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ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

**Markus Dettenkofer, Jean Carlet, Håkan Hanberger, Hilary Humphreys, Christian Rued, Andreas Widmer, Barry Cookson
organisational support by Henri Saenz (ESCMID)**

- To give an overview on the ranking of top issues and questions in the field of Infection Prevention and Control of healthcare-associated infection (as judged by ESGNI members and international experts)**
- Focus on research priorities as well as practical aspects of IPC**

ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

Seven topics pre-selected by the ESGNI board:

- *Surveillance*
- *Economics / Mathematical models*
- *Microbial epidemiology / Resistance*
- *Organisational and Behavioural Change*
- *Healthcare Delivery Factors*
- *Specific HAI and Settings*
- *Decolonisation/Disinfection / Antiseptic compounds*

- Antimicrobial Stewardship has not been considered here

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- **“Please give your rating scaled from 1 (very low importance) to 10 (of extraordinary importance) for the seven groups ...**
- **... as well as for each topic within each group.”**
- **“You can make as many as you like of equal importance at group or topic level.”**
- **Start: February 13 Closure: March 28**

ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

RESULTS

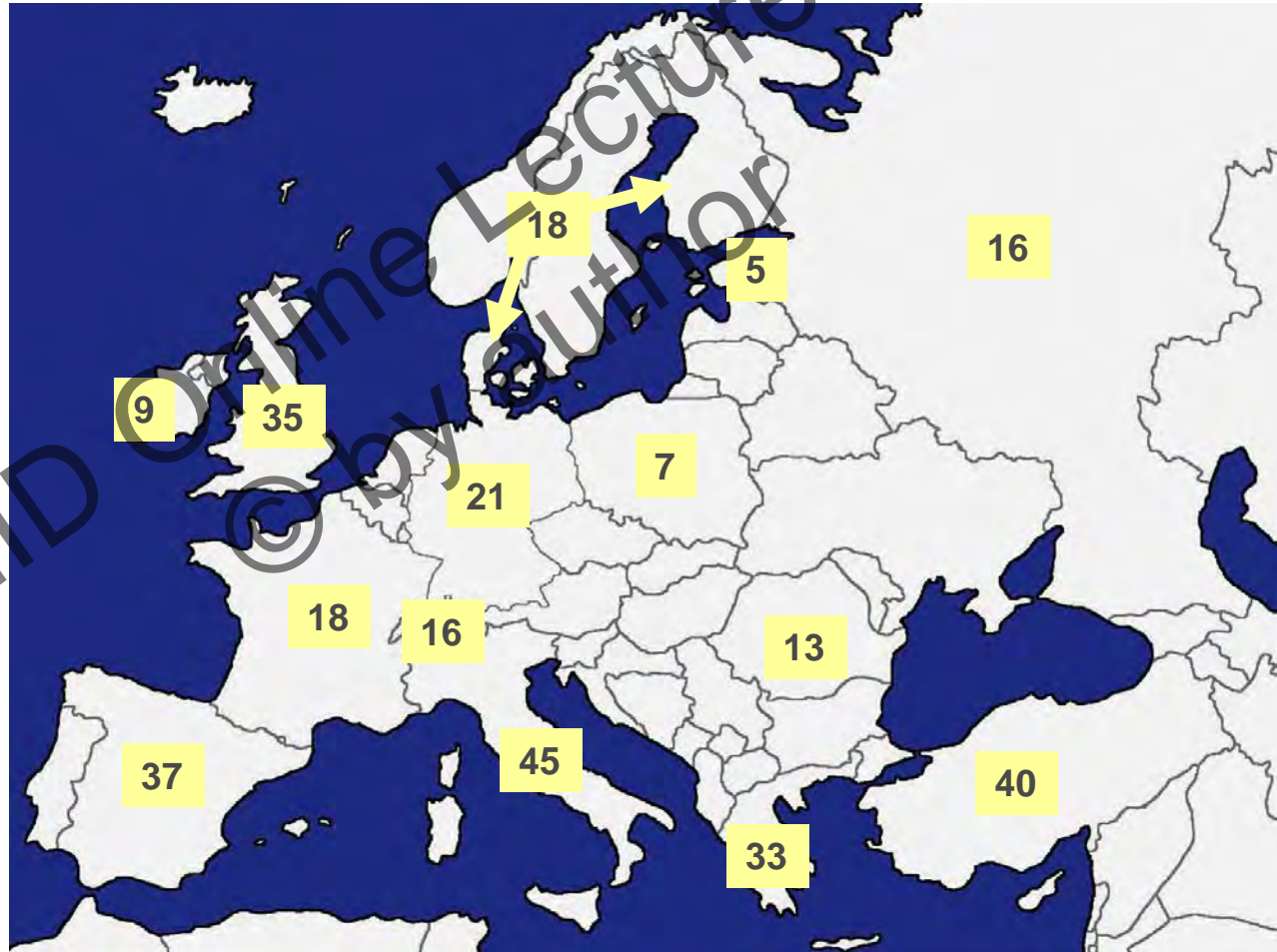
- 589 participants; 86 countries
- 5 continents; 16 subcontinents
 - Africa: 21
 - Americas: 33
 - Asia: 63
 - Europe: 462
 - Oceania: 10



