infection
CAUTI Catheter Associated Urinary Tract Infection
CCIH Hospital Infection Control Committee
CDC Centers for Disease and Control
CECIH State Coordination of Hospital Infection Control
CLABSI Central Line-associated Bloodstream Infection
CMCIH Municipal Hospital Infection Control Committee
CVC Central Venous Catheter
FAO Food and Agriculture Organization of the United Nations
FEBRASGO Brazilian Federation of Gynecology and Obstetrics Associations
HAI Healthcare Associated Infection
ICU Intensive Care Unit
LACEN Central Public Health Laboratory
MDR Multi Drug Resistant
MV Mechanical Ventilator
OIE World Organization for Animal Health
PEPCIRAS State Program for the Prevention and Control of Healthcare Associated Infections
SBI Brazilian Society for Infectious Diseases
SBP Brazilian Society for Pediatrics
SCVC-CL Safe Central Venous Catheter Insertion Practice Checklist
SSI Surgical Site Infection
UC Urinary Catheter
UTI Urinary Tract Infection
VAP Ventilator Associated Pneumonia
WHO World Health Organization

Introduction

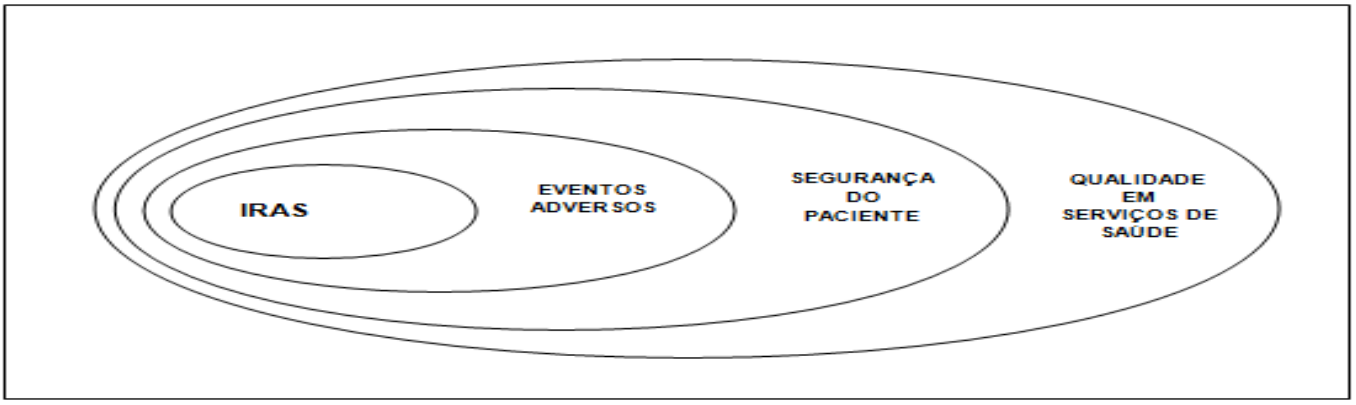
The first version of the National Program for the Prevention and Control of Healthcare Associated Infections (PNPCIRAS) covering the three-year 2013 to 2015 period was prepared by the National Commission on Prevention and Control of Healthcare Associated Infections (CNCIRAS). The program presented four objectives: 1) To reduce Primary Bloodstream Infections (BSI); 2) To reduce Surgical Site Infections (SSI); 3) To establish control mechanisms over Antimicrobial Resistance (AMR) in health services and; 4) To increase the compliance rate to PNPCIRAS, according to WHO criteria.

Several actions were carried out at the national level and widely promoted to achieve the objectives described in PNPCIRAS 2013-2015. One was the establishment of the analytical sub-network of antimicrobial resistance in health services, comprised by a group of Central Public Health Laboratories (LACENs), whose objective was to support surveillance and monitoring of antimicrobial resistance in health services, by the identification and molecular typing of multiresistant microorganisms during outbreaks.

Another important action was the implementation of the first phase of the States in Focus Project, whose objectives are: to provide a situational diagnosis, to promote the alignment of actions between State Programs and the PNPCIRAS, and to identify strategic needs for future actions. This first phase was developed in the North and Northeast regions. The second phase began in 2016 and is in progress in the South, Southeast and Midwest regions. In addition, the results obtained with PNPCIRAS 2013-2015 will be published in 2017 on ANVISA's website.

For the construction of the new version of the PNPCIRAS covering the five-year period from 2016 to 2020, preliminary assessments of the previous version (PNPCIRAS 2013-2015) were considered, and several topics relevant to the Program were discussed, such as the global and national Healthcare Associated Infection (HAI) scenario, a serious public health problem and the most frequent adverse event associated with healthcare. HAI have high morbidity and mortality, with a direct impact on patient safety and, consequently, on the quality of health services (Figure 1).

Figure 1: HAI: a matter of quality in health services.



