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# Webinar

## Recommendations:

- Please turn off your microphone.
- There will be 40 minutes of presentation and 1 hour of questions and answers.
- Questions should be in writing, through the Chat or by email to: [Infectioncontrol@paho.org](mailto:Infectioncontrol@paho.org)
- The presentation will be available on the PAHO website in 48 hours.



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# External assessment of Infection and Prevention Control Program in Chile

Dr. Fernando Otaíza O’Ryan MSc.  
fotaiza@minsal.cl



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# Plan

- Main elements of our external assessment system
  - Assessment in national program
  - Elements assessed
  - Procedures
  - Evaluators
  - Reports



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# Purposes of IPC

## I. Prevent infections and its impact

- Prevent infections associated with medical devices and invasive procedures
- Prevent infections associated with outbreaks

## II. Prevent infection transmission between patients and healthcare workers

- Prevent occupational exposures

## III. Other purposes

1. Decrease spreading of antimicrobial resistance
2. Lower costs associated with infections
3. Increase efficiency of measures
4. Improve response to and diminish impact of infectious diseases (e.g. outbreaks)
5. Prevent environmental damage



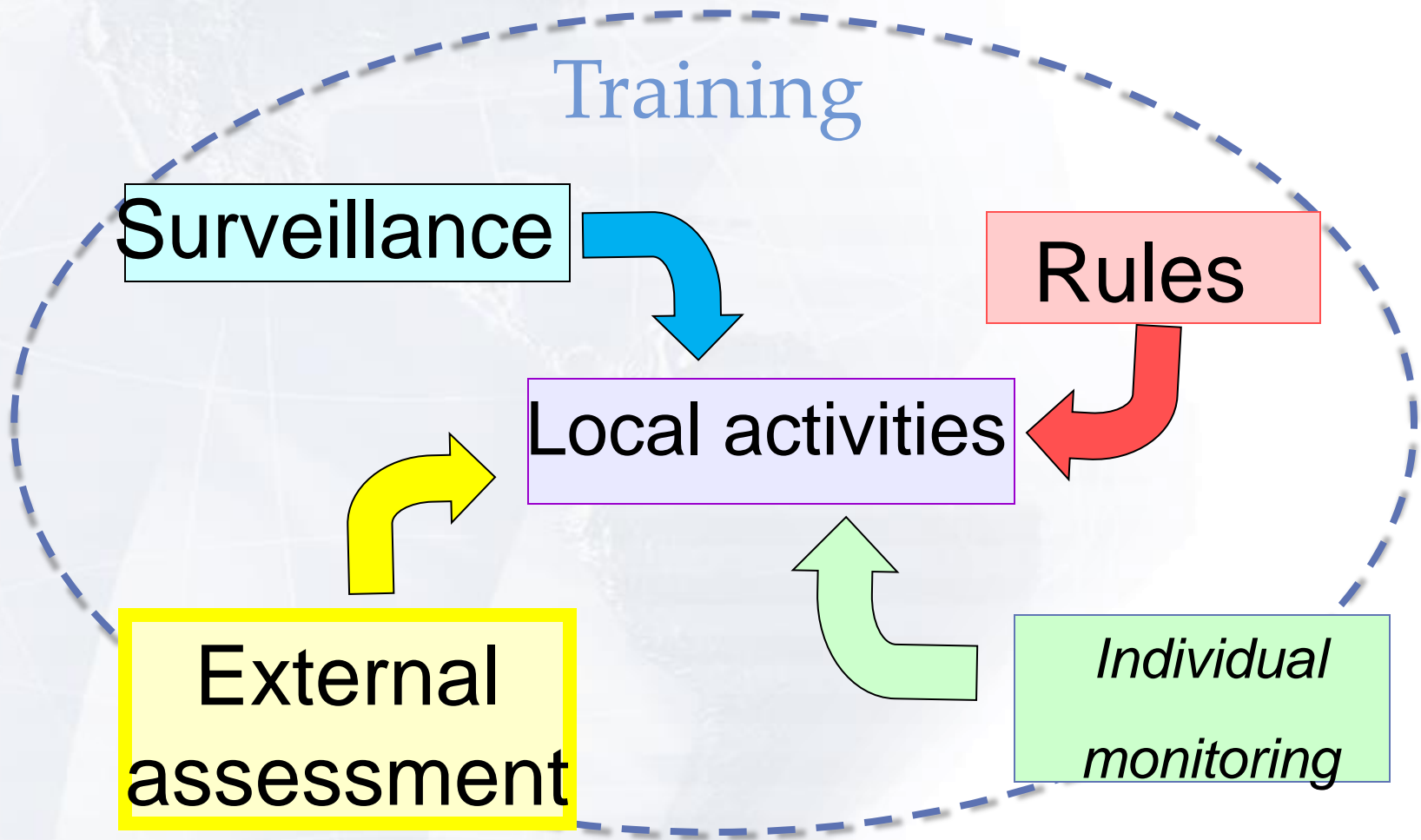
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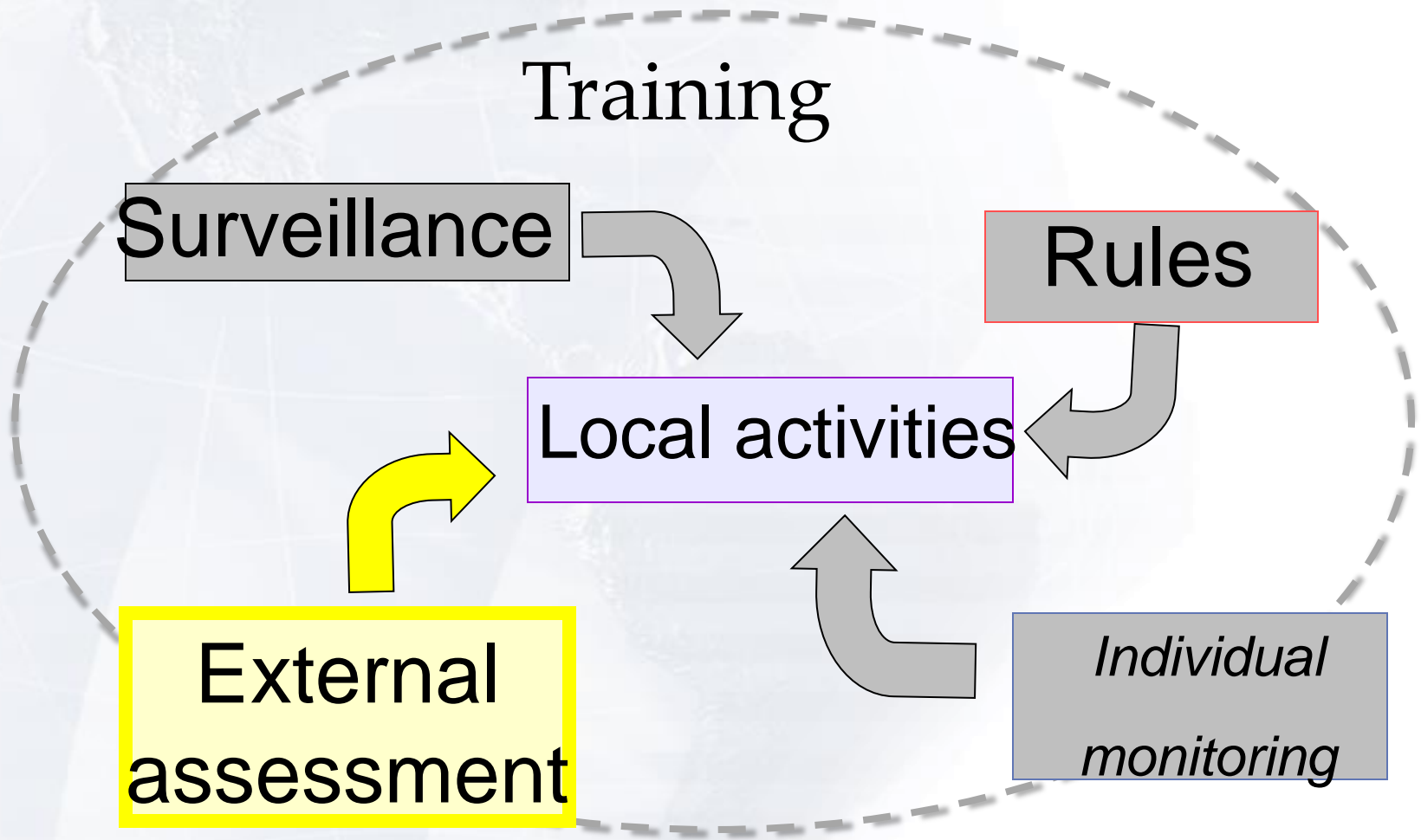
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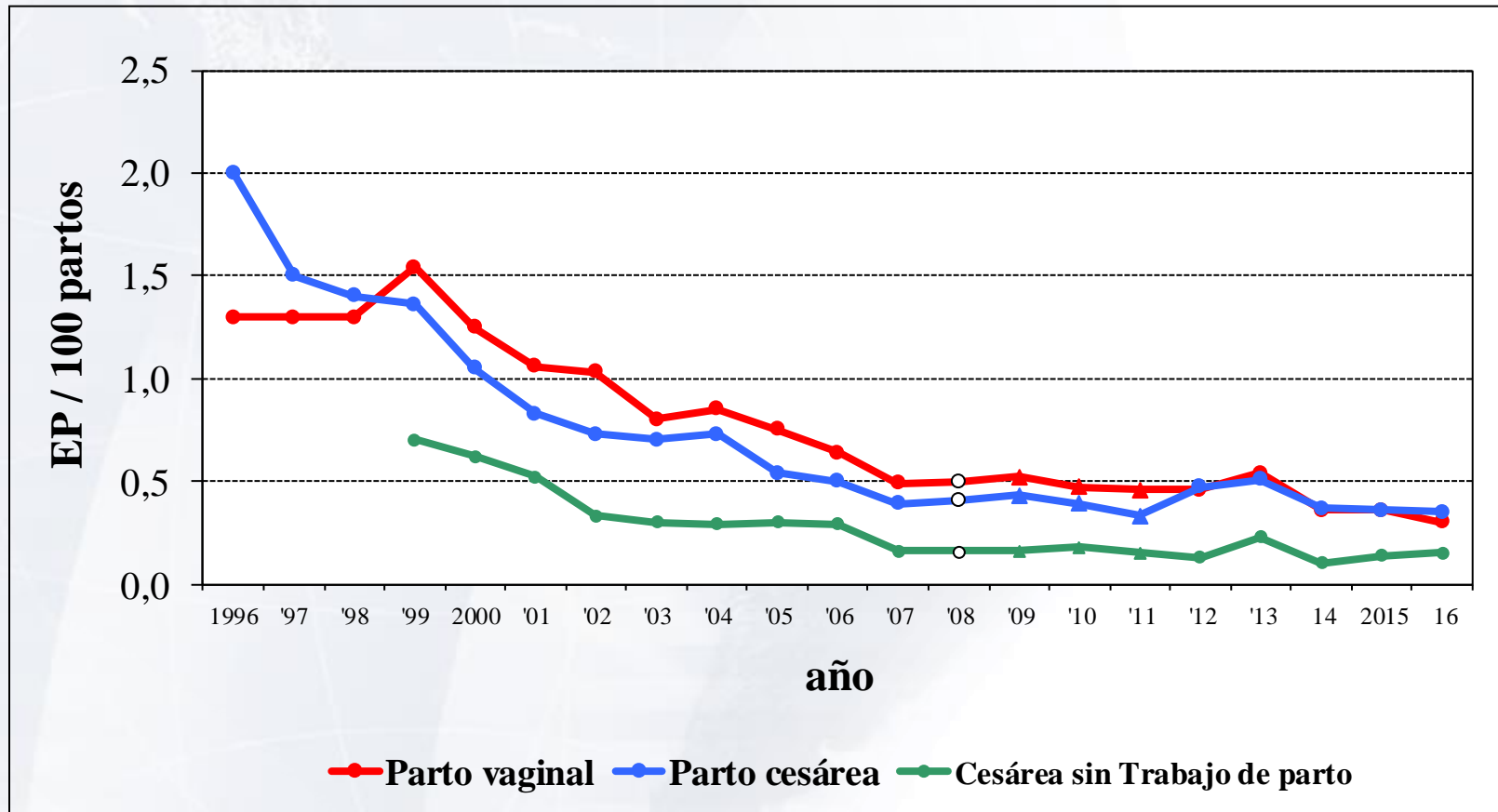
# National IPC Program – Strategies



