Difficulties in implementing core IPC components

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http://www.who.int/gpsc/ipc-components-guidelines/en/

Guidelines on Core Components of Infection Prevention and Control Programmes at the National and Acute Health Care Facility Level

World Health Organization

Brazil

Population: 192 million

States: 26 (1 Federal District)

Cities: 5,565

Capital: Brasilia

Healthcare system:

- Mixed healthcare funding
- Public services: universal access
- Decentralized to the States

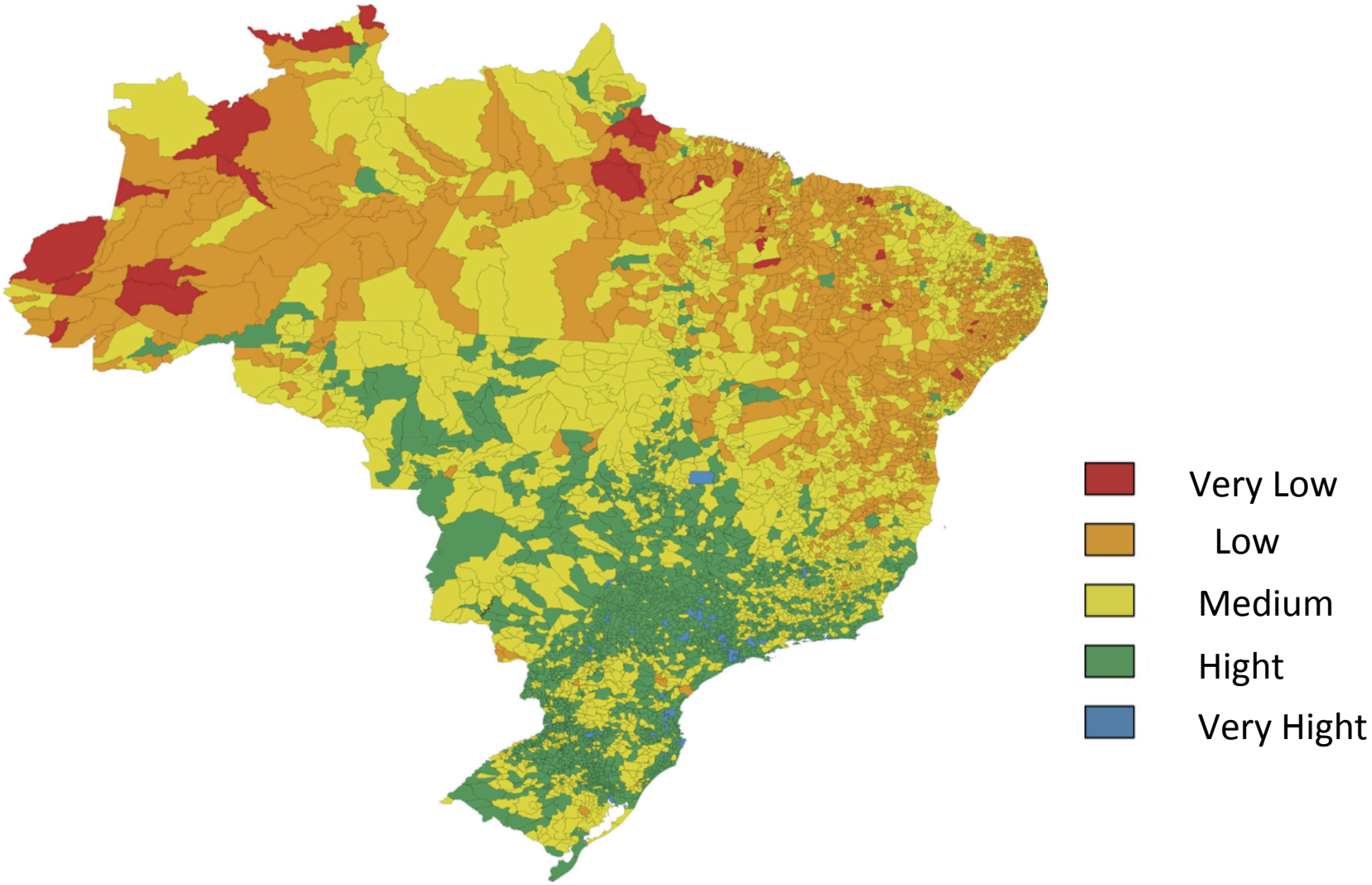
Hospitals – 6.778

beds – 494.097

CNES 2017

Less than 50 beds – 60%

Human Development Index



Projeto IRAS Brasil (2011-13)

IRAS em hospitais brasileiros: prevalência, fatores de risco, prognóstico, custos e infra-estrutura para controle.

