



The state of IPC in Austrian hospitals

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

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IPC = infection prevention and control

DISCLOSURES

- No conflicts of interest pertaining to this presentation

BACKGROUND



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

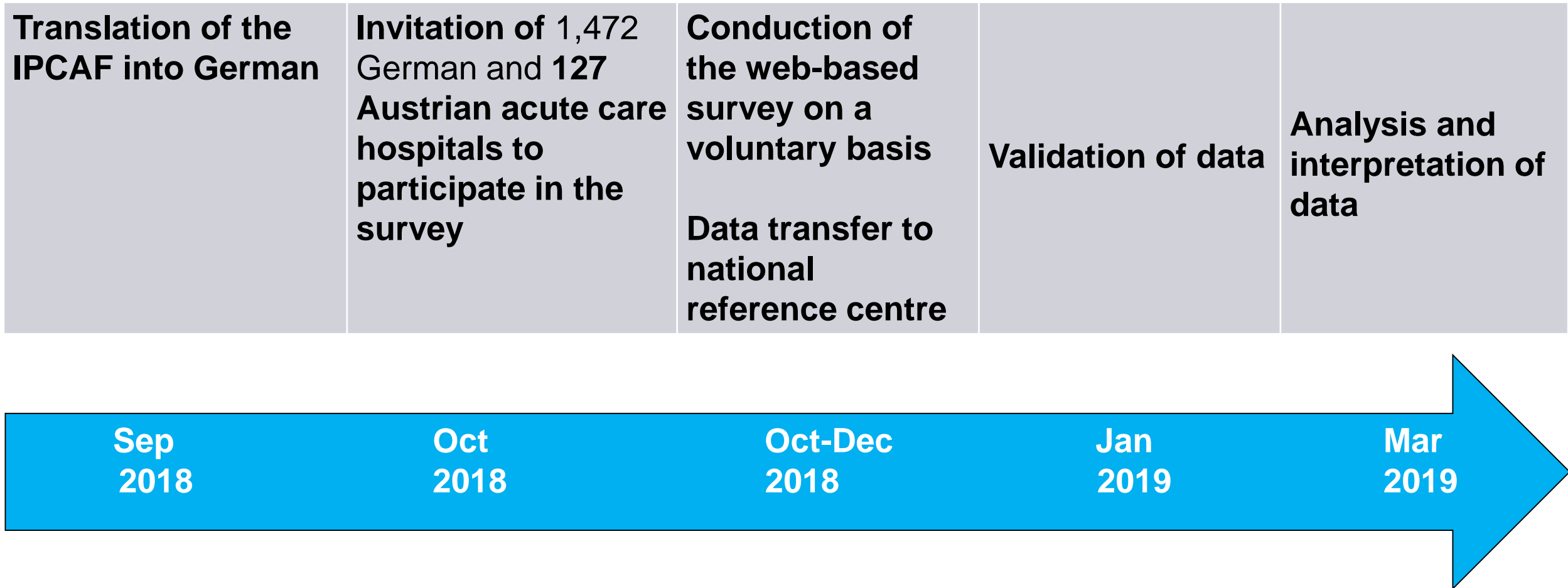
- Questionnaire format
- Variable number of questions per core component
- Each answer for a question is allocated a different score
- Scores for every question are added to calculate the core component score
- Scores for all eight core components are aggregated to determine the overall IPCAF score
- 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	<input type="checkbox"/> No	0
	<input type="checkbox"/> Yes, without clearly defined objectives	5
	<input type="checkbox"/> Yes, with clearly defined objectives <u>and</u> annual activity plan	10
2. Is the IPC programme supported by an IPC team comprising of IPC professionals? ⁴ Choose one answer	<input type="checkbox"/> No	0
	<input type="checkbox"/> Not a team, <i>only</i> an IPC focal person	5
	<input type="checkbox"/> 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	<input type="checkbox"/> No IPC professional available	0
	<input type="checkbox"/> No, <i>only</i> a part-time IPC professional available	2.5
	<input type="checkbox"/> Yes, one per > 250 beds	5
	<input type="checkbox"/> Yes, one per ≤ 250 beds	10
4. Does the IPC team or focal person have dedicated time for IPC activities?	<input type="checkbox"/> No	0
	<input type="checkbox"/> Yes	10
5. Does the IPC team include both doctors and nurses?	<input type="checkbox"/> No	0
	<input type="checkbox"/> Yes	10
6. Do you have an IPC committee ⁵ actively supporting the IPC team?	<input type="checkbox"/> No	0
	<input type="checkbox"/> Yes	10

SEQUENCE OF EVENTS



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*
<https://doi.org/10.1186/s13756-020-00761-2>

