HAI AND ANTIMICROBIAL USE IN LONG-TERM CARE FACILITIES:

KICK-OFF MEETING HALT-2 PROJECT

HALT PROJECT

RESULTS EU-WIDE PPS 2010

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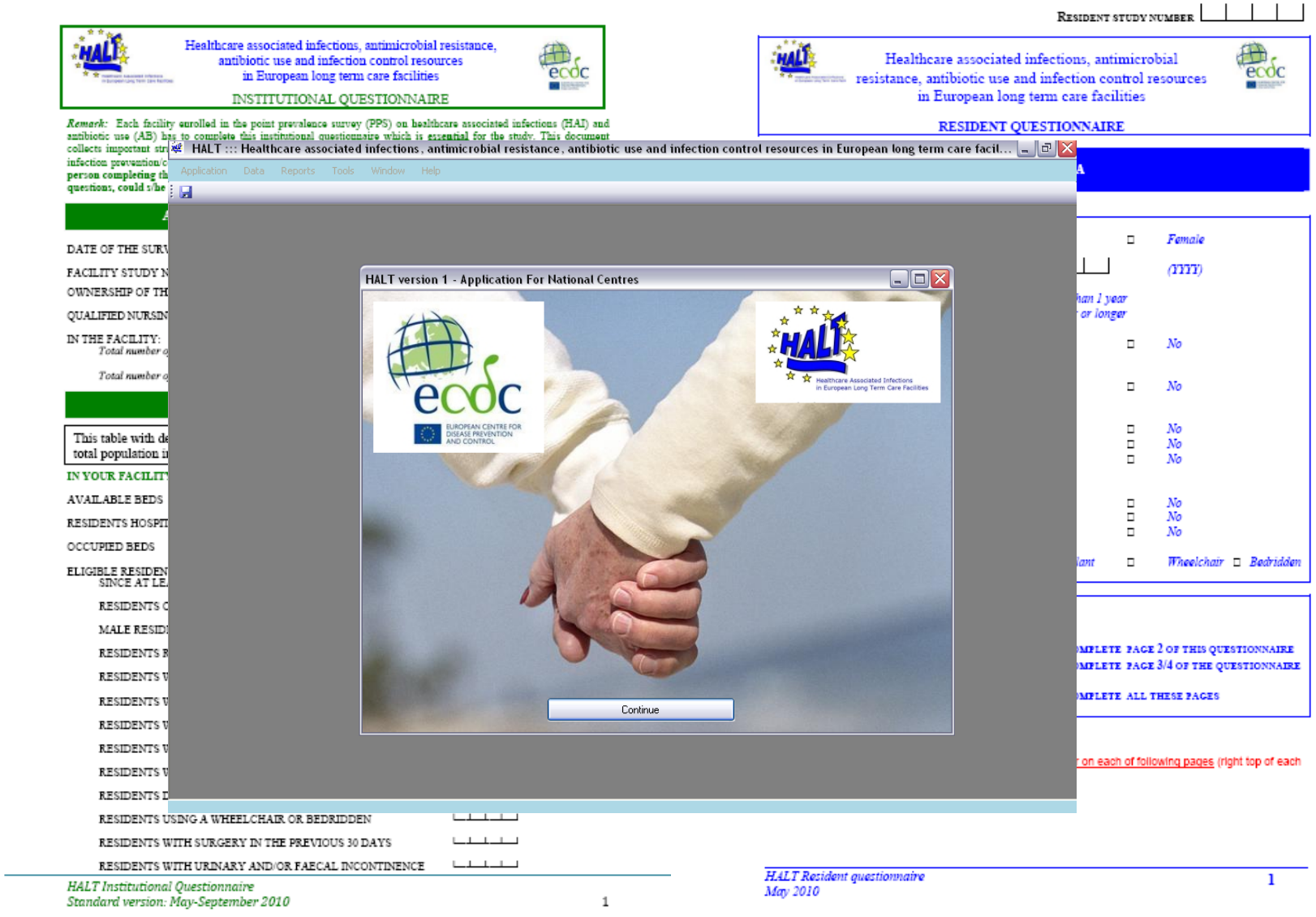
AIMS OF THE PROJECT

- **To describe HAI, AB use, AMR & risk factors**
- **To disseminate and use these results to:**
  - Raise awareness
  - Evaluate needs for IC structures & AB stewardship in LTCFs
  - Explore needs for training
  - Identify common EU problems and set up priorities
  - Evaluate the effect of strategies and guide policies (repeated PPS)