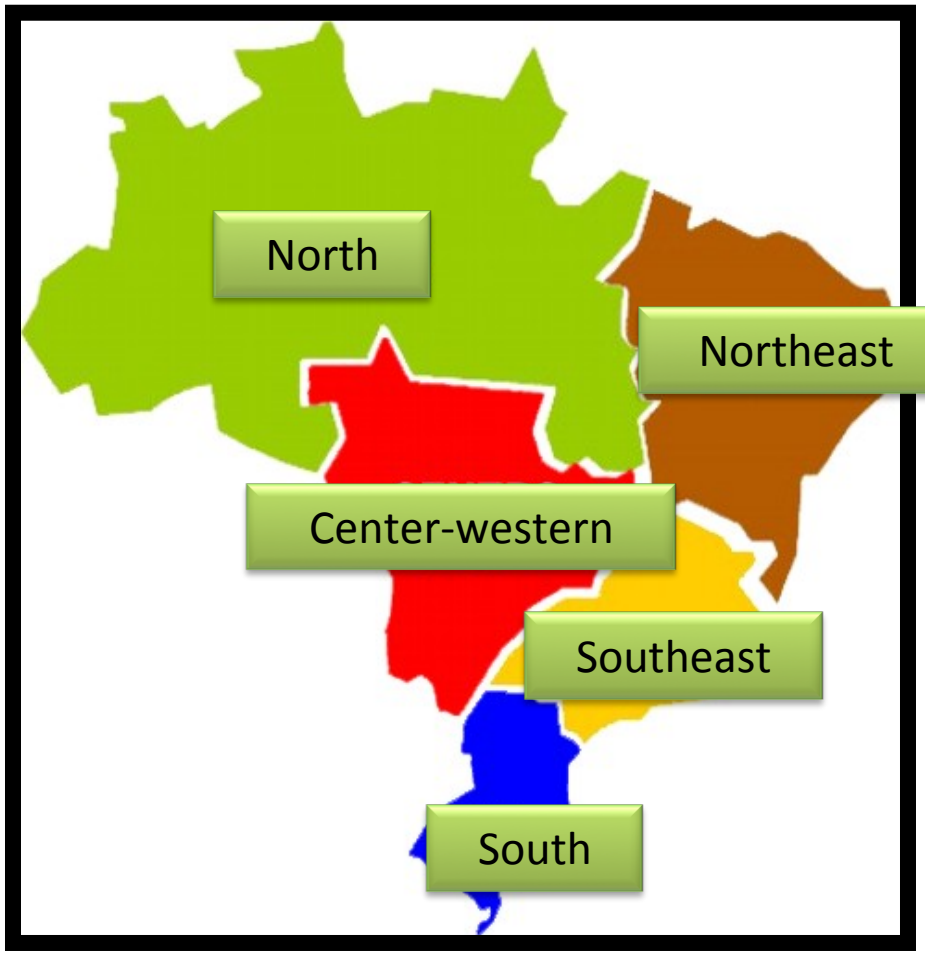
- **Padoveze, MC et al** – Structure for prevention of health care-associated infections in Brazilian hospital: A contrywide study. **American Journal of Infection Control . 44:74-79, 2015**

- **Fortaleza, CMCB et al** – Multi-state survey of healthcare-associated infections in acute care hospitals in Brazil – **Journal of Hospital Infection . 96:139-133, 2017.**

Objective

- To identify the prevalence of HAI in a representative sample of Brazilian hospitals.
  - Hospital-wide point prevalence survey
  - Patients more than 48 hours from admission

Sampling



- National Data Base of Healthcare Facilities
- Categories:
  - 20-49 beds
  - 50-199 beds
  - ≥200 beds
- Proposed sample: hospitals from five regions (n=270)
  - 11 university reference-hospitals
- Random selection