Source: Costa, 2016

In this regard, the scientific literature points out that hundreds of millions of patients are affected by HAI each year around the world, leading to significant mortality and enormous financial losses for health systems. Of every 100 hospitalized patients, 7 in developed countries and 10 in developing countries will acquire at least one HAI (WHO, 2014).

A study by the World Health Organization (WHO) has shown that the highest prevalence of HAI occurs in intensive care units, surgical wards and orthopedic wings. Surgical site infections, urinary tract infections and lower respiratory tract infections are the most frequent (WHO / CSR, 2002).

In Brazil, data from 2014 published by Anvisa from the ICUs of 1,692 hospitals have highlighted the density of the incidence of Central Line-associated Bloodstream Infection (CLABSI) in adult ICU, that is, 5.1 infections per 1,000 central venous catheters per day. In pediatric patients this incidence was 5.5 infections per 1,000 CVC per day. In the neonatal ICU, density decreases as patients' birth weight increases (Anvisa, 2015).

The literature provides evidence that HAI prevention measures should be adopted in all health facilities, whether in the hospital setting, in chronic care facilities, or in home care. Studies have shown that when health services and their staff recognize the magnitude of the problem posed by infection and join HAI prevention and control programs, a reduction of up to 70% can occur for some of the Healthcare Associated Infections, for example, bloodstream infections (CDC, 2016).

Approximately 20% to 30% of HAI can be prevented by intensive control and hygiene programs, according to the European Center for Disease Prevention and Control (ECDC, 2016).

There is a clear consensus of experts in the field regarding the need for strategic action to reduce HAI. Considering that lessons have been learned from recent successes, some authors

propose that the elimination of HAI will depend on four strategic pillars of action: 1) promote adherence to evidence-based practices, by investing in education and their implementation; 2) increase sustainability through the alignment of financial incentives and reinvestment in strategies that are proven successful; 3) fill gaps in knowledge to respond to emerging threats through basic epidemiological and translational research; 4) collect data to guide prevention efforts and measure progress (Anvisa, 2013).

The WHO recommends that national and regional authorities take action to reduce the risk of acquiring HAI. The objectives should be established at the national or regional level in line with the other health objectives at these levels (Anvisa, 2013).

Engagement between federal (Anvisa), state (CECIHs) and local public health agencies (CMCIHs and Infection Control Committees) and health professionals of the institutions is vital for the implementation, sustainability, and expansion of a HAI surveillance and prevention program.

In Brazil, both the publication of Law # 9,431 of January 6th, 1997 that establishes that hospital infection control programs are mandatory in hospitals nationwide, and the publication of Ordinance # 2616 of May 12th, 1998 that defines the guidelines and standards for the prevention and control of hospital infections, make clear the existing concern about the subject and provide the rationale for the maintenance of a National Program for the Prevention and Control of Healthcare Associated Infections – PNPCIRAS. The PNPCIRAS should guide the actions of State / District / Municipal Hospital Infection Control Departments and of all health services nationwide, toward monitoring the incidence of HAI, establishing benchmarking among health institutions, monitoring process indicators and monitoring the compliance with best practices for the prevention of infections, with resulting decrease in associated morbidity and mortality (Brazil,1997; Brazil,1998).

Among the attributions listed by Ordinance 2616/98, the definition of guidelines for action, at all levels, will strengthen and facilitate the execution of the National Program.

It is also important to strengthen these levels, especially with the support of central managers to guarantee human and material resources and implementation of actions. It should be emphasized that the participation of CECIHs, CMCIHs and Infection Control Committee in the execution of the actions foreseen in this program is essential.

In this sense, and considering that a Program for the Prevention and Control of HAI depends on monitoring indicators, mandatory infection reporting of indicators at the national level was also discussed.

Historically, as of 2010, reporting of CLABSI became mandatory for all public and private health services with neonatal, pediatric and adult intensive care units (ICUs), with more than 10 beds either in total or in each of the units (Anvisa 2010). As of January 2014, all health services with any number of ICU beds have to report monthly to ANVISA their data on CLABSI in ICU and antimicrobial resistance markers related to these infections, in addition to reporting Surgical Site Infections (SSI) associated with surgical delivery by cesarean section (Anvisa, 2014). In addition to existing indicators, this new version of PNPCIRAS included indicators for Ventilator-Associated Pneumonia (VAP) and Catheter Associated Urinary Tract Infection (CAUTI).

Although national mandatory reporting refers to some indicators, we emphasize that surveillance and monitoring of all indicators by Infection Control Committees are of paramount importance in reducing the incidence of HAI. Likewise, it is necessary to consider that the implementation and monitoring of these indicators will only be effective when combined with the development of a program to prevent and control healthcare associated infections. (Anvisa 2010)

Another issue of extreme relevance in the context of surveillance and monitoring of HAI is the antimicrobial resistance that is being discussed worldwide and is one of the most serious health problems today, since infections caused by bacteria resistant to multiple classes of antimicrobials

has become increasingly common.