METHODOLOGY

- **Voluntary participation** (non-representative data)
- **Long-term care facilities** (IPSE definition)
  - Temporary (short or long) or permanent stay of elderly
  - The residents in these institutions
    - Need constant supervision (24/7)
    - Need 'high-skilled nursing care'
    - Are medically stable; no need for continuous 'specialized medical care'
    - Don't need invasive medical procedures (ex. ventilation)
  - In these institutions
    - Registered nursing staffs are mostly present 24/7
    - Different types of residents are treated in the facility
- **Grouped by LTCF type, LoS, type of residents**

METHODOLOGY



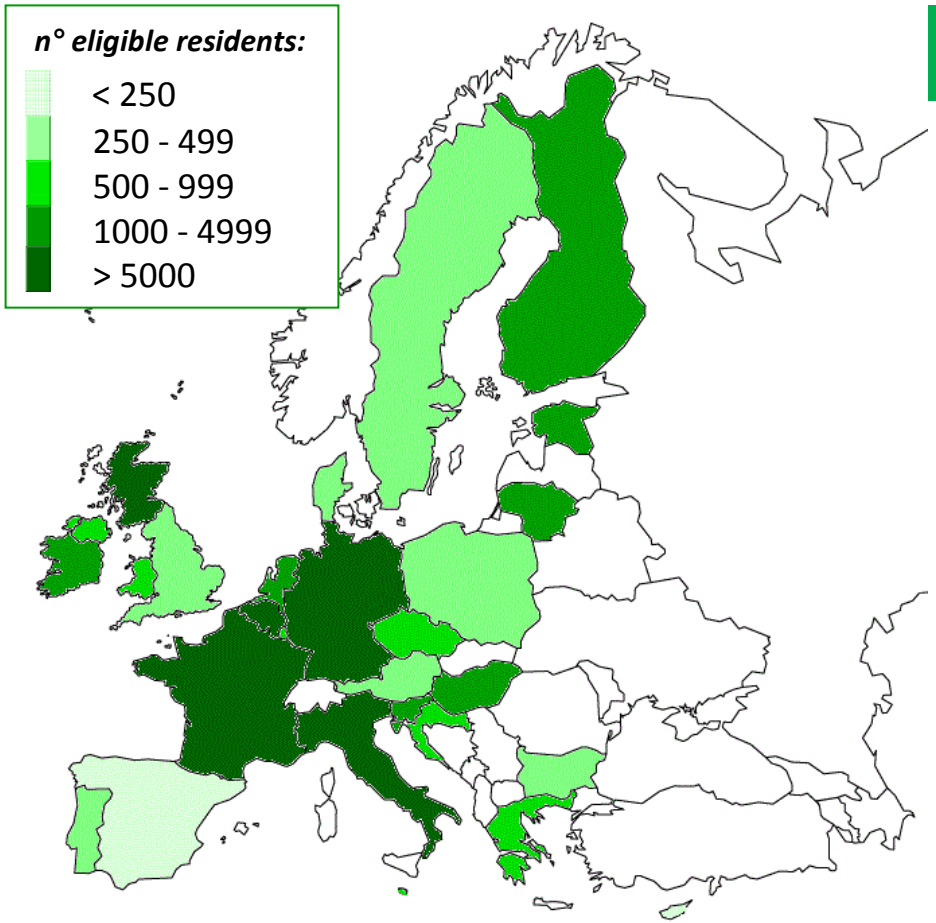
METHODOLOGY

- **A resident questionnaire for each resident:**
  - Presenting signs/symptoms of an infection on the day of the PPS
    - Not already present or in incubation at (re)admission
    - Acute or worsening, unrelated to non-infectious cause

    AND/OR

  - On antimicrobials on the day of the PPS
    - All oral, rectal, IM and IV treatments with
      - Antibacterials and antimycotics for systemic use
      - Drugs for treatment of tuberculosis
    - Antibiotic treatment by inhalation
    - Exclusion: antivirals, antimicrobials for topical use, antiseptics