Rio Grande do Sul

Paraná

São Paulo

Minas Gerais

Rio de Janeiro

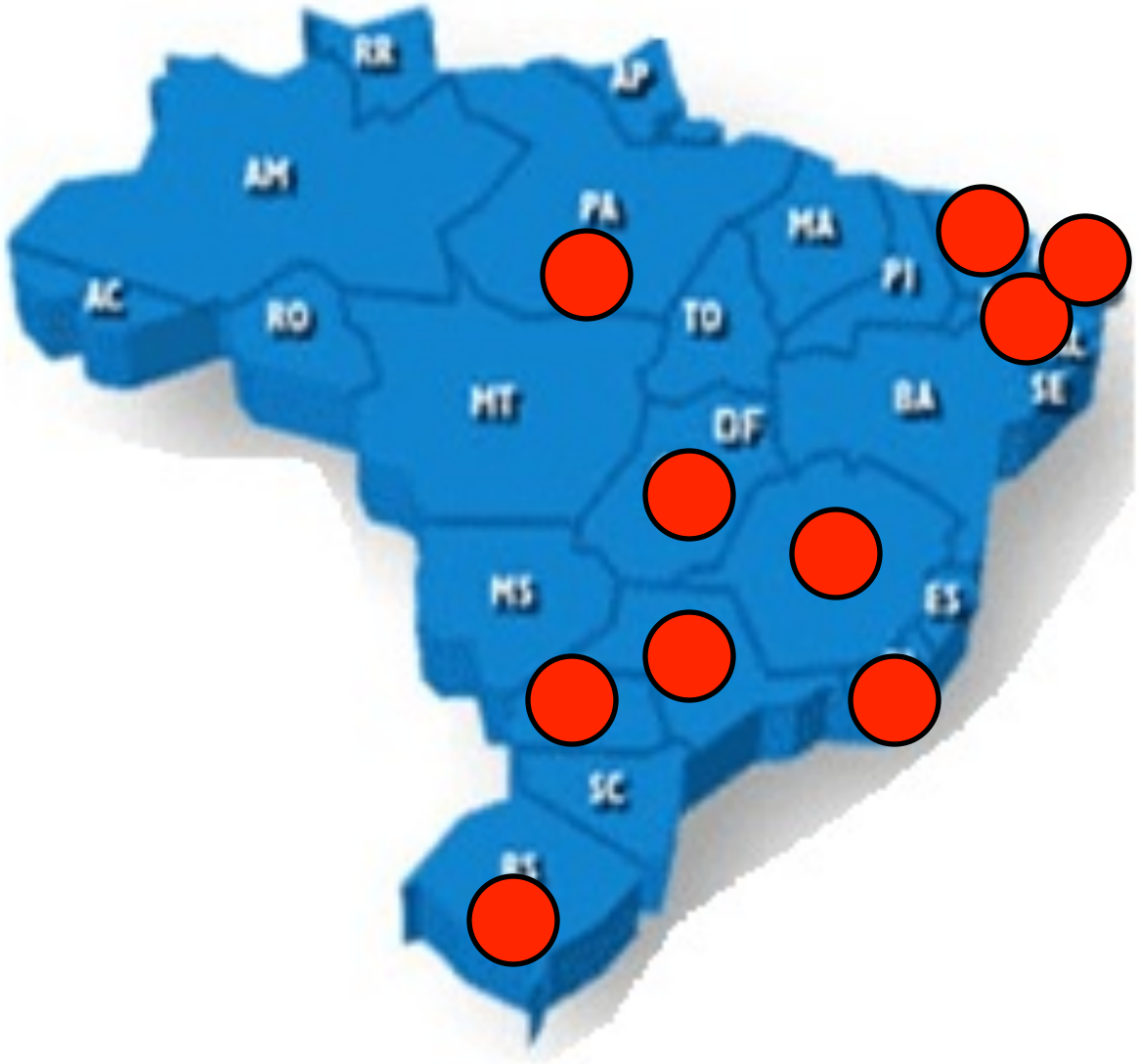
Pernambuco

Ceará

Paraíba

Goiás

Pará



Data collection

- A team of trained nurses
  - Supervisor from reference hospitals
- Written guidelines for data collection
- HAI criteria: ANVISA and CDC
- Development of data base system

1 = operacional structure
2 = guidelines
3 = surveillance
4 = prevention activities