(2020) 9:92


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

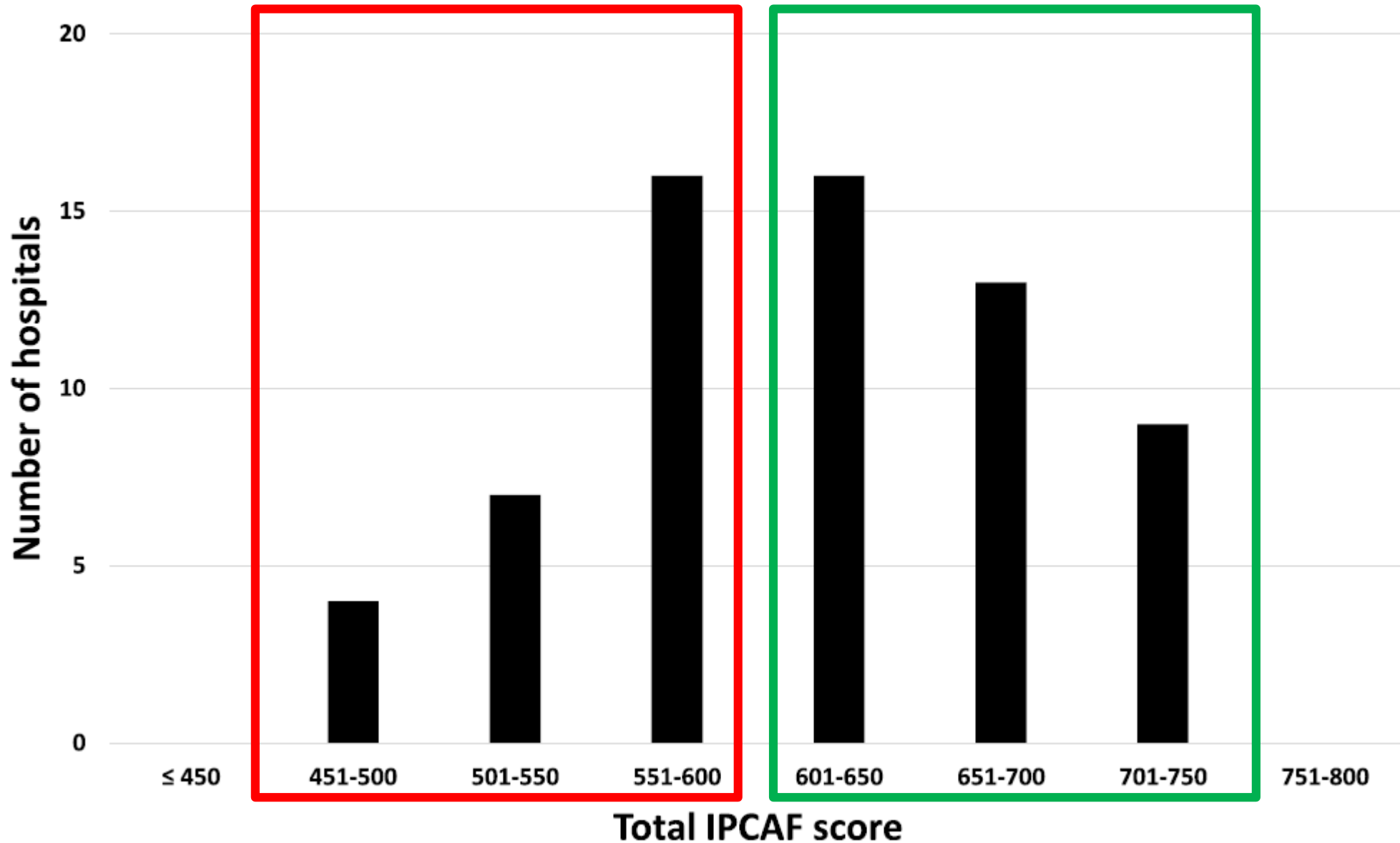


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OVERVIEW

- 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



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

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

In other words, the WHO multimodal improvement strategy addresses these five areas:

1. Build it (system change)



- What infrastructures, equipment, supplies and other resources (including human) are required to implement the intervention?
- Does the physical environment influence health worker behaviour? How can ergonomics and human factors approaches facilitate adoption of the intervention?
- Are certain types of health workers needed to implement the intervention?
- **Practical example:** when implementing hand hygiene interventions, ease of access to handrubs at the point of care and the availability of WASH infrastructures (including water and soap) are important considerations. Are these available, affordable and easily accessible in the workplace? If not, action is needed.

2. Teach it (training & education)



- Who needs to be trained? What type of training should be used to ensure that the intervention will be implemented in line with evidence-based policies and how frequently?
- Does the facility have trainers, training aids, and the necessary equipment?
- **Practical example:** when implementing injection safety interventions, timely training of those responsible for administering safe injections, including carers and community workers, are important considerations, as well as adequate disposal methods.

3. Check it (monitoring & feedback)



- How can you identify the gaps in IPC practices or other indicators in your setting to allow you to prioritize your intervention?
- How can you be sure that the intervention is being implemented correctly and safely, including at the bedside? For example, are there methods in place to observe or track practices?
- How and when will feedback be given to the target audience and managers? How can patients also be informed?
- **Practical example:** when implementing surgical site infection interventions, the use of key tools are important considerations, such as surveillance data collection forms and the WHO checklist (adapted to local conditions).

4. Sell it (reminders & communication)



- How are you promoting an intervention to ensure that there are cues to action at the point of care and messages are reinforced to health workers and patients?
- Do you have capacity/funding to develop promotional messages and materials?
- **Practical example:** when implementing interventions to reduce catheter-associated bloodstream infection, the use of visual cues to action, promotional/reinforcing messages, and planning for periodic campaigns are important considerations.

5. Live it (culture change)



- Is there demonstrable support for the intervention at every level of the health system? For example, do senior managers provide funding for equipment and other resources? Are they willing to be champions and role models for IPC improvement?
- Are teams involved in co-developing or adapting the intervention? Are they empowered and do they feel ownership and the need for accountability?
- **Practical example:** when implementing hand hygiene interventions, the way that a health facility approaches this as part of safety and quality improvement and the value placed on hand hygiene improvement as part of the clinical workflow are important considerations.

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...

ACKNOWLEDGEMENTS

THANK YOU...



World Health Organization

NRZ



Andrea Grisold
Agnes Wechsler-Fördös

All hospitals participating in
the survey and in the
KISS network



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