Eastern Europe:	62
Northern Europe:	18
South-Eastern Europe:	125
South-Western Europe:	107
Western Europe:	150

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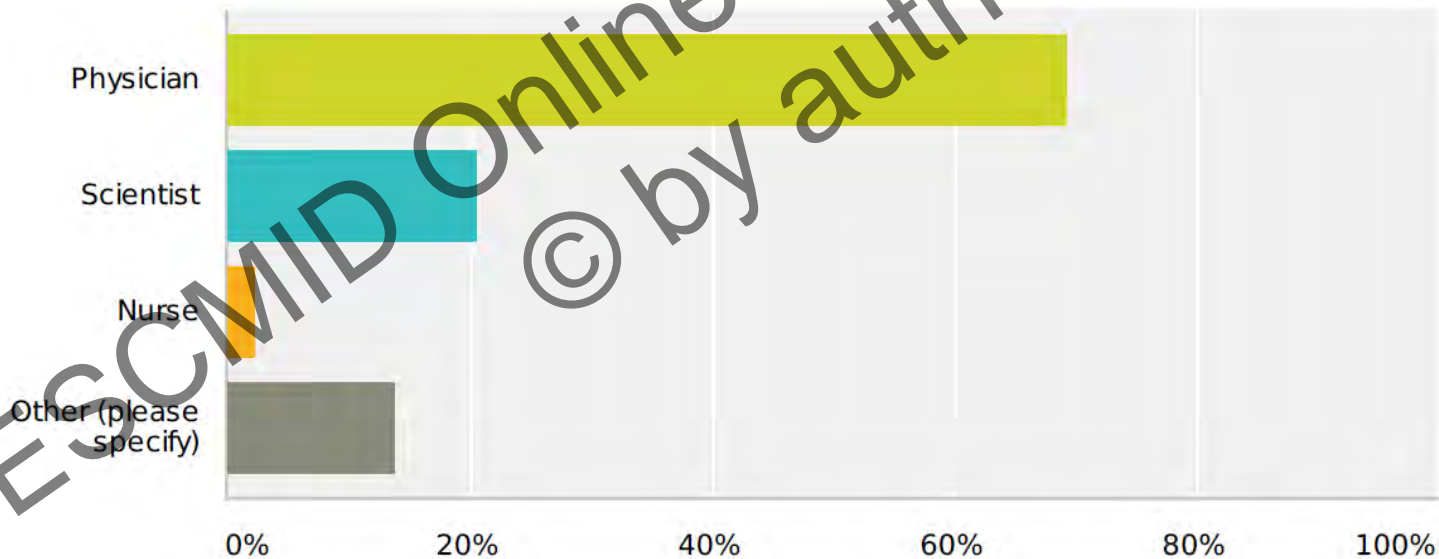
Europe: 462



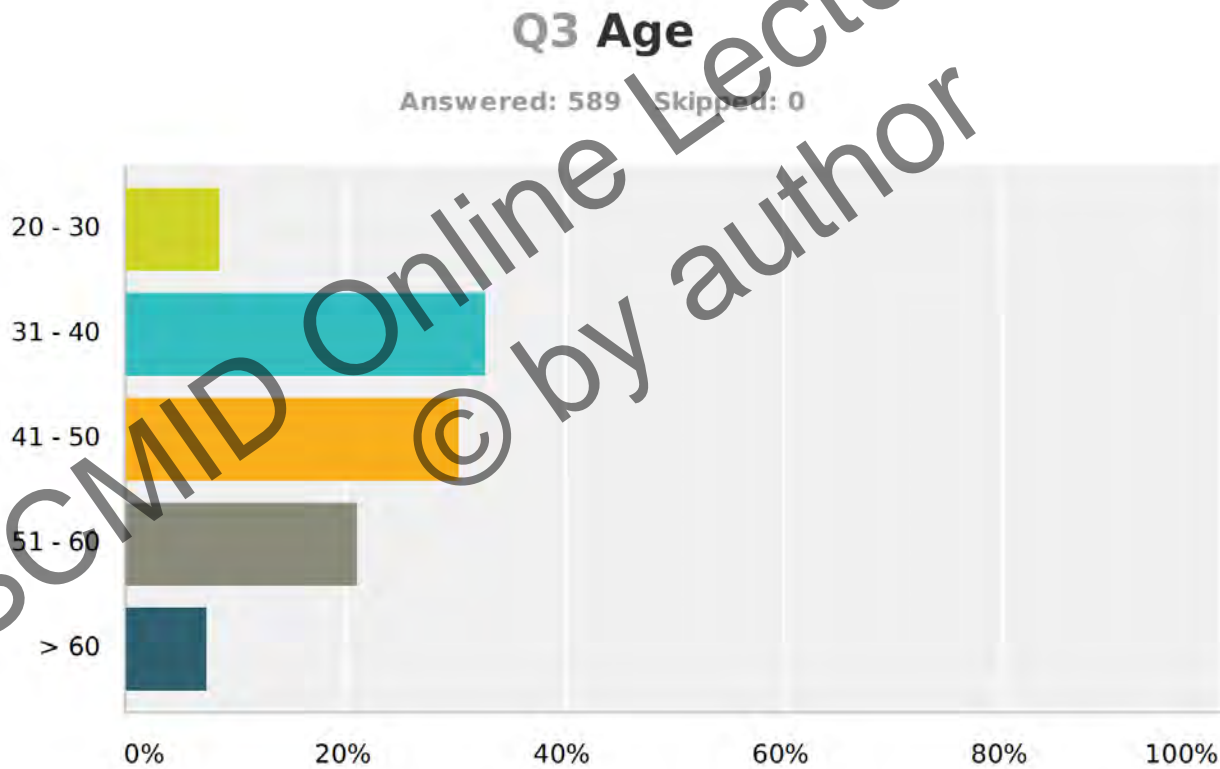
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Q2 Profession