Silva CPR, Lacerda RA. Validação de proposta de avaliação de programas de controle de infecção hospitalar. Rev Saúde Pública. 2011;45(1):121-8

www.lemc.com.br/iras

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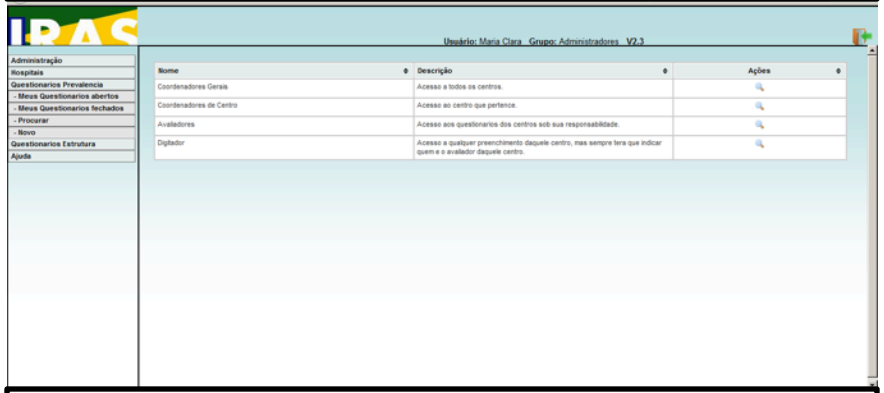
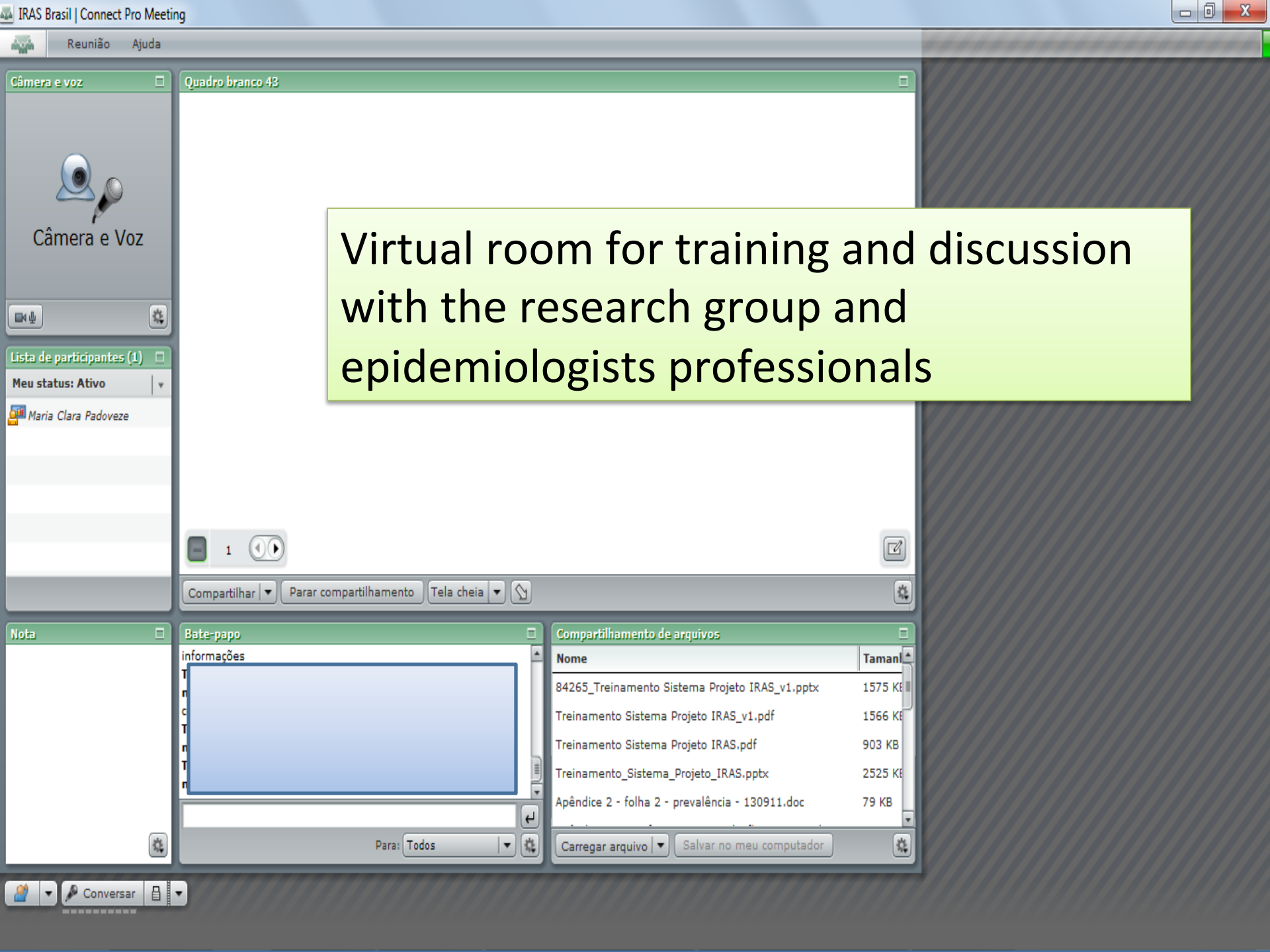