Since 2001, the World Health Organization (WHO) has drawn attention to a worldwide problem: increasing bacterial resistance to antimicrobials, especially for healthcare associated infections. At that time, a Global Strategy for Containment of Antimicrobial Resistance was launched as a challenge to the world's many health institutions, in view of scientific publications with increasing and alarming numbers of infections caused by multiple drugs resistant bacteria (MDR).

In 2015, the World Health Assembly approved a Global Action Plan on Antimicrobial Resistance whose overall objective was to assure the continuity of the capacity to treat and prevent infectious diseases using effective, safe and quality assured drugs, in a responsible manner, and accessible to all requiring them. To achieve this goal, the Global Action Plan established five strategic objectives: 1) increase awareness and understanding of antimicrobial resistance; 2) strengthen knowledge through surveillance and research; 3) reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures; 4) optimize the use of antimicrobial agents in human and animal health; and 5) ensure sustainable investment in new drugs, diagnostics, vaccines and other interventions to fulfill needs of all countries (WHO, 2015, WHO, FAO, OIE 2016).

This plan foresees the commitment of the State-Members to the development of their national action plans. Toward that end, the National Action Plan Development Handbook was published in February 2016, a joint publication of the World Health Organization (WHO), the Food and Agriculture Organization of the United Nations (FAO) and the World Organization for Animal Health (OIE) to assist countries in the initial phase of developing new action plans or updating existing plans in line with the strategic objectives of the Global Action Plan. In May 2017, Brazil and other signatory countries will be required to present national antimicrobial resistance plans at the 70th World Health Assembly (WHO, FAO, OIE 2016).

In view of the above, the surveillance of epidemiological data regarding the incidence of HAI, multiresistant microorganisms and the monitoring of the emergence of new resistance mechanisms are critical steps for guiding prevention and control strategies, as well as for monitoring the effectiveness of public health interventions and the detection of new standards and trends, and for the strengthening and qualification of microbiology laboratories, aimed at improving the quality and safety of health services in Brazil.

1. National Program for the Control and Prevention of Healthcare Associated Infections (PNPCIRAS) for the period 2016-2020.

This document was prepared in collaboration with CNCIRAS taking into consideration the evaluation of the preliminary results of PNPCIRAS 2013-2015 and the best scientific evidence available. The PNPCIRAS will be in effect from 2016 to 2020, subject to regular evaluations to monitor its development.

1.1. General objective

To reduce the incidence of Healthcare Associated Infections (HAI) in health services at the national level.

1.2. Specific objectives for the period (2016-2020)

To achieve the general objective, the following specific objectives were established for **2016-2020**:

I. Specific Objective 1: To consolidate the National HAI Epidemiological Surveillance System.
II. Specific Objective 2: To reduce the incidence of priority HAI nationally.
III. Specific Objective 3: To prevent and control the spread of antimicrobial resistance in health services.
IV. Specific Objective 4: To consolidate the PNPCIRAS.

1.3. Goals and strategic actions for the specific PNPCIRAS objectives

For each specific objective, goals were set and strategic actions established to be developed at the national level in partnerships with State, District and Municipal HAI Prevention and Control Coordinations and Infection Control Committees.

1.3.1 Goals and Strategic Actions to Consolidate the National HAI Epidemiological Surveillance System.

A. Goals

Goal 1 - By 2020, 80% of all hospitals with adult, pediatric or neonatal ICU beds reporting their CLABSI regularly from 10 to 12 months of the year[1].

Goal Scheduling

Year	Goal
2016	60%
2017	65%
2018	70%
2019	75%
2020	80%

Goal 2 - By 2020, 80% of all hospitals with adult, pediatric or neonatal ICU beds reporting their Ventilator Associated Pneumonia (VAP), Catheter Associated Urinary Tract Infection (CAUTI) data, reporting regularly from 10 to 12 months of the year[2].

Goal Scheduling

Year	Goal
2017	60%
2018	70%
2019	75%
2020	80%

Goal 3 - By 2020, 80% of hospitals performing surgical delivery reporting their cesarean section infection data from 10 to 12 months of the year[3].

Goal Scheduling per year

Year	Goal
2017	55%
2018	60%
2019	70%
2020	80%

[1] Consider the total number of hospitals with ICU beds at the beginning of the current year (April).

[2] Consider the total number of hospitals with ICU beds at the beginning of the current year (April).

[3] Consider the total number of hospitals performing cesarean delivery in the current year (April), even if they do not have ICU beds.

B. Strategic Actions

1. Review, prepare and publish technical materials on epidemiological surveillance of priority HAI.
2. Promote actions with state coordinations to improve the quality of reported data.
3. Promote feedback of information from the HAI epidemiological surveillance system.
4. Increase the number of national mandatory reporting indicators.