# National IPC Program – Strategies



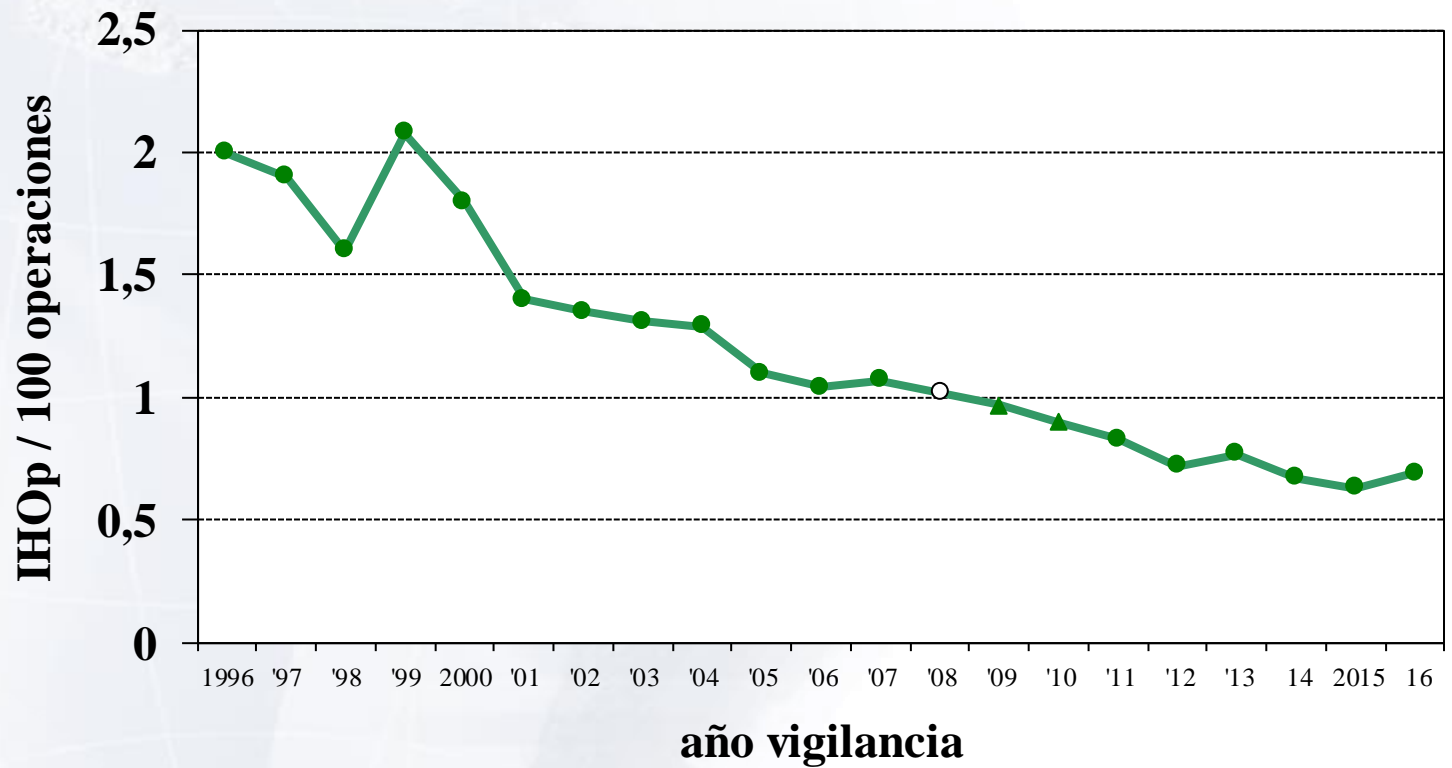
# Endometritis rates according to type of delivery 1996 - 2016



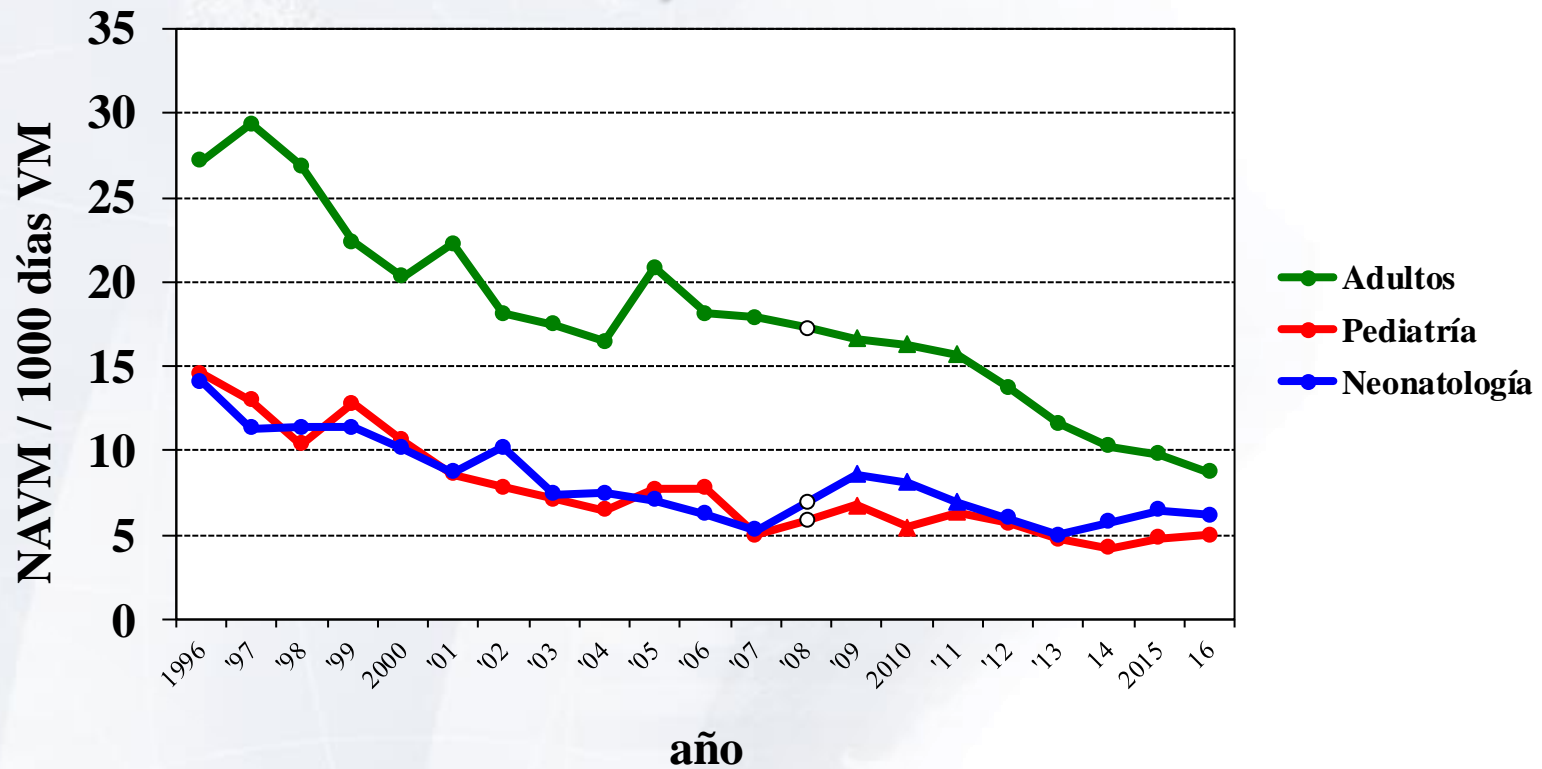


# Surgical site infections in C-section

## 1996 - 2016



# VAP/ 1000 patient days in mechanical ventilation (age related) 1996 - 2016



# Impact of IPC program 2000 – 2014 for specific infections

Infection	Indicator	Rate 2000	Rate 2014	decrease
Endometritis in vaginal delivery	Infections/ 100 deliveries	1,25	0,36	<b>71,2%</b>
Surgical site infections in laparoscopic cholecistectomy	Infections/ 100 surgeries	0,5	0,18	<b>64,0%</b>
Central line associated bloodstream infections in Pediatrics	Infections / 1000 catheter days	4,9	2,33	<b>52,5%</b>
Ventilator associated pneumonia in adults	Infections / 1000 ventilator days	20,3	10,27	<b>49,4%</b>
Catheter associated urinary tract infections in Internal Medicine	Infection/ 1000 días days of indwelling catheter	6,9	4,48	<b>35,1%</b>
Intestinal diseases(actute diarrhea) in infants	Infections/ 100 discharges	3,0	2,08	<b>30,7%</b>