Answered: 589 Skipped: 0



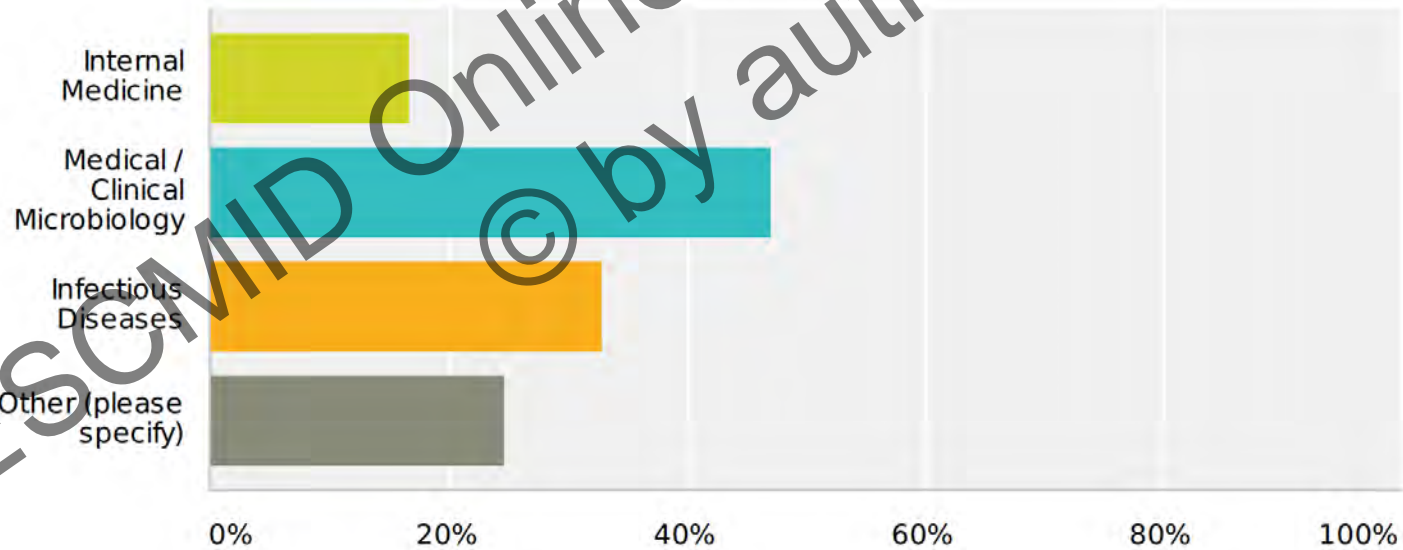
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Q4 Board certification

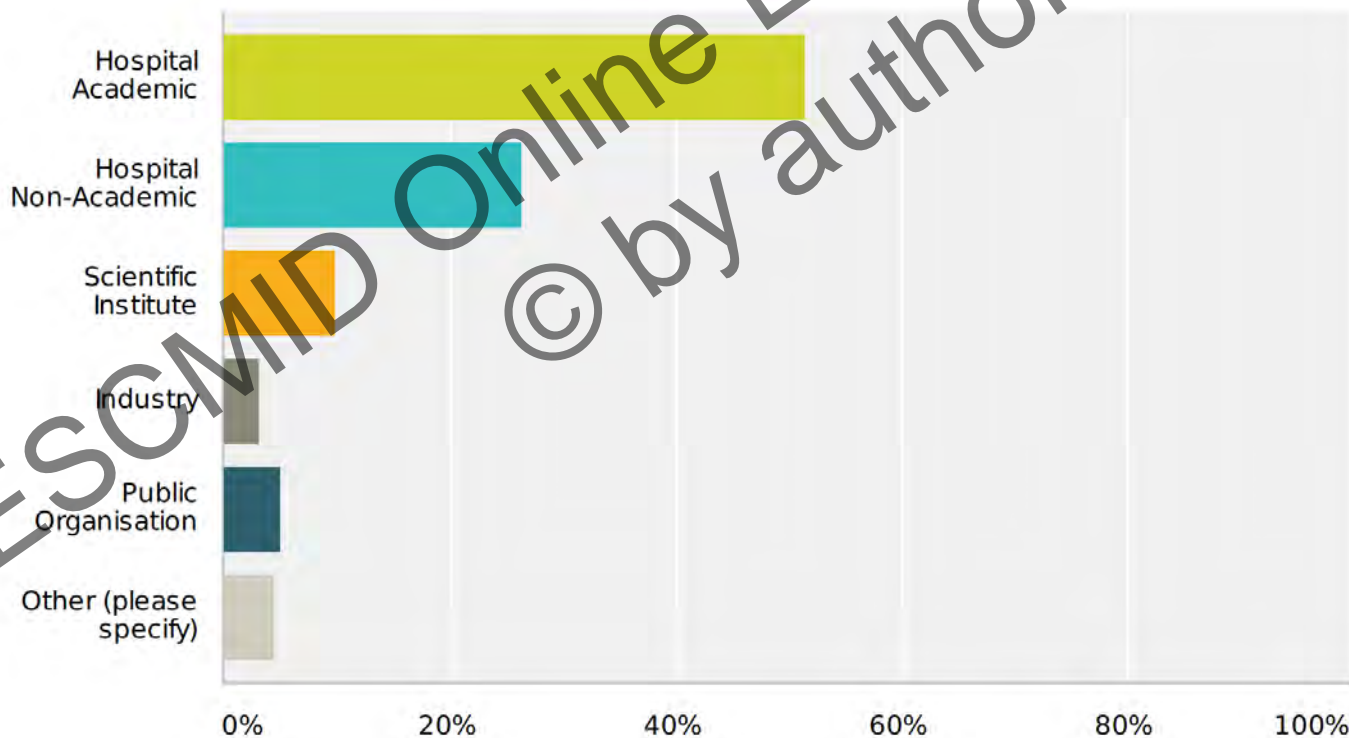
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Q5 Primary working environment