Controlled access


IRAS Brasil | Connect Pro Meeting
Reunião
Ajuda
Câmera e voz
Câmera e Voz
Quadro branco 43
Virtual room for training and discussion with the research group and epidemiologists professionals
Lista de participantes (1)
Meu status: Ativo
Maria Clara Padoveze
1
Compartilhar
Parar compartilhamento
Tela cheia
Nota
Bate-papo
informações
Para: Todos
Compartilhamento de arquivos
Nome
84265_Treinamento Sistema Projeto IRAS_v1.pptx 1575 KB
Treinamento Sistema Projeto IRAS_v1.pdf 1566 KB
Treinamento Sistema Projeto IRAS.pdf 903 KB
Treinamento_Sistema_Projeto_IRAS.pptx 2525 KB
Apêndice 2 - folha 2 - prevalência - 130911.doc 79 KB
Carregar arquivo
Salvar no meu computador
Conversar

Hospitals - IRAS Brazil

Distribution of the number of hospitals, total number of beds, and median beds per hospital (range) according to the hospital categories, Brazil, 2011-2013

Hospital Category/ Region	Hospitals (n)	Total no. of beds	Median beds per hospital (range)
Reference	11	4,747	462 (144-984)
Southeast	4	1,298	486 (144-812)
Northeast	3	1,476	250 (242-984)
Midwest	1	302	302 (NA)
North	1	377	377 (NA)
South	2	1,294	647 (641-653)
≥200 beds	8	2,247	280 (223-386)
Southeast	5	1,398	286 (234-316)
Northeast	1	386	386 (NA)
Midwest	0	NA	NA (NA)
North	1	223	223 (NA)
South	1	240	240 (NA)
50-199 beds	55	4,910	79 (50-181)
Southeast	22	1,902	74 (51-181)
Northeast	10	997	99 (50-159)
Midwest	3	237	83 (66-88)
North	3	281	96 (70-115)
South	17	1,493	77 (60-165)
<50 beds	79	2,079	24 (10-49)
Southeast	31	894	30 (10-49)
Northeast	5	177	30 (10-40)
Midwest	22	526	21 (10-42)
North	6	188	25 (10-49)
South	15	294	24 (10-33)
Total	153	13,983	45 (10-984)

NA, not applicable.

Component 1- IPC programme

Distribution of percentiles of the conformity index for the Health Care–Associated Infection Prevention and Control Committee and *P* values (linear regression) according to categories of hospitals and geographic region (n = 153), Brazil, 2011-2013

	Minimum	25%	50%	75%	Maximum	Crude *P* value	Adjusted *P* value*
Hospital category							
Reference hospitals†	0.69	0.90	0.94	0.98	1.00	Reference	Reference
≥200 beds	0.67	0.95	0.96	0.99	1.00	.20	.90
50-199 beds	0.06	0.70	0.88	0.96	1.00	<.001	.09
<50 beds	0.00	0.23	0.55	0.84	1.00	<.001	<.001
Country region							
Southeast	0.00	0.67	0.88	0.95	1.00	Reference	Reference
Northeast	0.00	0.33	0.76	0.94	1.00	.07	.001
Midwest	0.00	0.23	0.43	0.64	0.98	<.001	.001
North	0.00	0.15	0.76	0.95	1.00	.09	.04
South	0.00	0.60	0.85	0.97	1.00	.90	.90

*Adjusted *P* value to country region and hospital category.
†Eleven university hospitals.