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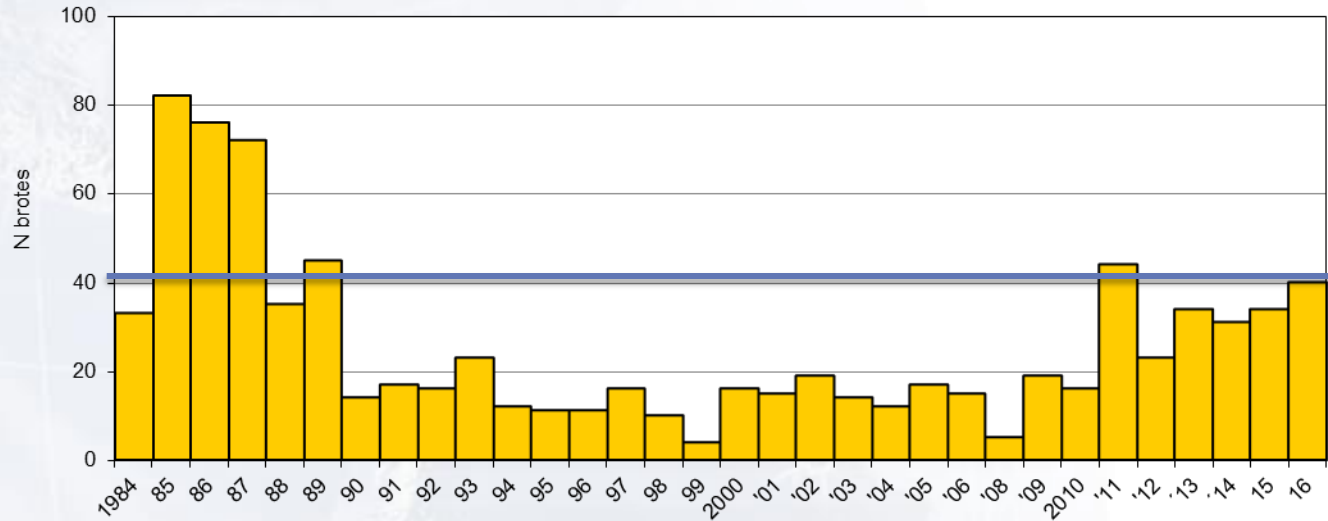


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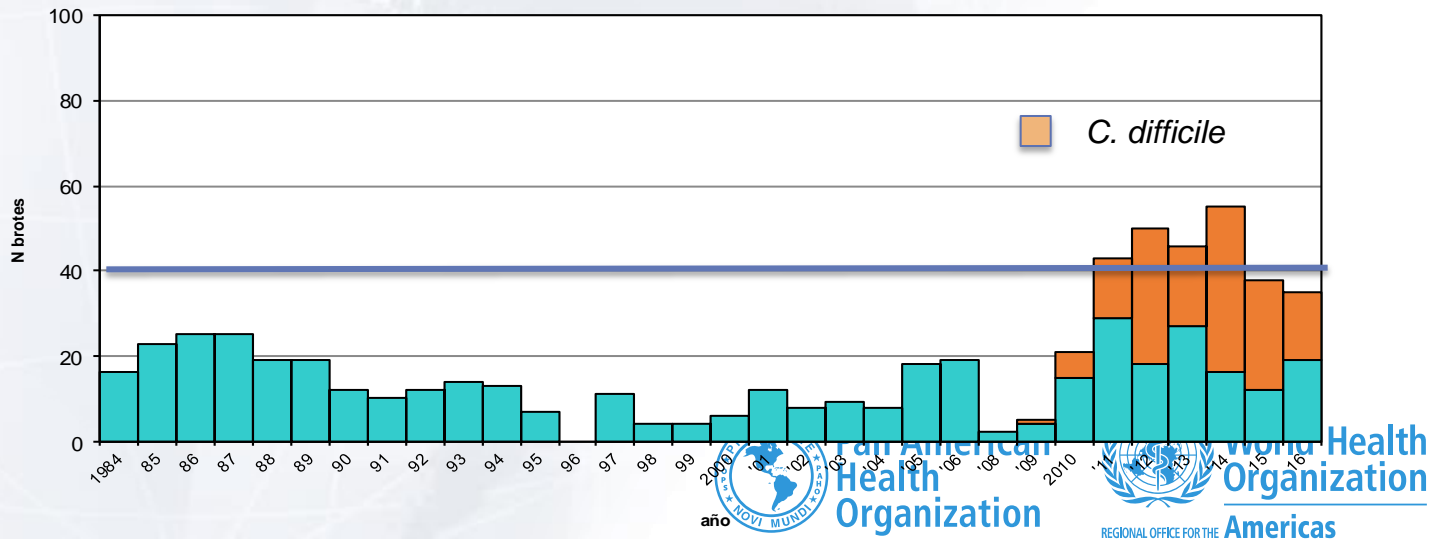
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# Infections outbreaks reports in Chile 1984 - 2016

pediatrics



adults



# What to assess

## Regulatory matters

- Accomplishment of rules enforced for program core elements

## Technical matters

- Accomplishment of prevention rules based in evidence
  - HAIs prevention associated to medical devices and invasive procedures
  - Prevention and control of outbreaks



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APRUEBA NORMA TÉCNICA  
N° 124 SOBRE PROGRAMAS DE  
PREVENCIÓN Y CONTROL DE LAS  
INFECCIONES ASOCIADAS A LA ATENCIÓN  
DE SALUD (IAAS).

EXENTO N° 350 /

SANTIAGO, 24 OCT. 2011

- Refers to organization, tasks, responsibilities and all structural and functional elements of IPC
- Included in law of people's rights in healthcare
- Divides components in 8 basic elements including guidelines for its performance in each
- Fundamental for assessments



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# The processes we want to boost

## Impact indicators

→	→	→	→	→	→
HAI rates over expected (epidemiological surveillance= <b>initial indicator</b> )	Rules, instructions, recommendations and others (evidence based) on prevention,	Assessment of evidence based technical directions (supervision)	Organizing activities to accomplish unfulfilled technical directions (rules, training, improving processes, devices and others)	Check on proposed improvement changes (supervision)	Assess changes in <b>initial indicator</b>  If there are no changes, must repeat the process



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# The processes we want to boost

## Processes indicators

→	→	→	→	
Rules, instructions, recommendations, etc.(evidence based) on prevention	Assess level accomplished for technical guidance(supervision) = initial indicator	Organize activities to improve unfulfills technical (practices in healthcare)	Check if improvement changes are installed properly(supervision)	Assess modifications in <b>initial indicator</b> .  If there are no changes, process must be repeated



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# Where are we: **Technical guidelines and rules**

## Comprehensive national evidence-based technical guidelines,

### Rules:

1. **Organization of IPC (2011)**
  2. **Epidemiological surveillance (1998; 2013)**
  3. **Sterilization (2001; 2015)**
  4. **Standard and isolation precautions(1988; 1998)**
    - **Standard precautions (2013)**
  5. **Rationalizing antimicrobial usage**
- Cooperation in rules regarding management of Influenza, hepatitis B, Ebola and Hantavirus.