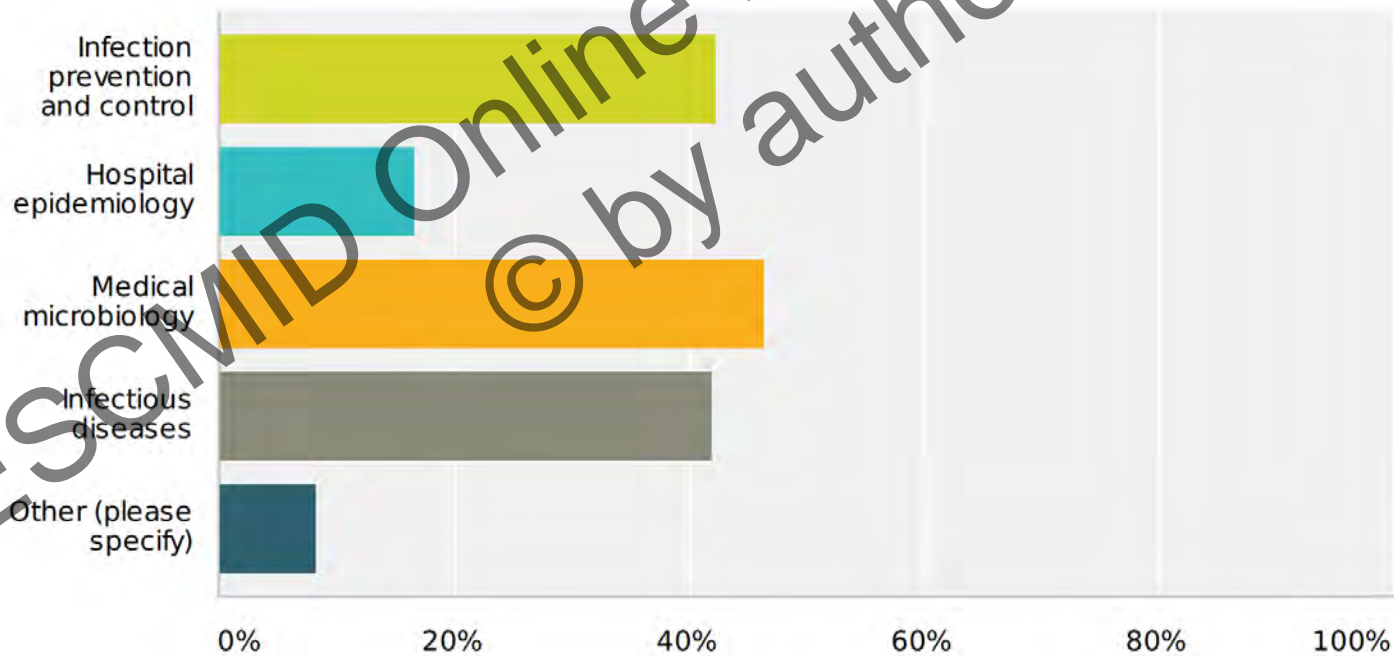
Answered: 589 Skipped: 0



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Q6 Main focus

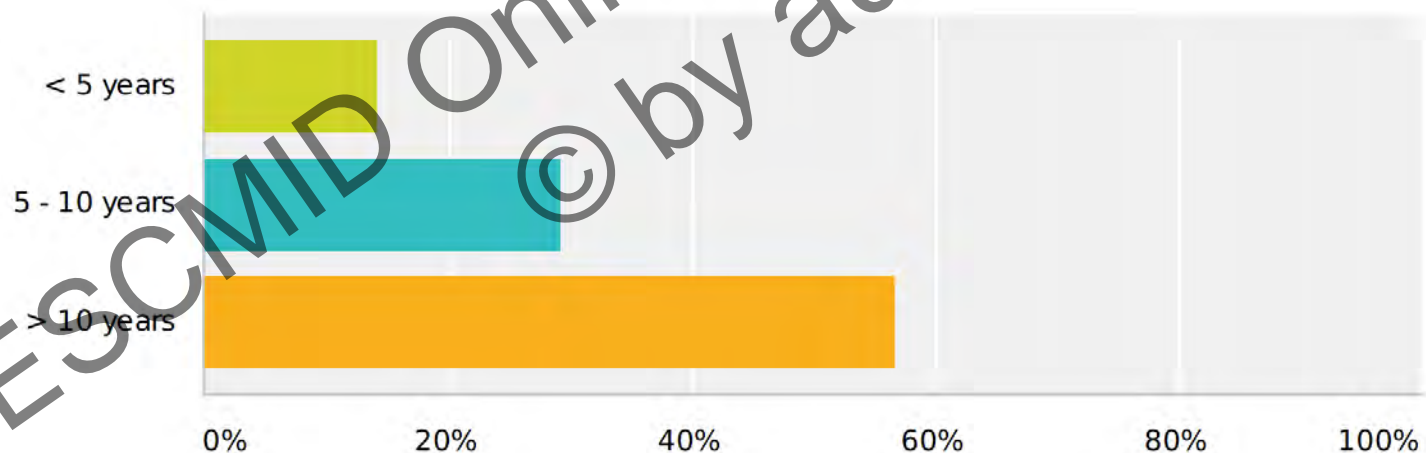
Answered: 587 Skipped: 2



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Q7 Years of experience in the field (given in #4 above)

Answered: 589 Skipped: 0



ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

Ranking of Topics:	(mean score)
1. <i>Microbial epidemiology / Resistance</i>	(8.9)
2. <i>Surveillance</i>	(8.2)
3. <i>Decolonisation/Disinfection / Antiseptic compounds</i>	(8.1)
4. <i>Specific HAI and Settings</i>	(7.9)
5. <i>Organisational and Behavioural Change</i>	(7.9)