1.3.2 Targets and strategic actions to reduce the incidence of priority HAI nationwide.

A. Goals:

Goal 4 – By 2020, reduce by 15% the incidence density of CLABSI in adult, pediatric or neonatal ICU showing infection rates above the 90th percentile, using data from 2015 as reference.

Goal Scheduling per year

Year	Goal
2016	5%

2017	7.5%
2018	10%
2019	12.5%
2020	15%

Goal 5 - By 2020, 50% of hospitals with adult, pediatric or neonatal ICU beds having implemented Safe Central Venous Catheter Insertion Practices Checklist (SCVC-CL).

Goal Scheduling per year

Year	Goal
2017	20%
2018	30%
2019	40%
2020	50%

Indicator: # of hospitals with ICU beds with SCVC-CL Check list implemented / Total hospitals with ICU beds X 100

Goal 6 – By 2020, 80% of hospitals with adult, pediatric or neonatal ICU beds with Protocols implemented: Prevention of VAP and CAUTI.

Goal Scheduling per year

Year	Goal
2017	55%
2018	60%
2019	70%
2020	80%

Indicator: # of hospitals with VAP and CAUTI protocol implemented in the year / # of hospitals with ICU beds in the year X 100

B. Strategic Actions

1) Review, prepare and publish technical material on HAI prevention and control.
2) Propose strategies for the implementation and monitoring of HAI Prevention Protocols by health services.
3) Develop partnerships with associations, universities, scientific societies and professional councils for the dissemination and implementation of recommendation guides.
4) Support CECIHs in the actions to reduce HAI in health services.

1.3.3 Strategic goals and actions to prevent and control the spread of antimicrobial resistance in health services.

A. Goals:

Goal 7 - By 2020, 70% of the actions planned in the National Plan for the Control and Prevention of Antimicrobial Resistance in Health Services executed, according to the schedule established in this document.

Goal Scheduling per year

Year	Goal
2018	50%
2019	60%
2020	70%

Indicator: # of actions anticipated in plan executed in the year **X 100**

# of actions anticipated for the period

Goal 8 - By 2020, 80% of all hospitals with ICU beds (adult, pediatric or neonatal) reporting their Antimicrobial Resistance (AMR) data regularly from 10 to 12 months of the year.

Goal Scheduling per year

Year	Goal
2017	50%
2018	60%
2019	70%
2020	80%

Indicator: # of hospitals reporting Lab confirmed CLABSI AMR data in the year **X 100**

# of hospitals with ICU beds reporting 10 to 12 months in the year

Goal 9 – By 2020, 80% of hospitals with adult, pediatric or neonatal ICU beds with Antimicrobial Use Protocols implemented at the ICU.

Goal Scheduling per year

Year	Goal
2017	50%
2018	60%
2019	70%
2020	80%

Indicator: # of hospitals with Antimicrobial Use protocol implemented in the year **X 100**

# of hospitals with ICU beds in the year

A. Strategic actions

1. Develop actions to improve quality of health services microbiology laboratories.

2. Review, prepare and publish technical documents on Antimicrobial Resistance in health services.

3. Develop action to strengthen the Antimicrobial Resistance Analytical Sub-network.

4. Promote the implementation of the National Plan for the Control and Prevention of Antimicrobial Resistance in Health Services.
5. Establish actions to promote the implementation of use of antimicrobials in ICUs protocols, according to Anvisa's Collegiate Board Resolution RDC 07/2010.
6. Implement national monitoring of the sensitivity profile to antimicrobials of agents causing CAUTI at hospitals with ICU beds.

1.3.2 Goals and Strategic actions to Consolidate PNPCIRAS.

A. Goal:

Goal 10 – By 2020, reach 80% of national rates (Anvisa) of compliance to essential components of the PNPCIRAS, according to WHO criteria.[4]

Goal Scheduling per year

Year	Goal
2017	60%
2019	75%
2020	80%

Indicator: Result of Annual Assessment.

Goal 11 – By 2020, 90% of states with State Programs for the Prevention and Control of HAI implemented.

Goal Scheduling per year

Year	Goal
2017	60%
2018	70%
2019	80%
2020	90%

Indicator: # State HAI Prevention and Control Programs implemented x 100
Number of States in the country

[4] Currently national compliance rates of the essential Components of PNPCIRAS are 47% (assessment performed in 2015).

B. Strategic actions

1. Increase compliance rates of component: Organization of a National Program for the Control and Prevention of Healthcare Associated Infections– PNPCIRAS.
2. Increase compliance rates of component: Technical recommendation guides
3. Increase compliance rates of component: Human Resources
4. Increase compliance rates of component: Monitoring and Assessment
5. Establish partnerships with other Public Health agencies and other services.
6. Develop strategies for education and to build competencies to support state coordinations in the implementation and development of their HAI Prevention and Control Programs.
7. Organize the structure of the PNPCIRAS.
8. Promote integration and communication networks among state coordinations.