### **Specific rules**

- **Management of diarrhea outbreaks in pediatrics**
- **Management of *A. baumannii* infections**
- **Management of adenovirus infections**
- **Preventing viral infections in pediatrics (winter campaign)**
- **Prevention of CAUTI**
- **Prevention of Endometritis**
- **Management of SRV**
- Response to influenza pandemics
- Management of dust in healthcare environments
- Catastrophes
- **Management of *C. difficile* outbreaks**
- **Infecciones en hemodiálisis**
- Epidemiological surveillance
- Precautions for EVD
- Antimicrobial resistance surveillance
- **Prevention of endophthalmitis outbreaks after cataracts surgical treatment**

## Specific objectives (why assess?):

1. Identify development of main components for national IPC program (norma 124):  
Organization, Technical directions, Human resources, Surveillance and supervision, Microbiology, Environmental matters, links and communication with PUBLIC HEALTH Network, monitoring local IPC programs .
2. Apply assessment criteria for each element under control in Assessment instrument and final results and comments.
3. Apply and evaluate specific situations in hospitals regarding modes of assessment and criteria.
4. Measure level of development of National IPC Program to help defining interventions to be implemented.



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# Description of the process

- Non punishable IPC program assessment
- Involves technical and ruling components
- Different moments for
  - Evaluation
  - Training
  - Keeping records



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# ORD C13/1072 de 5/IV/2012

- Assessment process done by Health services
- External assessment
- Contents included in a checklist related to Norma 124

ite  
ORDINARIO C13 / N° 1072 /

ANT.: Norma Técnica N° 124 sobre Programas de Prevención y Control de Infecciones asociadas a La Atención en Salud (IAAS)

MAT.: Envía instrucciones sobre evaluación del cumplimiento de Norma Técnica N°124 en hospitales

SANTIAGO, 05 ABR. 2012

ASISTENCIALES

- Healthcare institutions can update o complete missing information when assessed
- There is a cycle expected to be accomplished for the evaluation process



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# ORD C13/1072 de 5/IV/2012

## sequence for external assessment

Who	What
Health Service (assessor)	Communicates $\geq 30$ days in advance of the assessing process
	On field applies an assessing instrument based in Norma 124
	At the end of assessment an oral report is given to hospital CEO and IPC team
	Fills in assessment checklist available in website and sends it to the hospital (within 7 days since on field assessing was done)
Hospital (appeal)	IPC team: Goes over assessment results and hands in documents unavailable during the process or clarifies specific aspects and sends them through web site to be authorized at the Hospital level
	Hospital main authority: reviews information released from IPC, modifies it if considered necessary and sends it to Health Service (up to 10 days since report was received from Health Service) through a website.
Health Service (assessor)	Receives and analyzes latest documents sent from the hospital through the website and modifies assessment results if considered reasonable according to new information → Final qualification
	Official document with final result is sent to Hospital's main authority.
	Sends final results through website to Hospital, regional Sanitary authority and Ministry of Health



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# Use of informatic system(SICARS)

- Process is faster
- Automatic formula to calculate results according to score assigned during assessment
- Better graphic presentation
- Storage of information regarding the process linking hospitals, Health Service and Ministry of Healthn
- National report readily available
- Stronger and consistent database



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# Consequences of assessment

- Is an assessment of a Healthcare Program
  - Helps identifying aspects that can be improved
- Main aim is improving the accomplishment of IPC program and continually support local activities for this purpose
- Not punishable (no fines involved)
- Not an accreditation process
- Not an audit



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# Who does the assessment

- The assessment is a well established managerial process
- It is not punishable
  - No fines involved
  - No prohibition in functioning for health institutions regarding results
  - No incentives

Hence:

- Evaluation process is assigned to Health Service that assesses Healthcare Programs
- Regional health authority can fine or prohibit functioning of certain processes within a hospital according to the assessment done.



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# Who is in charge of assessments

- Health professionals from Health Services, in charge of managing healthcare network.
  - IPC professionals from Health Services
  - Mainly qualified nurses
- Other professionals trained
  - Organizing the assessment
  - Apply the assessing instrument
  - Build up reports
  - Use of computerized system (SICARS)
- They are program assessors, their training is not in IPC programs



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# Attitude, messages to bear in mind by assessors

- People are afraid of evaluations
  - Hostile reactions or indifference towards the process
- Keep calm and do the assessment in an orderly manner
- It is possible that healthcare workers at hospital know more than you do regarding Healthcare associated infections
  - You know how to assess accomplishment of Norma 124
- We are not punishers
- We don't give incentives
- We keep a record of what we see



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# Which are the elements to be assessed

- Not all elements are under regulations
- Some of them have been chosen and kept as indicators
- There are quantitative and qualitative elements included
- All elements assessed must be accomplished
- A small margin has been considered so as to take care of bias or errors in interpreting their accomplishment.



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# External assessment: What to evaluate

- Development of an assessment checklist with core components proposed by WHO
  - Existing rules,
  - Old accreditation system of HAIs
  - Rapid program assessment from PAHO
  - Accreditation system for institutions
  - Law of people's rights and responsibilities in healthcare
- 1. National experts →
  1. Written consultations
  2. Consensus meetings
  3. On field assay
- 2. Validate through meetings IPC professional from public hospitals and Health Services.
- 3. Excel® spreadsheet to include gathered data
- 4. Guidelines to perform assessment



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# 2<sup>nd</sup> Meeting of world network of IPC, WHO, June 2008

## Core components for infection prevention and control programmes

1. Organization of IPC programmes
2. Technical guidelines
3. Human resources
  - Training
  - Amount
  - Occupational health
4. Surveillance of infections and assessment of compliance with IPC practices
5. Microbiology laboratory
6. Environment
7. Monitor and evaluation of programmes
8. Links with Public Health or other services



# External assessment: backgrounds

- Early process done by external healthworkers
- 8 scopes of assessment
- 157 elementos assessed
  - 21 «priority»
- **21 priority elements**
  - Basic aspects of an IPC program whose performance are highly relevant in the quality of these programs.
  - Identified by an \*

# Definitions for assessment

## «Document»

- Documents from institution that shows the development and accomplishment of any element must follow the following rule:
  - Include subjects and matters required.
  - It requires an emission date
  - Professional signing it must be identified by its name and signature
- Can accept
  - Entity official web mail
  - Reports on meetings and matters dealt with



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# Definition for assessment

## «Documents»

- An official document from the hospital to show accomplishment of certain element must have the following characteristics:
  - Include contents required.
  - Include a date when it was elaborated.
  - Include name and signature of Hospital main authority.
  - Update if conditions in previous document have changed.
    - Must be revised and updated at least every five years