6. <i>Healthcare Delivery Factors</i>	(7.5)
7. <i>Economics / Mathematical models</i>	(6.9)

ESGNI Survey 2013: Topic group 1 "Microbial epidemiology / Resistance" (I)

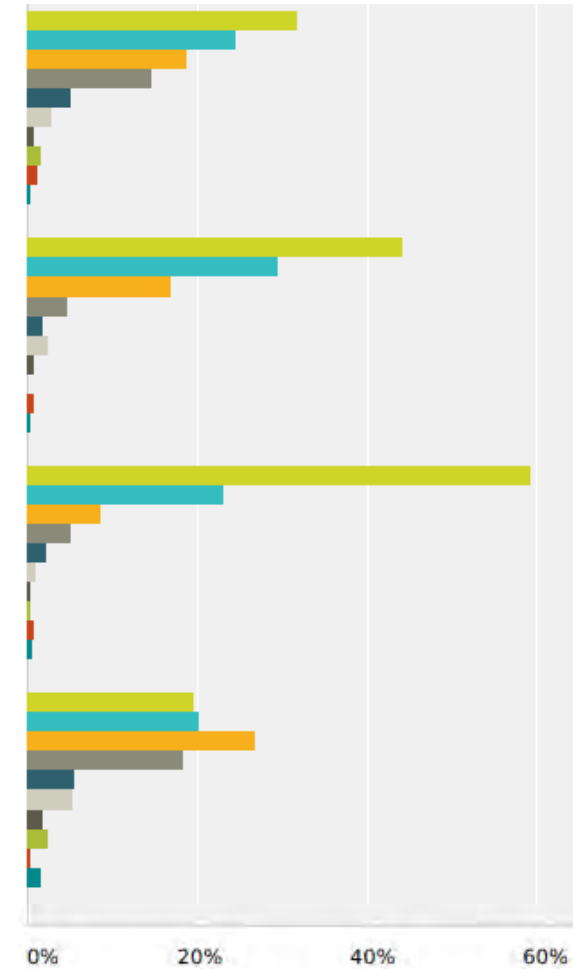
- A: Control of multi-resistant Gram-positive pathogens
- B: Control of multi-resistant Gram-negative pathogens (e.g., ESBL)
- C: Control of highly resistant (carbapenem-resistant) Gram-negative pathogens (KPC, NDM, Oxa 48)
- D: Control of *C. difficile* associated infection

8.4

9.0

9.2

7.9



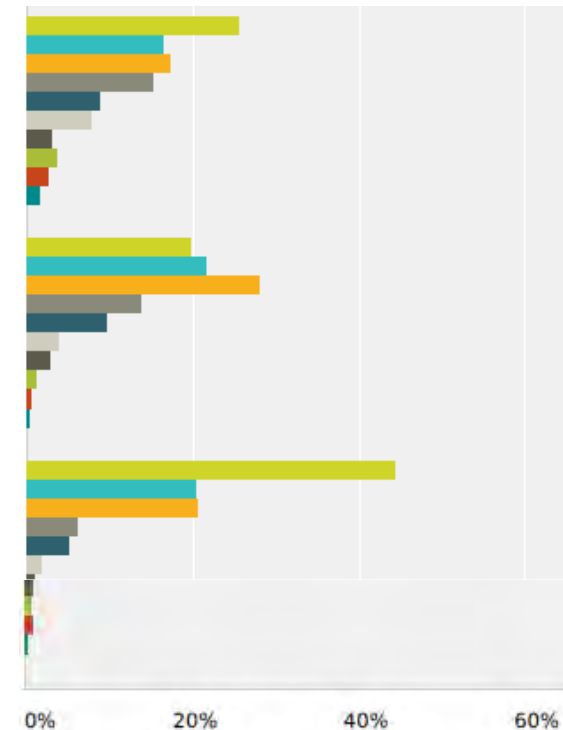
ESGNI Survey 2013: Topic group 1

"Microbial epidemiology / Resistance" (II)

