The state of IPC in Austrian hospitals

Data from a survey using the WHO Infection Prevention and Control Assessment Framework

Semmelweis TALK, September 20, 2022

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IPC = infection prevention and control

DISCLOSURES

- No conflicts of interest pertaining to this presentation

BACKGROUND


INFECTION PREVENTION
AND CONTROL ASSESSMENT
FRAMEWORK AT THE
FACILITY LEVEL
World Health
Organization

STRUCTURE AND PURPOSE OF THE IPCAF

- A WHO self-assessment tool for healthcare facilities to evaluate IPC structures and practices
- Based on the WHO Guidelines on core components of IPC
  1. IPC programmes
  2. IPC guidelines
  3. IPC education and training
  4. Surveillance
  5. Multimodal strategies
  6. Monitoring/ audit of IPC practices and feedback
  7. Workload, staffing and bed occupancy
  8. Built environment, materials and equipment for IPC

APPROACH OF THE IPCAF

- Questionnaire format
- Variable number of questions per core component
- Each answer for a question is allocated a different score
- Scores for every question are added to calculate the core component score
- Scores for all eight core components are aggregated to determine the overall IPCAF score
- Allocation of an “IPC-level” depending on the score (max. 800)
  - Inadequate (0-200 points)
  - Basic (201-400 points)
  - Intermediate (401-600 points)
  - Advanced (601-800 points)

FORMAT OF THE IPCAF

Core component 1: Infection Prevention and Control (IPC) programme		
Question	**Answer**	**Score**
1. Do you have an IPC programme?[3] Choose one answer	☐ No	0
	☐ Yes, without clearly defined objectives	5
	☐ Yes, with clearly defined objectives and annual activity plan	10
2. Is the IPC programme supported by an IPC team comprising of IPC professionals?[4] Choose one answer	☐ No	0
	☐ Not a team, *only* an IPC focal person	5
	☐ Yes	10
3. Does the IPC team have at least one full-time IPC professional or equivalent (nurse or doctor working 100% in IPC) available? Choose one answer	☐ No IPC professional available	0
	☐ No, *only* a part-time IPC professional available	2.5
	☐ Yes, one per > 250 beds	5
	☐ Yes, one per ≤ 250 beds	10
4. Does the IPC team or focal person have dedicated time for IPC activities?	☐ No	0
	☐ Yes	10
5. Does the IPC team include both doctors and nurses?	☐ No	0
	☐ Yes	10
6. Do you have an IPC committee[5] **actively supporting the IPC team?**	☐ No	0
	☐ Yes	10

Source: WHO

SEQUENCE OF EVENTS

Translation of the IPCAF into German	**Invitation of** 1,472 German and **127 Austrian acute care hospitals to participate in the survey**	**Conduction of the web-based survey on a voluntary basis** **Data transfer to national reference centre**	**Validation of data**	**Analysis and interpretation of data**

GOALS OF THE SURVEY

- **To describe the current state of IPC measures and structures in German and Austrian hospitals using a standardised WHO tool**

- **To disseminate and promote the concept of the WHO Core Components of Infection Prevention and Control**

SELECTED RESULTS

COMPREHENSIVE SURVEY RESULTS

Aghdassi *et al. Antimicrobial Resistance and Infection Control* (2020) 9:92
https://doi.org/10.1186/s13756-020-00761-2

Antimicrobial Resistance and Infection Control

RESEARCH Open Access

Evaluating infection prevention and control programs in Austrian acute care hospitals using the WHO Infection Prevention and Control Assessment Framework