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Scenario

Critical patients unit

**activity: aspiration thorough endotracheal tube**



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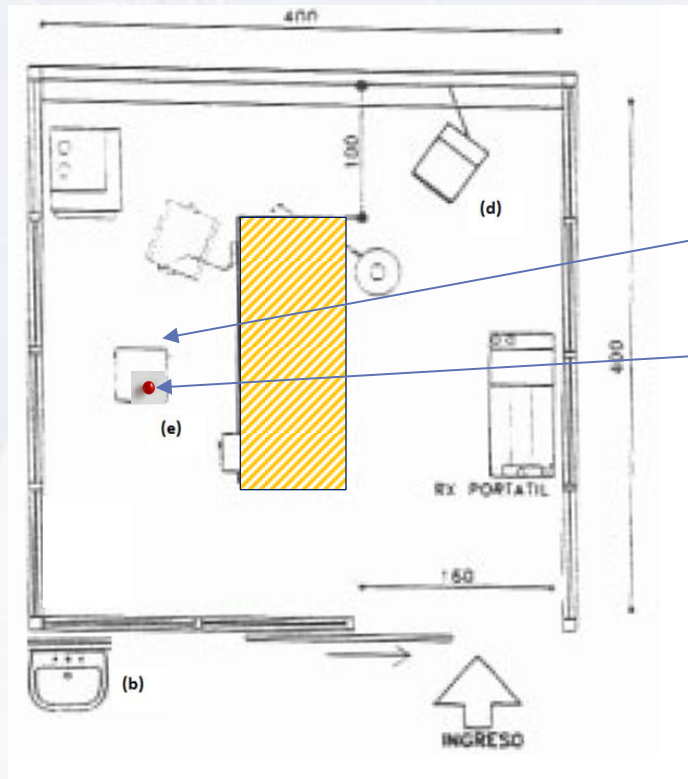


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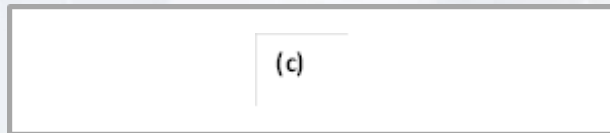
# Case

hospital has seven isolation areas, each with a defined structure according to blueprint



## Simbology Isolation Unit

- a) Clinical bed
  - b) Handwash basin
  - c) Patient bathroom
  - d) Cardiovascular monitor
  - e) Procedures table
  - f) Mesa de procedimientos
-  Alcohol based solution



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an example:

# Assessment of scope HAIs surveillance and y preventive practices control



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# Intention

To assess if hospital has an effective epidemiological surveillance system to get knowledge of:

- (a) HAIs situation in the hospital
- (b) Reporting system on performing level of preventive practices in healthcare workers

# HAIs surveillance

## Components

1

HAIs surveillance include

- **Detection of HAIs**
- **Detection of outbreaks**
- **Pathogens with epidemiological relevance**

2

HAIs surveillance system has:.

- **Objectives**
- **Definitions**
- **Mode of detecting cases (numerator).**
- **Mode of detecting patients (denominator)**
- **Analysis and infection rates formula**

# HAI surveillance

## Components

3

4

Active surveillance includes

- **Responsible for detecting cases\***
- **Clinical charts reviews of patients with risks**
- **Use standardized definitions**
- **Clinical charts reviews at least once a week**

Assess quality of information gathered

- **Prevalence or incidence studies, or others to know system capability of accurately detecting HAIs.**
- **Quality of information to be assessed at least once a year**

# HAI surveillance

Component

5

Information is analyzed and disseminated

- **Periodical reports of HAIs to different authority levels in the hospital**
- **Reports on outbreaks management**
- **Information is reported to the Main central level**

### Ámbito 1: Organización (parte 1)

Componentes	Elementos	cumple	
1.1 Existe un programa de control (PCI) de IAAS que :	1.1.a Depende del nivel técnico más alto del hospital*		
	1.1.b Cuenta con objetivos y metas para infecciones endémicas para el período		
	1.1.c Cuenta con objetivos y metas para infecciones epidémicas para el período		
	1.1.d Cuenta con objetivos y metas para el cumplimiento de prácticas preventivas para prioridades locales.		
1.2 Las actividades incluyen la prevención de IAAS en:	1.2.a Pacientes		
	1.2.b Personal de salud		
	1.2.c Visitas y acompañantes de los enfermos		
1.3 Las funciones del PCI establecen que es responsable institucional de:	1.3.a Vigilancia de IAAS *		
	1.3.b Desarrollo de normas, guías y estandarización de prácticas de prevención de IAAS	1.3.b.1 Precauciones estándar	
		1.3.b.2 Selección y uso apropiado de antisépticos	
		1.3.b.3 Mantención de técnica aséptica en procedimientos clínicos	
		1.3.b.4 Esterilización y desinfección de material clínico	
		1.3.b.5 Precauciones para aislamiento	
	1.3.c Manejo de brotes *		
	1.3.d Capacitación de personal de salud		
1.3.e Evaluación de adhesión en cumplimiento de práctica de prevención de IAAS			
1.3.f Participación en la selección y provisión de insumos adecuados para la prevención y control de IAAS ( PCI define los antisépticos que se emplean en el establecimiento)			



# Final qualification (obtained by computerized program)

Qualification	Compliance of priority elements	Global compliance	Compliance in each scope
Full COMPLIANCE of HAIs program	≥ 95% and	≥ 85% and	≥ 50%
COMPLIANCE WITH MINOR OBSERVATIONS of HAIs program	Between 80 y <95% o	Between 75% y < 85% o	One or more scopes < 50%
NON COMPLIANCE of HAIs program	<80% or	<75%	

- 21 priority elements
- These are fundamental aspects of HAIs program with high relevance in its quality
- Identified with \* in the manual



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# Reports

## 2 ways of using them

### Local level

- Identifies specific needs of hospital under assessment
- Hospital must develop intervention plans

### National level

- Identifies state of compliance of each component at a national level
- Ministry of health defines policies, strategies and activities to improve the health system



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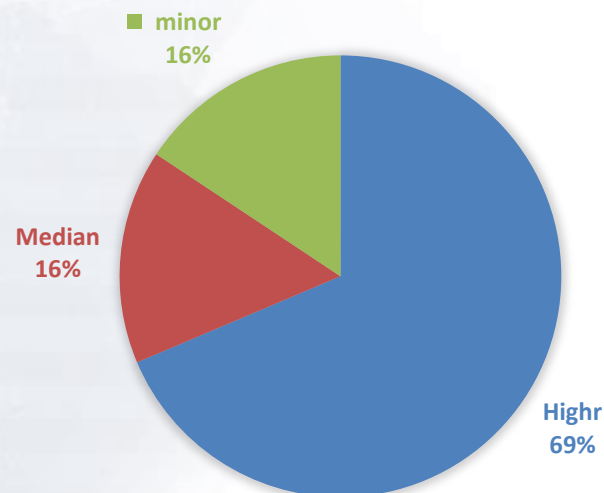
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# Assessments