PARTICIPATING COUNTRIES



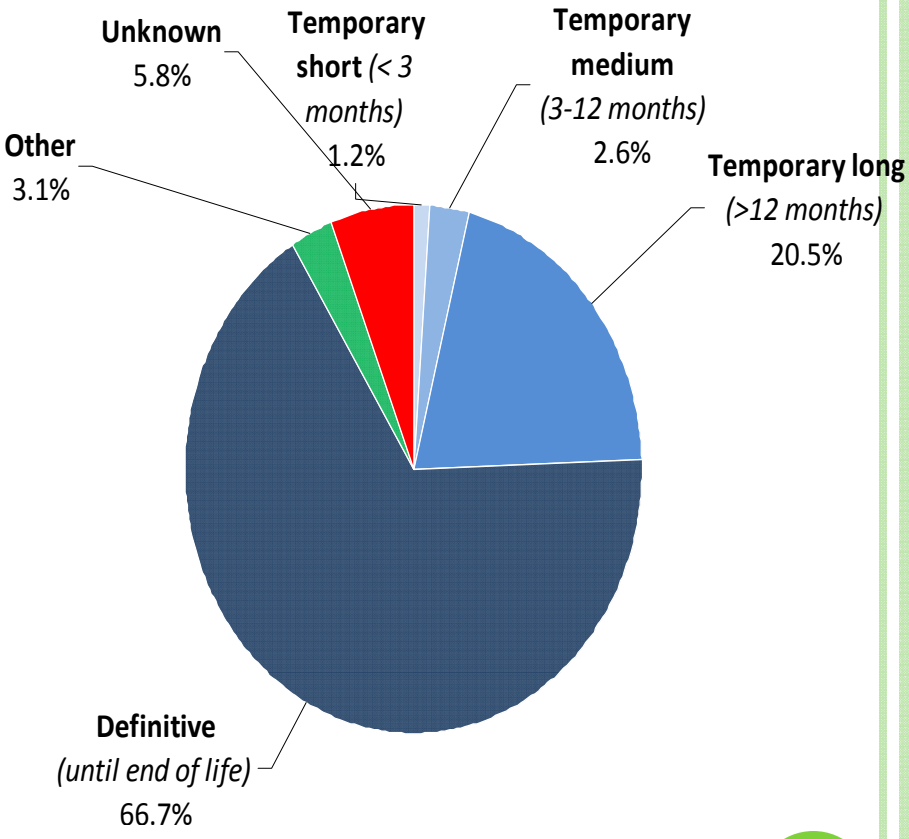
28 countries, 722 LTCFs

Austria	Belgium
Bulgaria	Croatia
Cyprus	Czech Republic
Denmark	Estonia
Finland	France
Germany	Greece
Hungary	Ireland
Italy	Lithuania
Luxemburg	Malta
Poland	Portugal
Slovenia	Spain
Sweden	The Netherlands
UK: England	
Scotland	
Wales	
Northern Ireland	

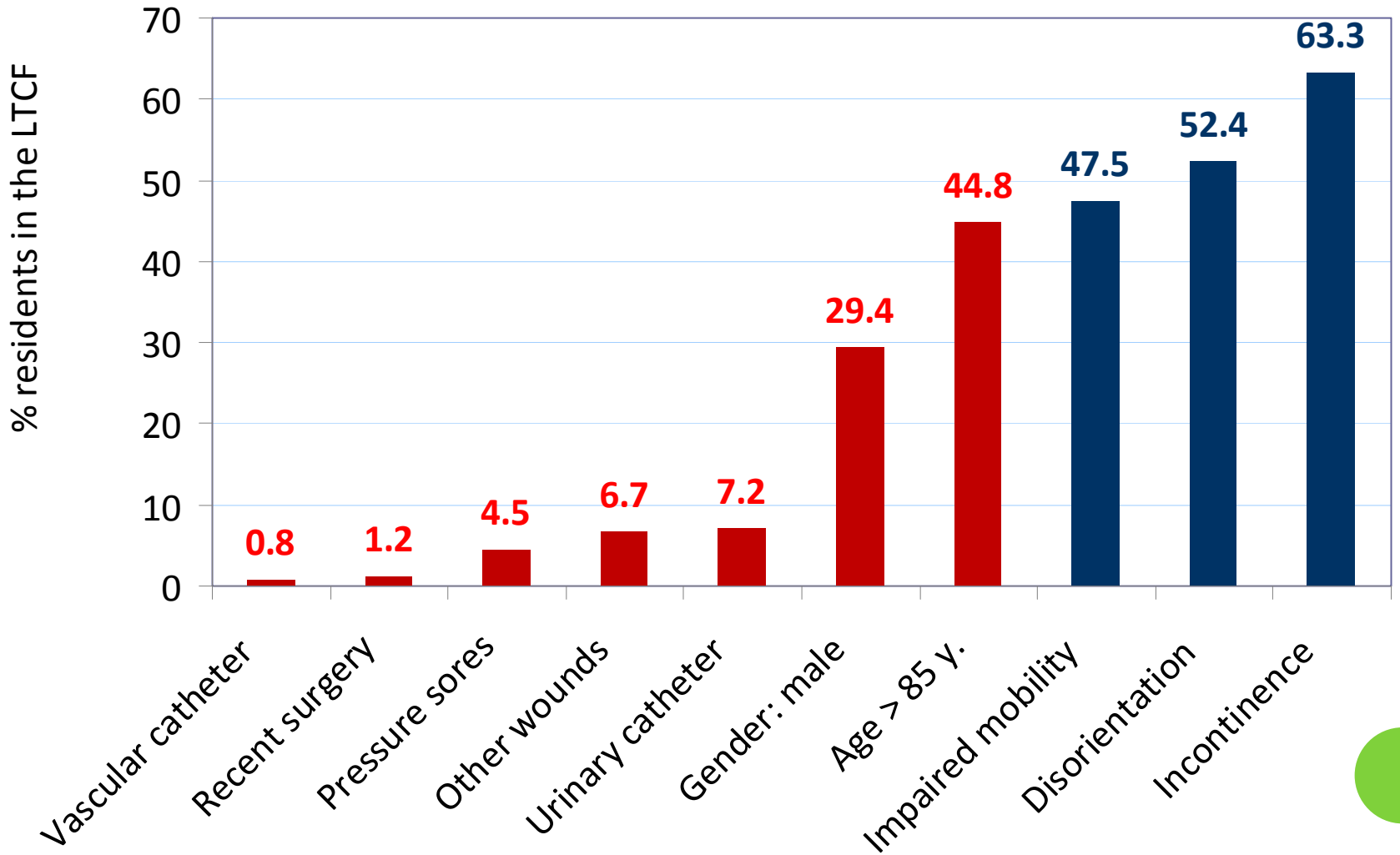
Total LTCF-beds:	67 613 beds
Mean LTCF size:	94 beds (9 – 695 beds)
Total eligible population:	63 884 r. (94.5%)