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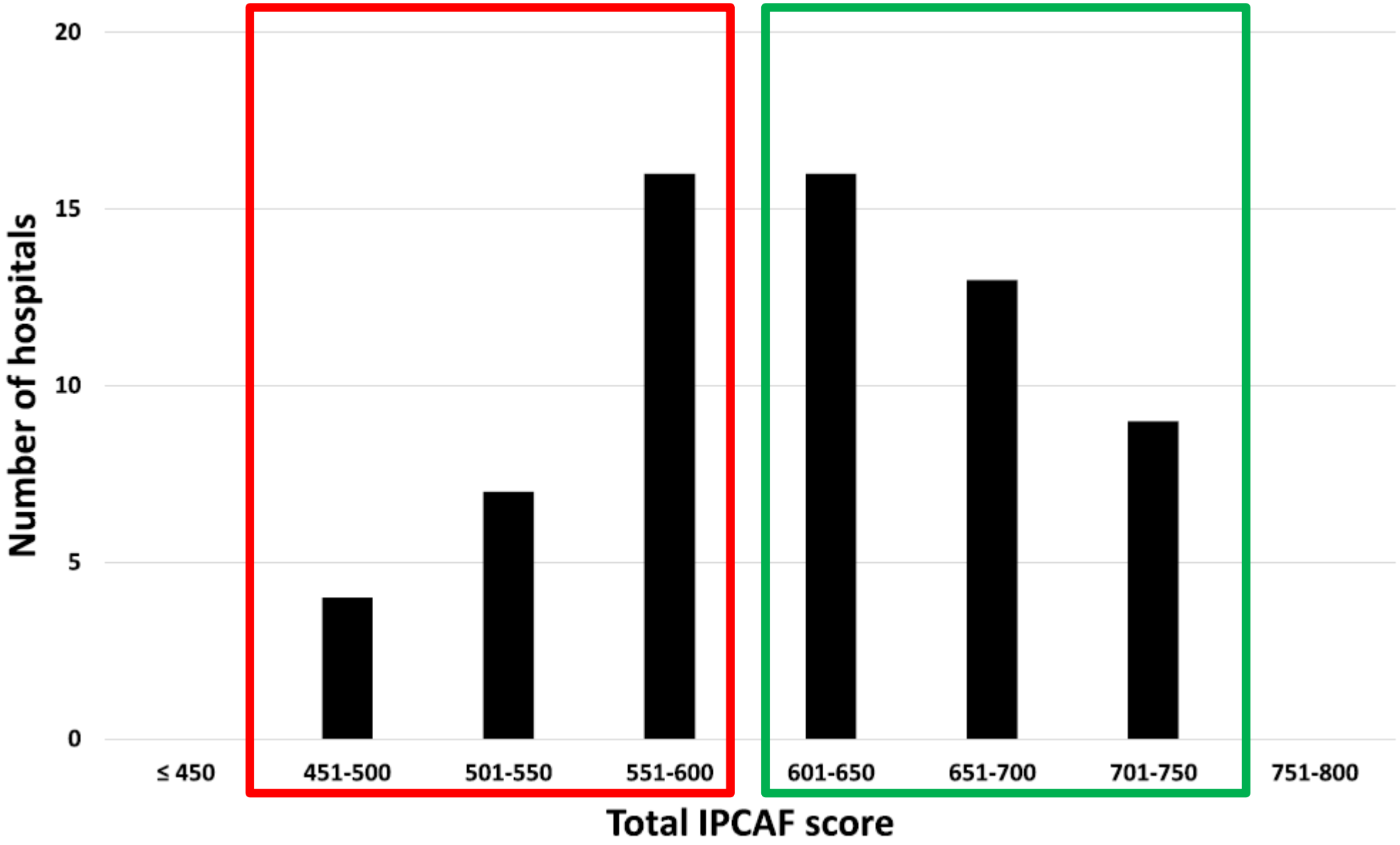
OVERVIEW

- 65 of the 127 Austrian acute care hospitals (response rate 51%) fully conducted the IPCAF and transferred data to the national reference centre

- Overall median score: 620 (IQR: 568-675) (advanced IPC-level)
  - Inadequate (0-200 points)
  - Basic (201-400 points)
  - Intermediate (401-600 points)
  - Advanced (601-800 points)

IPCAF SCORE DISTRIBUTION



Aghdassi et al. ARIC. 2020

WHICH DEFICITS WERE DISCOVERED?