## First global experience

- **62** hospitals assessed
- 51 hospitals included in the system

COMPLEXITY OF 62 HOSPITALS ASSESSED



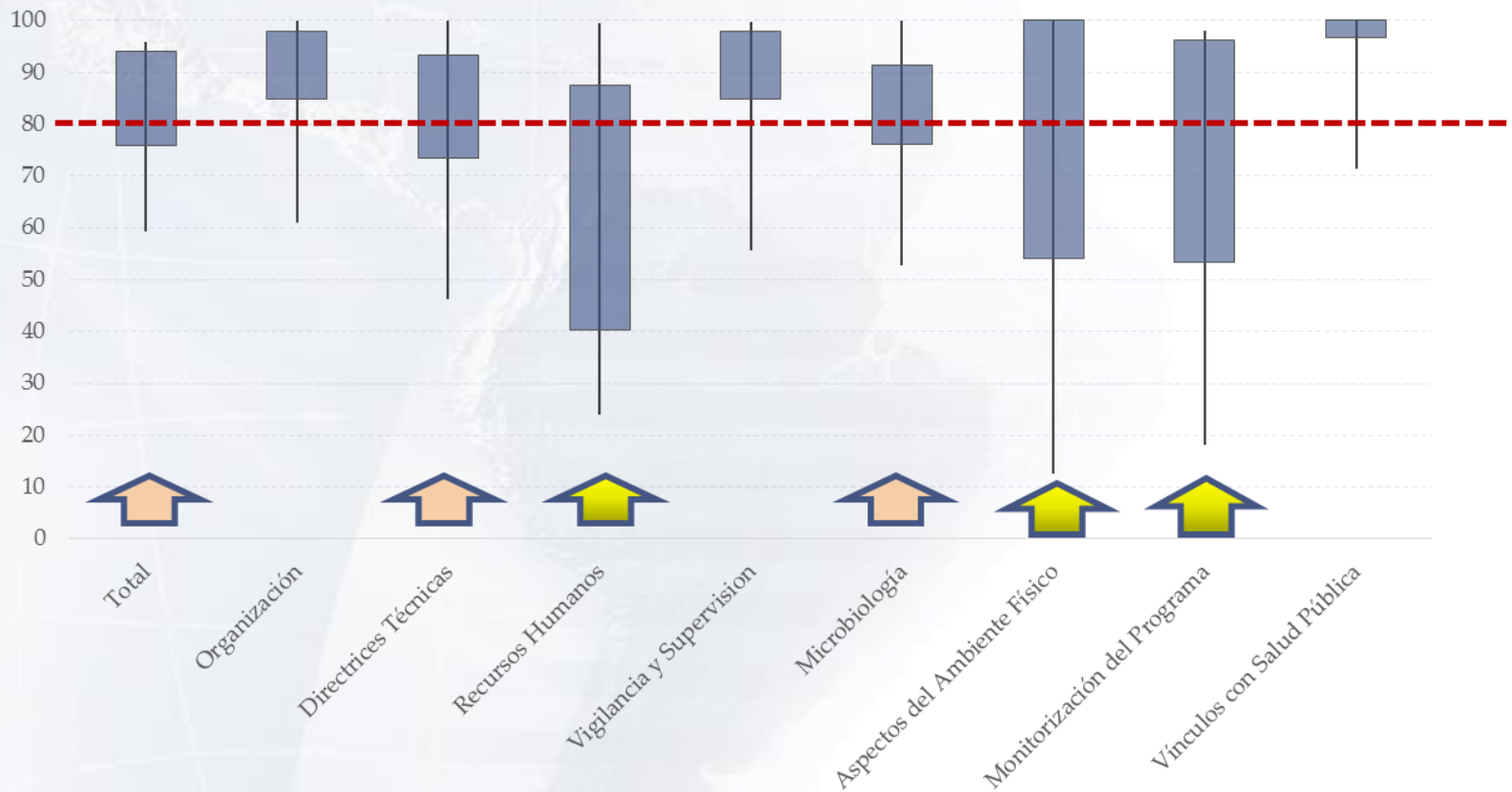
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# First assessment of 51 hospitals per scope(2015 – 2016)



Percentiles  
 graficados  
 P90%  
 P75%  
 P25%  
 P10%

# Example: Organization of IPC program

## Responsability

- 80% are under Medical Director of the hospital s
  - reglamento 161 de Hospitales
  - Clínicas y NT 124
- Of those not in compliance
  - 8 are ruled by Quality Department or Main nurse
  - In 2 IPC is not included in hospital organigram

## Professional's dedicated hours

- Physician  $\geq 5$  hours per week

**88% complies**

- Nurse 44 hours/ 250 beds per week

**68% complies**

- Others have less assigned hours
- All hospitals have assigned certain number of hours



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# Technical guidelines

- Assess the existence of local technical guidelines for IPC
  - Rules, procedures, guidelines or other official instructions
  - Official: signed by main hospital authority
  - Updated: Last revision done less than 5 years ago
  - Special observations:
    - **Each guide includes responsible of complying with the guides.**
    - **Each clinical ward must have their proper rules and guides concerning IPC**

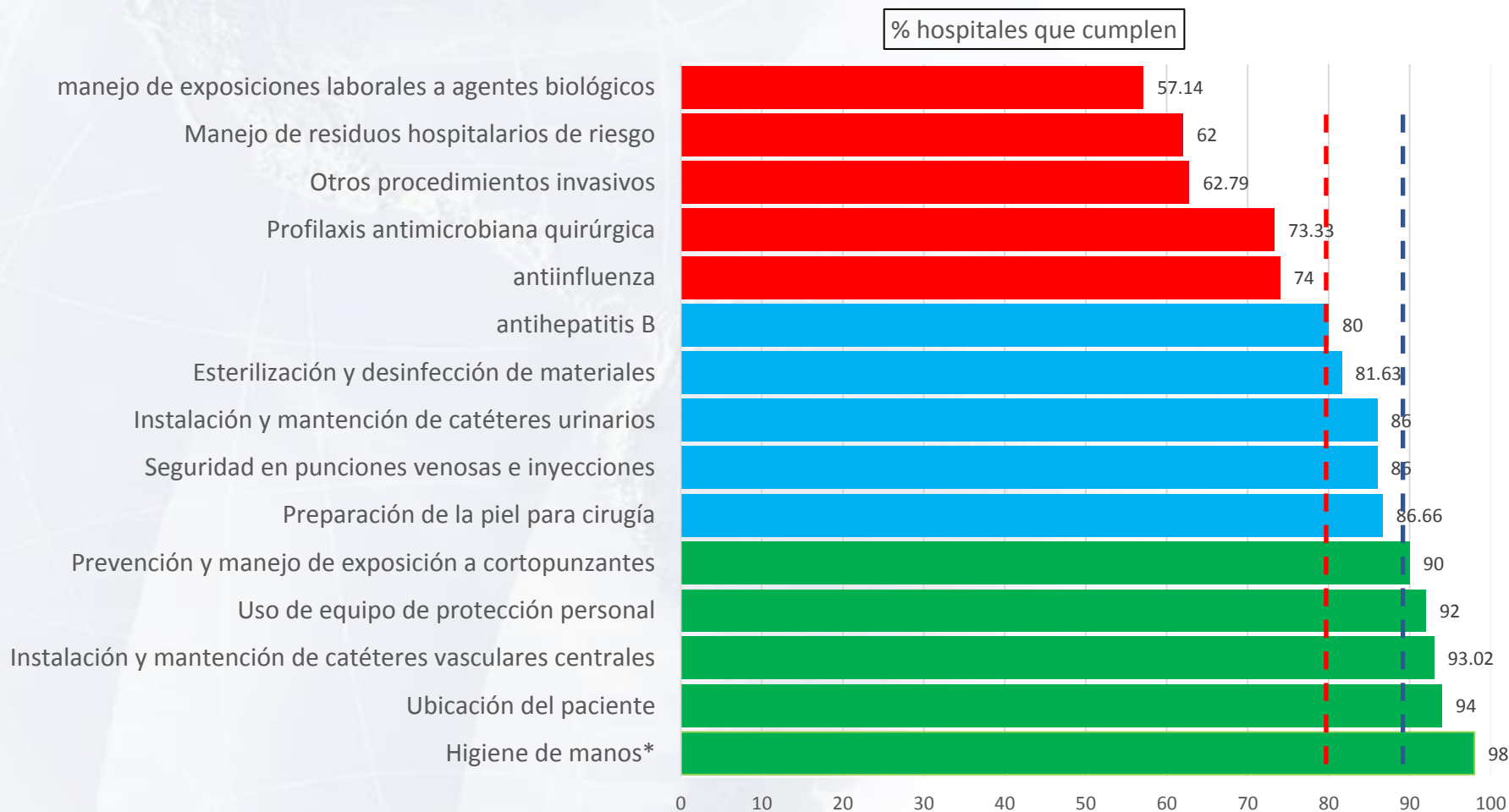


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# Technical guidelines (documents with clinical instructions)