E: Control of nosocomial spread of tuberculosis
(focus on MDR and XDR TB) **7.6**

F: Further development of epidemiological tools
for the understanding of microbial ecology
(especially: microbial spread) in hospitals **8.0**

G: The development of reliable, affordable,
accessible and rapid laboratory detection
methods **8.8**



ESGNI Survey 2013: Topic group 2 "Surveillance"

A: Further standardisation of surveillance systems, including definitions and indicators, for international comparison of HAI rates

8.1

B: Further development of standards regarding post discharge surveillance

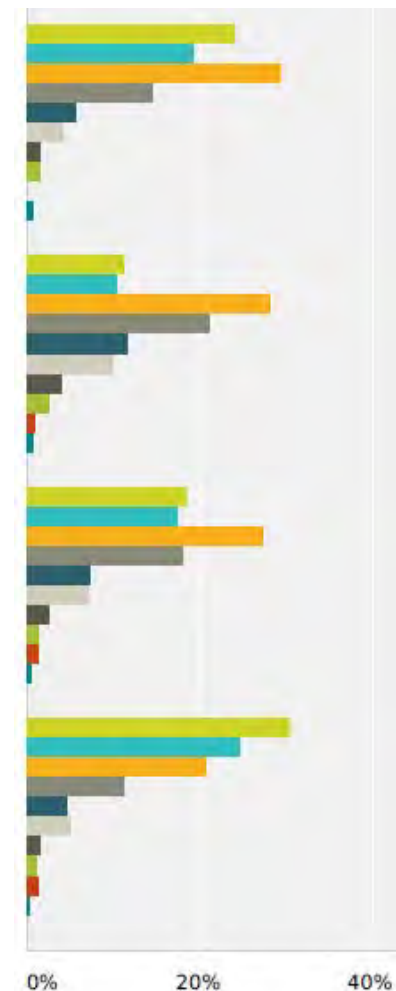
7.2

C: Evaluation of computerised healthcare information systems as a resource for surveillance of HAI

7.8

D: Evaluation of computerised healthcare information systems for the early detection of outbreaks of HAI (and multidrug-resistant pathogens)

8.3



ESGNI Survey 2013: Topic group 3

"Decolonisation/Disinfection / Antiseptic compounds"

A: Research on the effects of decolonisation of patients harbouring MDR-bacteria on infection rates

8.1

B: Studies of the effect of surface disinfectants (focus on oxygen-releasing compounds) on the prevention of cross-transmission of MRSA, VRE, AB, CD

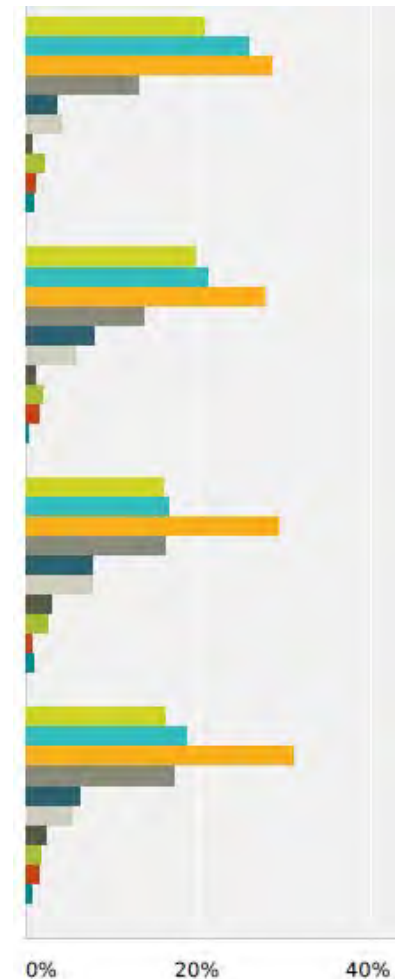
7.9

C: Studies of the effect of 'no-touch' automated room disinfection systems on the prevention of cross-transmission of MRSA, VRE, AB, C. diff.

7.6

D: Studies investigating the clinical effectiveness of antiseptic compounds (e.g. chlorhexidine, octenidine, polyhexanide; also impregnated in devices)