OVERVIEW SCORE PER CORE COMPONENT

Table 1 Distribution of results of the total IPCAF score and scores per core component. Results from 65 participating Austrian acute care hospitals

Component	Score					
	P10	Q1	Median	Q3	P90	Mean
CC1: IPC Program	57.5	62.5	77.5	85	91.5	74.3
CC2: IPC Guidelines	77.5	87.5	95	97.5	100	91.5
CC3: IPC Education and Training	50	65	70	75	85	69.4
CC4: HAI Surveillance	58.5	70	82.5	90	92.5	78.4
CC5: Multimodal Strategies for Implementation of IPC Interventions	6	40	65	80	88	57.6
CC6: Monitoring/Audit of IPC Practices and Feedback	53.5	62.5	72.5	80	89	72.1
CC7: Workload, Staffing and Bed Occupancy	52	65	80	95	98	77.2
CC8: Environments, Materials and Equipment for IPC	90	95	95	100	100	95.7
Total	513.5	567.5	620	675	709	616.2

Abbreviations: *CC* Core component(s); *HAI* Healthcare-associated infection(s); *IPCAF* Infection Prevention and Control Assessment Framework; *P10* Tenth percentile; *P90* 90th percentile; *Q1* First quartile; *Q3* Third quartile

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RESULTS FOR CORE COMPONENT 5 (MULTIMODAL STRATEGIES)

- 77% of hospitals reported utilising a multimodal approach at IPC

MULTIMODAL STRATEGIES

- Multiple approaches directed at the target audience (usually HCWs) to achieve a desired improvement in patient care

Source: WHO

RESULTS FOR CORE COMPONENT 5 (MULTIMODAL STRATEGIES)

- 77% of hospitals reported utilising a multimodal approach at IPC

- but…

  – Only 58% (of hospitals) through an interdisciplinary team
  – Only 66% (of hospitals) cooperated with hospital quality management
  – Only 65% (of hospitals) used bundle strategies

OTHER RESULTS OF INTEREST

- 54% of hospitals either without an IPC programme or IPC programme without clear objectives (CC1 IPC programme)
- Only 38% of hospitals with interactive (e.g. bedside teaching) IPC training for healthcare workers (CC3 Education)
- Only 26% of hospitals reported employing at least one IPC professional per ≤250 beds (CC1 IPC programme)
- 26% of hospitals did not conduct surveillance of multidrug-resistant pathogens according to the local epidemiological situation (CC4 Surveillance)

CONCLUSIONS

SUMMARY/ KEY MESSAGES

- IPC structures and processes are generally at a high level in Austria, in particular
  - IPC guidelines
  - HAI surveillance

- Potentials for improvement were uncovered, in particular
  - **Implementation of multimodal strategies**
  - IPC staffing
  - Methods employed in the IPC education and training of healthcare workers

LIMITATIONS

- Voluntary participation of hospitals: not a representative sample, facilities especially interested in IPC/surveillance may be overrepresented

- Heterogeneity of data collectors
  - Difficulties in understanding WHO terminology and concepts leave room for misinterpretation
  - Some questions may have been perceived as potentially compromising: wishful reporting?

- IPCAF was primarily conceived for self-assessment, not to generate national reference data

EVALUATION

- The IPCAF is a useful tool for acute care healthcare facilities to evaluate IPC structures and practices
- Deficits can be uncovered even in a high-income setting
- A effective tool to increase awareness for IPC and implementation
- **Repeated application of the IPCAF allows facilities to perform continuous evaluation and may lead to improvement**

OUTLOOK

- The WHO proposes five steps for the implementation of IPC facility programmes:
    1. preparing for action
    2. **baseline assessment**
    3. developing and executing an action plan
    4. **assessing impact**
    5. sustaining the programme over the long term.

- Lessons learned from the IPCAF by the participating hospitals may reveal themselves in years to come…

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THANK YOU…

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KISS
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