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# Technical guidelines: Most relevant results (local technical guidelines)

## **≥90% hospitals comply**

- Hand hygiene\*
- Patient location
- Installing and maintenance of central venous lines
- Use of personal protective equipment (PPE)

## **≤80% hospitals comply**

- Antiinfluenza
- Surgical antimicrobial prophylaxis
- Other invasive procedures
- Hospital waste management
- Handling occupational exposures to biological agents



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# Human Resources

- Assess information given in IPC to all hospital workers and
- Specific training in IPC to health care workers.
  - Training can be done by other experts outside from the hospital, but its contents are defined by local IPC professionals.
  - Activities in occupational health can be taught by other groups, coordinated with IPC team in priorities to include.



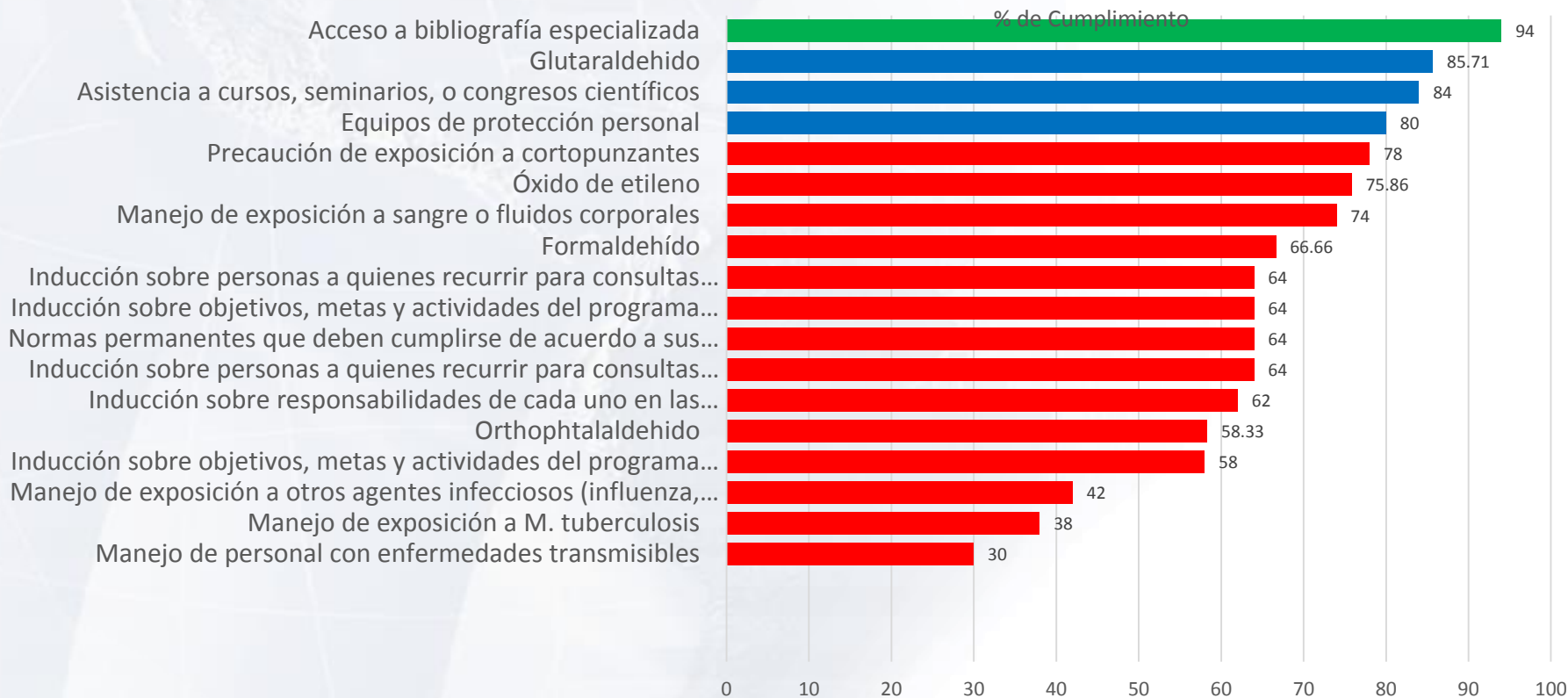
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# Human resources



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# Human resources: Most relevant results in IPC assessment

**≥90% hospitals comply**

- Access to IPC information and updates (IPC team)

**≤80% hospitals comply**

- Induction of new personnel
    - Regarding responsibilities in activities assigned
    - Where to refer in case of doubts regarding infection control
    - Permanent rules to be complied according to functions
    - Induction regarding objectives, goals and activities of local IPC program.
  - Management of occupational exposition
    - Formaldehyde
    - Management of exposition to blood and body fluids
    - Ethylene dyoxyde
    - Prevention of needlestick and sharps injuries
    - PPE use
- 
- Management of health care workers with communicable diseases
  - Management of exposure to TB
  - Management of exposition to other infectious agents (influenza, meningococcal disease and others)
  - Training in purposes, goals and activities of IPC program
  - Orthophtalaldehyde



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# What do we expect: implementation process of the assessment program

- Training of local assessors(Health Services)
  - Hospitals should walk through this new model of assessment through an adaptative process and development of new skills and needs
  - Develop documents and other activities under a new format.
  - **Meanwhile we must expect not fully satisfactory results, until hospitals get adapted to new system and requirements.**
- Training assessors in IPC at the Regional Health Authority level.
- They are responsables in applying this new instrument in the private healthcare system.
- **¿Ruling and auditing role?**
  - **Fines and closure of institutions**



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# What do we expect: Implementation process of assessment program → Priorities

- Increase number of trained assessors
- Train experts to evaluate specific aspects in hospitals
  - **Recurrent or prolonged outbreaks**
  - **Infections rates consistently over accepted level**
- Define annual goals
- 60 hospitals assessed yearly
- Improvement intervention plans revised regularly



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# IPC Program Ministry Health (MINSAL)- CHILE



[fotaiza@minsal.cl](mailto:fotaiza@minsal.cl)

[mauro.orsini@minsal.cl](mailto:mauro.orsini@minsal.cl)

[mpohlenz@minsal.cl](mailto:mpohlenz@minsal.cl)



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Next Webminar

**June 13 – 2pm EST**

- Theme: “Infection control for *Candida auris*, an emerging fungal pathogen”
- Presented by CDC Mycotic group



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