7.8



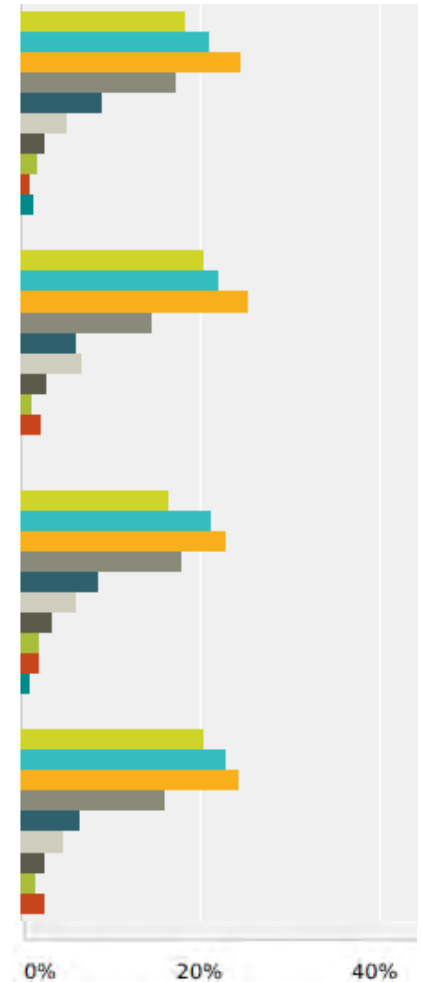
ESGNI Survey 2013: Topic group 4 "Specific HAI and Settings" (I)

A: Development of clinical scoring systems and new technologies to improve the diagnosis of ventilator-associated pneumonia 7.8

B: Development of protocols/checklists and new technologies to improve the prevention of central-line associated infections 7.9

C: Development of protocols/checklists and new technologies to improve the prevention of urinary-catheter associated infections 7.6

D: Development of protocols/checklists and new technologies to improve the prevention of surgical site infections 7.9

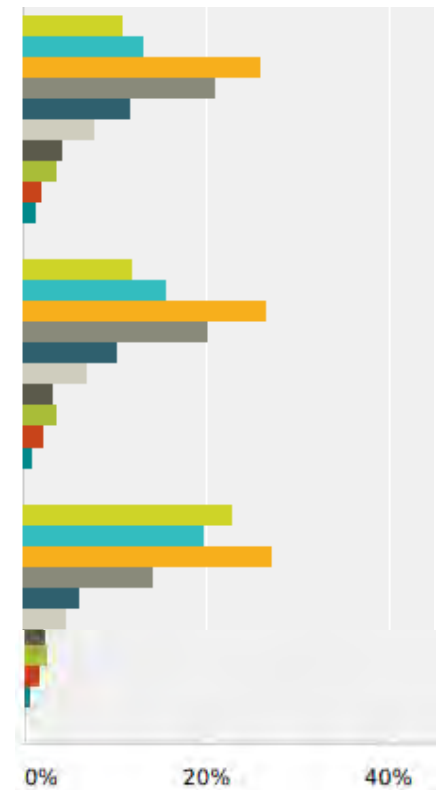


ESGNI Survey 2013: Topic group 4 "Specific HAI and Settings" (II)

E: Evaluation of interventions to minimise water-borne (healthcare-associated) infections, including those caused by legionellae and fungi **7.2**

F: Evaluation of preventative measures to reduce airborne HAI, including those caused by mould fungi **7.3**

G: Research in to HAI in specific settings, e.g. intensive care units, neonatal units, cardiothoracic surgery, etc. **8.0**



ESGNI Survey 2013: Topic group 5 "Organisational and Behavioural Change"

A: Application of behavioural and management sciences to achieve better compliance with infection prevention measures and policies 7.8

B: Studies on the role of human resources in preventing HAI 7.6

C: Studies on the role of isolation measures and infrastructure in preventing HAI 7.9



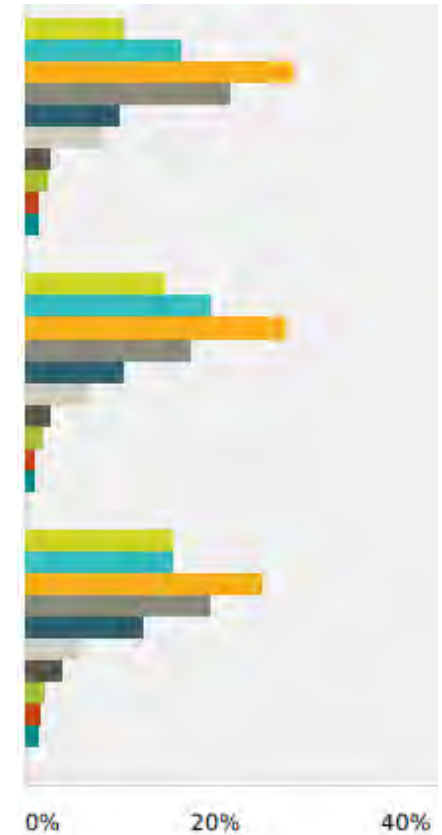
ESGNI Survey 2013: Topic group 6

"Healthcare Delivery Factors"

A: Identification of IPC staffing in healthcare institutions 7.4

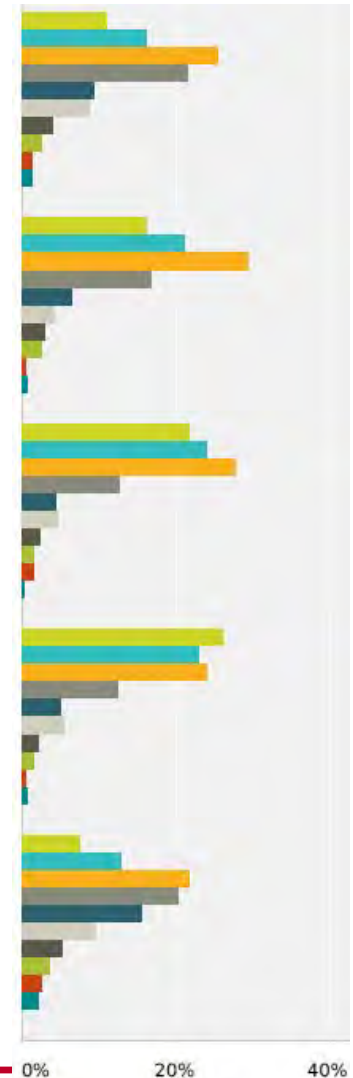
B: Further studies on the relationship between healthcare workers' workload and cross-transmission of nosocomial pathogens / HAI 7.6