ANNEX I

ACTION PLAN

SPECIFIC OBJECTIVE 1: CONSOLIDATE THE NATIONAL HAI EPIDEMIOLOGICAL SURVEILLANCE SYSTEM.

Goal 1 - By 2020, 80% of all hospitals with ICU beds (adult, pediatric or neonatal) reporting central venous catheter associated Primary Bloodstream Infection (CLABSI) data regularly from 10 to 12 months a year

Goal 2 - By 2020, 80% of all hospitals with ICU beds (adult, pediatric or neonatal) reporting their Ventilator-Associated Pneumonia (VAP) and Catheter Associated Urinary Tract Infection (CAUTI) regularly from 10 to 12 months a year

Goal 3 - By 2020, 80% of all hospitals that perform surgical deliveries reporting their C-section infection data from 10 to 12 months a year.

Strategic action I: Review, prepare and publish technical materials on epidemiological surveillance of priority HAI.

Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Review and publish diagnostic criteria for primary lab confirmed BSI, SSI, VAP, UTI.	Workgroups and GVIMS	X	X							
b) Prepare and publish diagnostic criteria for puerperal infection.	Workgroups and GVIMS	X	X							
c) Prepare and publish technical note with orientation of changes on the national reporting tool annually.	GVIMS and CNCIRAS		X		X		X		X	
d) Prepare and publish technical note describing the national epidemiological surveillance system for HAI.	GVIMS and CNCIRAS			X						

Strategic action II: Promote actions at state coordinations to improve the quality of data reported.

Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Review national reporting tool annually.	GVIMS and CNCIRAS		X		X		X		X	
b) Review annually the list of antimicrobial resistance markers of the national reporting form according to the AMR epidemiological profile of the country.	GVIMS CATREM CNCIRAS	X		X		X		X		X
c) Establish an agreement with the CECIHs regarding the specific actions onto services with Primary Lab BSI percentile ≤ 10.	GVIMS			X		X		X		X
d) Work together with the office responsible for the Family Health Strategy ,aimed at improving C-section post-surgery active surveillance actions.	GVIMS			X						
e) Establish partnerships with FEBRASGO and SBP.	GVIMS				X					
f) Support competence building and awareness for professionals involved in the National HAI Epidemiological Surveillance System.	GVIMS and CNCIRAS	X	X	X	X	X	X	X	X	X

g) Train CECIHs to apply national diagnostic criteria and fill out reporting forms.	GVIMS and CNCIRAS		X		X		X		X	

h) Train CECIHs to analyze data of HAI reported.	GVIMS and CNCIRAS		X		X		X		X	
i) Promote use of national diagnostic criteria for Infection Control Committees to define infections	GVIMS and CECIHs		X	X	X	X	X	X	X	X
Strategic action III: Promote feedback of information of the HAI epidemiological surveillance system.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Prepare and publish Patient Safety and Health Services Quality annually with the analysis of national data.	GVIMS and CNCIRAS	X		X		X		X		X
b) Disclose annually the positive list of hospitals that reported data on HAI from 10 to 12 months.	GVIMS			X		X		X		X
c) Carry out and support annual events to debate with CECIHs and experts in HAI prevention and control the epidemiological surveillance results to define strategic actions to reduce HAI.	GVIMS		X		X		X		X	
d) Promote partnerships with ABIH and SBI to participate in events promoted by the associations.	GVIMS		X		X		X		X	

e) Carry out and support state and national events to disclosure and provide data feedback.	GVIMS	X	X	X	X	X	X	X	X	X

f) Carry out technical meetings between GVIMS and CECIHs.	GVIMS	X	X	X	X	X	X	X	X	X
g) Monitor prevention and control actions for HAI carried out by CECIHs.	GVIMS	X	X	X	X	X	X	X	X	X
Strategic action IV: Increase the number of national mandatory reporting indicators.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Include VAP and UTI as mandatory reporting indicators, as of 2017.	GVIMS		X							
b) Define surgical site infection indicators that will be mandatory for HAI epidemiological surveillance, as of 2017.	GVIMS and CNCIRAS		X							
c) Introduce national reporting of the microbiological profile of CA UTI.			X							

SPECIFIC OBJECTIVE 2: REDUCE INCIDENCE OF PRIORITY HAI NATIONALLY

Goal 4 - By 2020, reduce 15% of the density of the incidence of CLABSI in the adult, pediatric or neonatal ICU with infection rate over the 90th percentile, using 2015 data as reference.

Goal 5 – By 2020, 50% of hospitals with adult, pediatric or neonatal ICU beds with the Safe Central Venous Catheter Insertion Practices (SCVC-CL) Verification Check list implemented.