Component 4 - Surveillance

Prevalence of HCAIs according to hospital size

Size category	Subjects	Total HCAIs	Patients with HCAI	Pneumonia	BSI	SSI	UTI	SST	Other
Reference hospitals*	2750	12.6	11.5	3.7	3.9	2.0 [10.7]	1.3	0.6	1.2
>200 beds	1211	13.5	12.8	4.6	3.6	1.7 [14.3]	1.8	0.7	1.0
50–199 beds	2147	7.7*	6.9*	3.2	1.6*	0.84 [6.7]*	1.2	0.1*	0.3*
10–49 beds	412	5.5*	5.6*	0.2*	0.7*	0.49 [4.3]*	1.5	0.2	1.7
Total	6520	10.8	9.9	3.6	2.9	1.5 [9.8]	1.4	0.6	0.9

HCAI, healthcare-associated infection; BSI, bloodstream infection; SSI, surgical site infection; UTI, urinary tract infection; SST, skin or soft tissue infection.

All data are percentages of total subjects. Numbers in brackets represent SSI prevalence when calculated only for subjects submitted to surgical procedures.

*Significantly different ($P < 0.05$) from the reference.

Component 8:
Built environment, materials and equipment

Distribution of percentiles of the conformity index for sterilization services and *P* values (linear regression) according to categories of hospitals and geographic region (n = 153), Brazil, 2011-2013

	Minimum	25%	50%	75%	Maximum	Crude *P* value	Adjusted *P* value*
Hospital category							
Reference hospital†	0.51	0.58	0.63	0.79	0.92	Reference	Reference
≥200 beds	0.48	0.56	0.80	0.91	0.99	.50	.50
50-199 beds	0.00	0.54	0.74	0.86	0.99	.90	.50
<50 beds	0.00	0.37	0.51	0.64	0.95	.01	.005
Country region							
Southeast	0.30	0.56	0.64	0.82	0.99	Reference	Reference
Northeast	0	0.34	0.56	0.76	0.87	.02	.002
Midwest	0.20	0.36	0.45	0.53	0.76	<.001	<.001
North	0	0.29	0.49	0.56	0.99	.008	.003
South	0	0.54	0.71	0.85	0.97	.60	.50

*Adjusted *P* value to country region and hospital category.
†Eleven university hospitals.

Component 8:
Built environment, materials and equipment

Ratio of beds to sinks, patients to sinks, beds to alcoholic product dispensers, and patients to alcoholic product dispensers and the conformity index in Brazilian hospitals (n = 153), Brazil, 2011-2013

Hospital category	Beds to sinks*	Patients† to sinks	CI	Beds to alcoholic product dispensers	Patients† to alcoholic product dispensers	CI
Reference hospital‡	3.34	2.54	0.65	3.27	2.47	0.83
≥200 beds	3.91§	3.12§	0.59§	3.49	2.79§	0.84
50-199 beds	3.14	2.01§	0.50§	3.39	2.17§	0.75§
<50 beds	3.08	1.47§	0.43§	6.43	3.06§	0.76§

CI, conformity index, which includes elements of functionality and cleanliness of hand hygiene resources.

*Includes all resources for handwashing: sinks, soap, and paper towels.

†Number of inpatients at the moment of visiting for evaluation.

‡Eleven university hospitals.