C: Further studies on the value of inter-professional collaboration, i.e. nurses, physicians, physiotherapists, technicians etc. in preventing HAI 7.5



ESGNI Survey 2013: Topic group 7 "Economics / Mathematical models"

- A: Research on cost associated with morbidity and mortality from HAI 7.3
- B: Research on the cost–benefit and cost-effectiveness of interventions to decrease HAI 7.8
- C: Research on the cost–benefit and cost-effectiveness of interventions to decrease the spread of multi-resistant pathogens 8.1
- D: Provide support for infection prevention and control (IPC) professionals to convince hospital administrators of the financial and medical benefits possible from IPC 8.2
- E: Further development of mathematical models for the understanding of microbial ecology (especially: microbial spread) in hospitals 6.8



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Selected comments (out of 49)

- ‘The most critical’:
Guys, you're not enough focused on the only real problem: the spread of ESBL and carbapenemase GNB and the control of antibiotic use. The other issues are easily manageable with existing routines.
- ‘The nicest’:
An excellent and very interesting survey
- ‘The most felicitous’:
Many of these are a priority - but it might also be useful to determine how they would be ranked given that resources are finite

ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

Selected comments (out of 49, continued)

- *I wish if there is any support for the low income countries to establish infection control programmes*
- *I work in a district hospital. There no guidelines for general wards with "very" geriatric patients for whom ICU guidelines are not applied.*
- *Public awareness of judicious use of antibiotics and prevention of emerging antibiotic resistance*
- *Nothing on cleaning specifications incl. frequencies; nothing on bed-spacing*

ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

Selected comments (out of 49, continued)

- *I miss the topic of nosocomial spread of respiratory viral infections and gastrointestinal viruses; noro is well known, but interventions remain difficult, there is no clear evidence of benefit of handwashing vs hand disinfection.*
- *Studies on the attitudes of HCW towards infection prevention and control and an evaluation of current standards of infection prevention education for HCW*
- *The role of the colonised healthcare worker in spread of MDRO*

ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

Selected comments (out of 49, continued)

- *Importance of detection of hidden environmental reservoirs of multidrug resistant bacteria*
- *Comparing rapid diagnosis & isolation bundles with routine monitoring of VRE regarding outcomes in facilities lacking prompt isolation circumstances*
- *Protocols, importance and interpretative guidelines for routine environmental sampling in preventing HAI*
- *Nosocomial viral infections, molecular typing as tool for understanding transmission and assessment of infection control measures*

ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

Selected comments (out of 49, continued)

- *International collaboration with Indian physicians, working particularly in large public hospitals with huge patient load, overcrowded wards, unstandardized or absent Microbiology labs, and indiscriminate use of broad-spectrum antimicrobials should be evaluated thoroughly with their role in selection and spread of antimicrobial genes.*
- *Places of wash areas and cooking areas especially in developing countries in villages including drainage water mixing with drinking water are the current sources of active exchange of drug resistant genes*

ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

Selected comments (out of 49, continued)

- *Education in handhygiene and awareness of people when and how they cross contaminate*
- *Elements of contact precautions that are important for MRSA carriers*
- *Interaction - HAI, out-patient health care system and community*
- *More focus on improvement of processes of care than on surveillance*

ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

Selected comments (out of 49, continued)

- *Most important: staffing and teaching/training may not require research but standardized curricula*
- *ESGNI should also focus on:*
 1. *Some kind of accreditation for hospitals if they are devoting efforts in preventing HAI*
 2. *Accreditation of hospital members dedicated to prevention of HAI*

ESGNI Survey 2013: Top Ten Questions in Healthcare Associated Infection Prevention and Control

Selected comments (out of 49, continued)

- *SDD in the prevention of VAP and CDAD*
- *Evaluation of the volume of antiseptic compounds used*
- *Today's HAI data in region and space very rarely comply with requirements of modern management decision making in settings with critical risk burden. Not to forget timely inter-institutional communications by defined reporting formats and data standards!*
- *Focus should be on transmission and prevention of infection in general rather than on specific organisms*

Standard Precautions



Standard Precautions
- for all patients and settings



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Conclusions

- Highest score (topic):
" *Microbial epidemiology / Resistance* "
- Followed by: " *Surveillance* " and
" *Decolonisation/Disinfection / Antiseptic compounds* "
- Very relevant and specific comments gained
- No "one fits all" in sight
- **Given the limited availability of effective anti-biotics in the near future, efficient Infection Control is crucial to limit the deleterious effects of emerging pathogens**

Sincere thanks are given to all international experts in the field who contributed to this ESGNI survey !