Goal 6 – By 2020, 80% of hospitals with adult, pediatric or neonatal ICU beds with VAP Prevention and CAUTI Protocols implemented.

Strategic action I: Review, prepare and publish technical materials on HAI prevention and control

Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd/20
a) Review and publish BSI, UTI, SSI, VAP and Neonatology prevention and control handbooks.	GVIMS	X	X			X				X
b) Prepare and publish ophthalmology and puerperal infection prevention manual.	GVIMS	X	X							
c) Establish strategies for broad dissemination of produced materials.	GVIMS	X	X							

Strategic action II: Develop strategies to implement and monitor HAI Prevention Protocols by health services.

Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd/20

a) Publish BSI, SSI, VAP and UTI prevention protocols.	GVIMS	X	X							

b) Establish a regulatory framework determining that all health services must implement and review their HAI prevention protocols.	GVIMS		X							
c) Establish an agreement with CECIHs to monitor implementation of safe CVC insertion practices to prevent primary BSI in hospitals with ICU beds.	GVIMS			X	X					
d) Prepare check list to monitor safe CVC insertion practices.	GVIMS CNCIRAS CECIHs			X	X					
e) Adapt HAI electronic form to receive data obtained at safe CVC insertion practices check list.	GVIMS			X	X					
f) Prepare and publish technical note for health surveillance departments and hospitals guiding them on the need to implement CAUTI and VAP Prevention protocols.	GVIMS			X						
Strategic action III: Develop partnerships with associations, universities, scientific societies and professional councils to promote and implement recommendation guidelines.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd/20

a) Promote broad dissemination of materials produced in partnerships with associations, universities, scientific societies and	GVIMS	X	X	X	X	X	X	X	X	X

professional councils.										
b) Develop prevention and control actions for HAI in partnerships with associations, universities, scientific societies and professional councils.	GVIMS	X	X	X	X	X	X	X	X	X
Strategic action IV: Support CECIHs in actions to reduce HAI at health services.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Encourage CECIHs to monitor and promote actions to reduce the incidence density of primary BSI at hospitals with ICU beds.	GVIMS and CECIH	X	X	X	X	X	X	X	X	X
b) Encourage CECIHs to monitor and promote actions to reduce the incidence density of primary BSI at services at the ≥ 90th percentile.	GVIMS	X	X	X	X	X	X	X	X	X
c) Provide technical support to CECIHs for actions to prevent and control HAI.	GVIMS	X	X	X	X	X	X	X	X	X

SPECIFIC OBJECTIVE 3: PREVENT AND CONTROL SPREAD OF ANTIMICROBIAL RESISTANCE IN HEALTH SERVICES

Goal 7 - By 2020, 70% of actions anticipated in the National Plan for the Control and Prevention of Antimicrobial Resistance in Health Services executed, according to the timeline anticipated in the present document.										
Goal 8 - By 2020, 80% of all hospitals with ICU beds (adult, pediatric or neonatal) reporting their CLABSI AMR data regularly from 10 to 12 months of the year.										
Goal 9 – By 2020, 80% of hospitals with adult, pediatric or neonatal ICU beds with Antimicrobial Use Protocols implemented at the ICU.										
Strategic action I: Develop actions to improve quality of health services microbiology laboratories.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Develop tool to evaluate microbiology laboratories that cater to health services.	GVIMS, CNCIRAS Health Services Control and Regulation Office (GRECS), CATREM and Public Health		X	X						

	Laboratories Office (GELAS)									
b) Publish Technical Note with guidance for Infection Control Committees on evaluation of microbiology laboratories.	GVIMS, CNCIRAS GRECS, CATREM and GELAS		X	X						
c) Prepare microbiology laboratories evaluation project for hospitals with zero laboratory confirmed CLABSI rate for ≥ 6 months a year 2016.	GVIMS, CNCIRAS GRECS, CATREM and GELAS	X	X							

d) Work with the state health surveillance departments on the development of actions to comply with Anvisa's Collegiate Board Resolution RDC 07/2010, or another replacing it, regarding requirements for microbiology laboratory support at health services with ICU beds.	GVIMS, CNCIRAS GRECS, CATREM and GELAS	X	X							
Strategic action II: Review, prepare and publish technical materials on Antimicrobial Resistance in health services.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Publish national guideline on use of antimicrobials at health services.	GVIMS	X	X							
b) Prepare and publish National Plan for the Control and Prevention of Antimicrobial Resistance in Health Services and complementary Technical Notes.	GVIMS	X	X							
Strategic action III: Develop actions to strengthen Antimicrobial Resistance Analytical Sub-network.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Re-structure the analytical sub-network with redefinition of workflows and processes.	GVIMS CATREM CNCIRAS GELAS Laboratory	X	X	X						