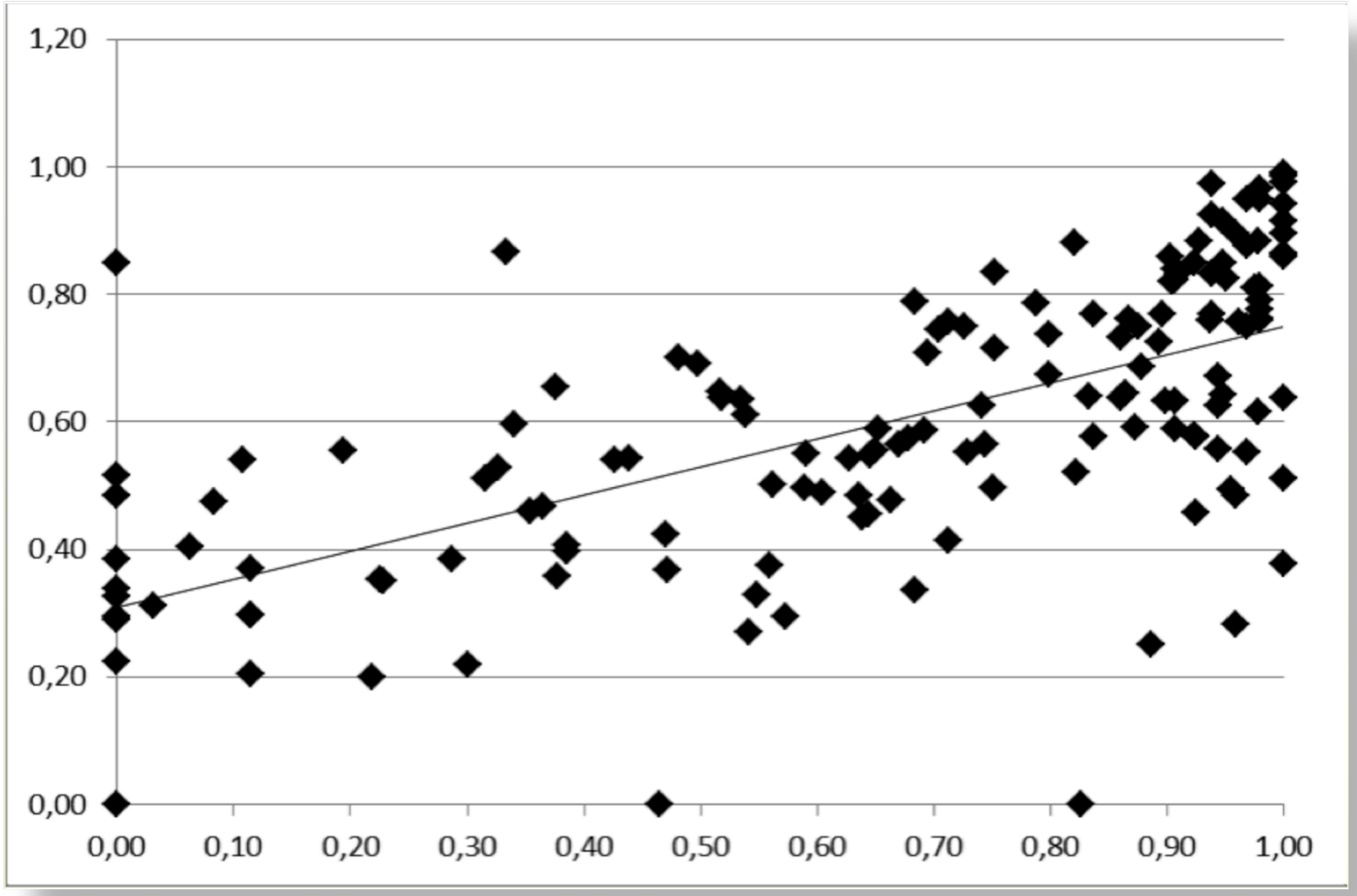
§$P < .05$.

Microbiology Laboratory

- The clinical microbiology laboratory of most hospitals were supported by outsourced laboratories (73,9%, 113/153) that were not evaluated.
- For the hospital with microbiology laboratory (40/153) the conformity index ranged from 0,30 to 0,87

CI IPV programme x CI sterilization services

R = 0.636; *P* <0.001



Difficulties in implementing core IPC programmes at facility levels

- Great variation among regions, states and cities
- High number of hospital with less than 50 beds (with poor structure and difficulties to maintain an IPC programme)
- Lack of evidence for microbiology service in small hospitals
- High level of conformities with the core IPC programmes only in university and large public or private hospitals

Suggestions for implementing core IPC programmes at national level

- Guidelines with different levels of priority for size of hospital and complexity of care
- On line national system for evaluation of core IPC programmes
- Central microbiology laboratory for surveillance at a national or regional level

PREVENT INFECTIONS SAVE LIVES IN HEALTH CARE

HANDLE ANTIBIOTICS WITH CARE

HEALTH CARE WITHOUT AVOIDABLE INFECTIONS

INFECTION PREVENTION AND CONTROL CONTRIBUTES TO ACHIEVING SUSTAINABLE DEVELOPMENT GOALS and could save millions of lives

3 GOOD HEALTH AND WELL-BEING

6 CLEAN WATER AND SANITATION

World Health Organization