	General Coordination (CGLAB)									
b) Promote actions to connect Infection Control Committee, CECIH/CMCIH and LACEN to implement the	GVIMS CATREM	X	X	X						

analytical sub-network.	CNCIRAS GELAS CGLAB									
c) Prepare and Publish reports with data attained through the Sub-network.	GVIMS		X							
d) Prepare a project for external quality control for laboratories of the AMR Sub-network.	GVIMS GELAS			X						
e) Prepare a surveillance and monitoring project with antimicrobial multiresistant mechanism alarm(Gram + and Gram - microorganisms)	GVIMS			X						
Strategic action IV: Promote the implementation of the National Plan for Antimicrobial Resistance Prevention and Control in Health Services.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Promote the National Plan for the Control and Prevention of Antimicrobial Resistance in Health Services and its complementary Technical Notes.	GVIMS	X	X	X	X	X	X	X	X	X

b) Support and provide tools for CECIHs/CMCIHs to implement and promote actions established in the National Antimicrobial Resistance in Health Services Prevention and Control Plan.	GVIMS	X	X	X	X	X	X	X	X	X

c) Hold regular meetings to evaluate AMR indicators with CNCIRAS and CATREM.	GVIMS	X		X		X		X		X
Strategic action V: Establish actions to promote the implementation of antimicrobial use protocols at ICUs, according to RDC 07/2010.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Prepare and publish technical note for health surveillance departments and hospitals guiding on the need to implement antimicrobial use protocols.	GVIMS GRECS				X					
b) Qualify CECIHs and health surveillance departments to monitor the implementation of antimicrobial use protocols.	GVIMS GRECS				X					
c) Establish an agreement with health surveillance departments regarding the inspection of the implementation of protocols on the rational use of antimicrobials by ICUs, in accordance to RDC 07/2010.	GVIMS GRECS				X					
Strategic action VI: Implement the national monitoring of antimicrobial sensitivity profile for agents causing CAUTI at hospitals with ICU beds.										
Activities	Responsibility	2º/16	1º/17	2º /17	1º /18	2º /18	1º /19	2º /19	1º /20	2º /20

a) Define the national monitoring of antimicrobial sensitivity profile for agents causing CAUTI, establishing the scope, which	GVIMS		X		X		X		X	

microorganisms should be monitored, schedule and reporting tool.										
b) Prepare and publish technical note for CECIHs and health services guiding on reporting profile of antimicrobial sensitivity for CAUTI causing agents.	GVIMS		X							
c) Prepare and publish annual bulletin with data from the national monitoring of the profile of antimicrobial sensitivity for CAUTI causing agents at hospitals with ICU beds.	GVIMS			X		X		X		X
d) Discuss results from CECIHs and specialists to plan actions.	GVIMS			X		X		X		X

SPECIFIC OBJECTIVE 4: CONSOLIDATE PNPCIRAS

Goal 10 - By 2020, reach 80% of national (Anvisa) compliance rates of essential Components of PNPCIRAS, according to WHO criteria.										
Goal 11 - By 2020, 90% of the states with HAI Prevention and Control State Programs implemented.										
Strategic action I: Increase compliance rates regarding the component: Organization of a National Program for the Control and Prevention of Healthcare Associated Infections– PNPCIRAS										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Insert the Sub-network into the PNPCIRAS to favor a timely response for the early detection and control of HAI epidemics.	GVIMS	X	X	X						
b) Include, in the scope of PNPCIRAS, actions to prevent the emergence of antimicrobial resistance and/or spread of multiresistant microorganism strains.	GVIMS	X	X	X						
Strategic action II: Increase compliance rates regarding the component: Technical recommendation guides										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20

a) Broadly disseminate the orientation on HAI prevention and control guides to low complexity level healthcare / primary health services.	GVIMS		X	X						

b) Disseminate guide on use of personal protective equipment to avoid unprotected direct contact with blood and body fluids.	GVIMS			X						
c) Disseminate technical recommendation guide on cleaning, disinfection, sterilization of reusable equipment in healthcare.	GVIMS			X						
d) Disseminate technical recommendation guide on standard precautions in the prevention and handling of accidents with cutting and piercing materials.	GVIMS			X	X					
e) Disseminate technical recommendation guide on respiratory hygiene standard precautions.	GVIMS			X	X					
f) Disseminate technical recommendation guidance on how to practice contact, droplet and airborne precautions.	GVIMS			X						
Strategic action III: Increase compliance rates regarding the component: Human Resource										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20

a) Develop a basic infection prevention and control training program for all health professionals and an advanced program for HAI prevention and control professionals (technical teams).	GVIMS				X					
b) Foster the participation of national and state teams in update and competence building events related to HAI control and prevention.	GVIMS		X		X		X		X	
Strategic action IV: Increase compliance rates regarding the component: Monitoring and Assessment										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Perform the evaluation of state programs every 2 years (States in Focus Project)	GVIMS CNCIRAS					X				X
b) Perform the evaluation of the PNPCIRAS 2016-2020 every 2 years	GVIMS CNCIRAS					X				X
c) Promote the alignment of state programs with PNPCIRAS.	GVIMS CNCIRAS		X		X		X		X	
d) Perform a partial assessment of the execution of strategic actions and of attainment of the PNPCIRAS 2016-2020 goals.	GVIMS CNCIRAS			X		X		X		X

e) Adjust/adapt annually, if necessary, the strategic actions for PNPCIRAS, according to the partial assessment of actions and goals.	GVIMS CNCIRAS		X		X		X		X	

Strategic action V: Establish partnerships with other Public Health Agencies and other services.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Support the use of documents and recommendations related to HAI of other government partners, on subjects: a. Occupational biohazard b. Immunization of health professionals c. Environment issues: Water, Ventilation	GVIMS CNCIRAS			X						
b) Establish partnership with the Ministry of Health departments that correlate with HAI prevention and control issues, especially with the Health Attention Department (SAS), Health Surveillance Department (SVS), and National Regulatory Agency for Private Health Insurance and Plans (ANS).	GVIMS			X	X	X				
Strategic action VI: Develop educational strategies and for building competences to support state coordinations on the implementation and development of their HAI Prevention and Control Programs.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20

a) Establish an agreement with the Three Party Intermanagement Commission for the effective establishment of State and Municipal HAI Control Coordinations.	GVIMS				X					

b) Encourage the development of states and municipalities agreement at the Two Party Intermanagement Commission for the effective establishment of Municipal HAI Control Coordinations.	GVIMS					X		X		X
c) Publish Technical Note with orientation on how to structure a Municipal HAI Control Coordination.	GVIMS CNCIRAS				X					
d) Support CECIHs that still do not have PEPCIRAS on the development of those.	GVIMS		X	X	X	X	X	X	X	X
e) Support CECIHs to implement action plans included in the PEPCIRAS	GVIMS		X	X	X	X	X	X	X	X
f) Establish an agreement with CECIHs to the send annual report with information on the execution of PEPCIRAS action plans.	GVIMS			X						
g) Prepare and publish a RDC to complement Ordinance MS #2616/98 and RDC 48/2000.	GVIMS GRECS					X				
Strategic action VII: Organize the structure of the PNPCIRAS										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Publish and disseminate the PNPCIRAS 2016-2020.	GVIMS	X								

b) Structure quarterly ordinary meetings of CNCIRAS, to monitor PNPCIRAS 2016-2020.	GVIMS	X	X	X	X	X	X	X	X	X
c) Disseminate CNCIRAS actions, publishing drafts, meeting agendas and documents developed.	GVIMS	X	X	X	X	X	X	X	X	X
d) Estimate a budget for planned activities.	GVIMS	X	X	X	X	X	X	X	X	X
Strategic action VIII: Promote integration and communication networks among state coordinations.										
Activities	Responsibility	2nd /16	1st /17	2nd /17	1 st/18	2 nd /18	1st /19	2 nd /19	1st /20	2 nd /20
a) Annually update the CECIHs database	GVIMS	X		X		X		X		X
b) Set up and manage an online discussion group with the participation of CECIH and Anvisa coordinators, using a mobile app.	GVIMS	X								
c) Hold meetings between Anvisa and CECIHs to discuss the execution of PEPCIRAS and its alignment with PNPCIRAS, among other issues of interest for HAI prevention and control.	GVIMS				X		X		X	

Annex II - Definitions

Institutional protocols implemented: Institutional protocols implemented are understood as a documental evidence of the assessed subject and training held oriented toward health professionals, with the presentation of the program and presence list. The protocol should have a maximum of 3 years from the date of publication or revision and can be included as the content (chapter) of the health service General Protocols.

The VAP prevention protocol should guide, at least:

- Head of bed should be kept at between 30 and 45º;
- Sedation must be assessed daily and tapered whenever possible;
- Oral hygiene must be done with antiseptics.

The CAUTI prevention protocol should guide, at least:

- Handwashing before and after catheter insertion and anytime when handling the system or site;
- Definition of criteria to indicate use of urinary catheters;
- Orientation for insertion, care and maintenance of the urinary catheter.

Checklist implemented: Checklist implemented is understood as the checklist being used in at least 50% of CVC inserted at the health service, with monitored indicators and data reported on the national form.

The Safe Central Venous Catheter Insertion Practices Checklist should include at least the following items:

- Handwashing.
- Maximum barrier precautions for catheter insertion: use of cap, mask, gown and sterile gloves and large sterile drapes that cover the entire area to be punctured.
- Preparation of the skin with 0.5% alcohol chlorhexidine solution or povidone-iodine.
- Selection of Central Venous Catheter (CVC) insertion site: use of subclavian vein as preferential site for non-tunneled CVC.

Program implemented: Program implemented is understood as the one whose action plans are being executed and whose indicators are being monitored.

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