PARTICIPATING LTCFs

LTCF type	Facilities	
	n	%
General NH	542	75.1
Mixed	107	14.8
Residential homes	47	6.5
Rehabilitation	8	1.1
Mentally disabled	7	1.0
Psychiatric LTCF	4	0.6
Other	3	0.4
Physically disabled	2	0.3
Palliative	2	0.3
TOTAL	**722**	**100**



RISK FACTORS & CARE LOAD



CARE LOAD INDICATORS

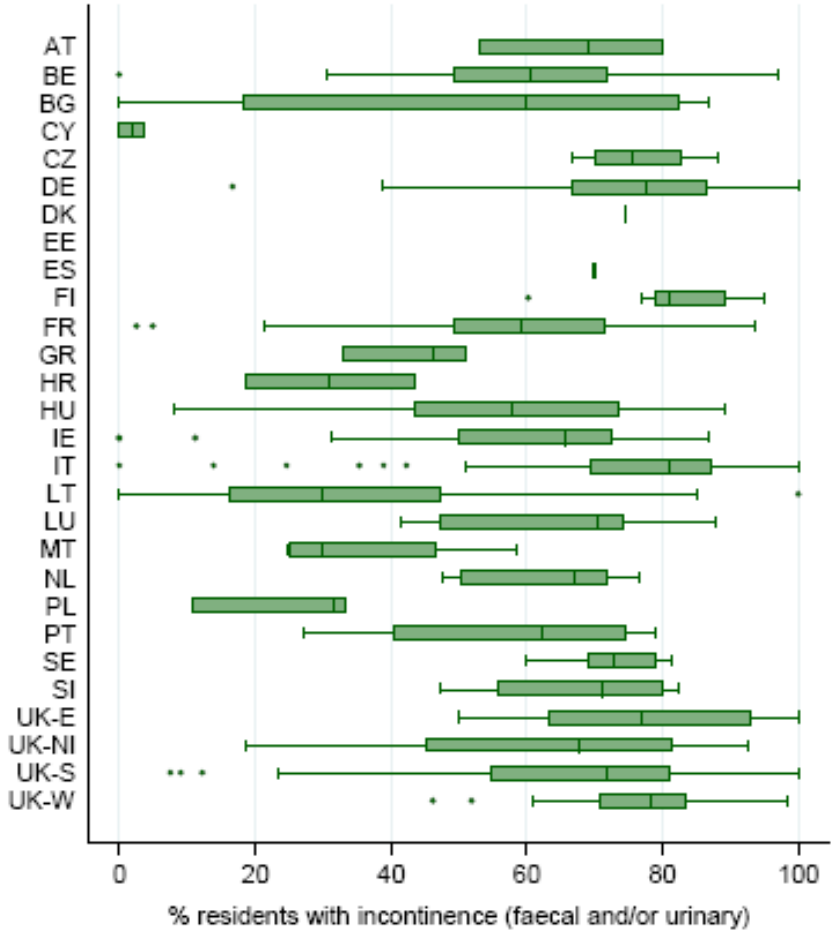


Figure 1: Prevalence of incontinence in the eligible population

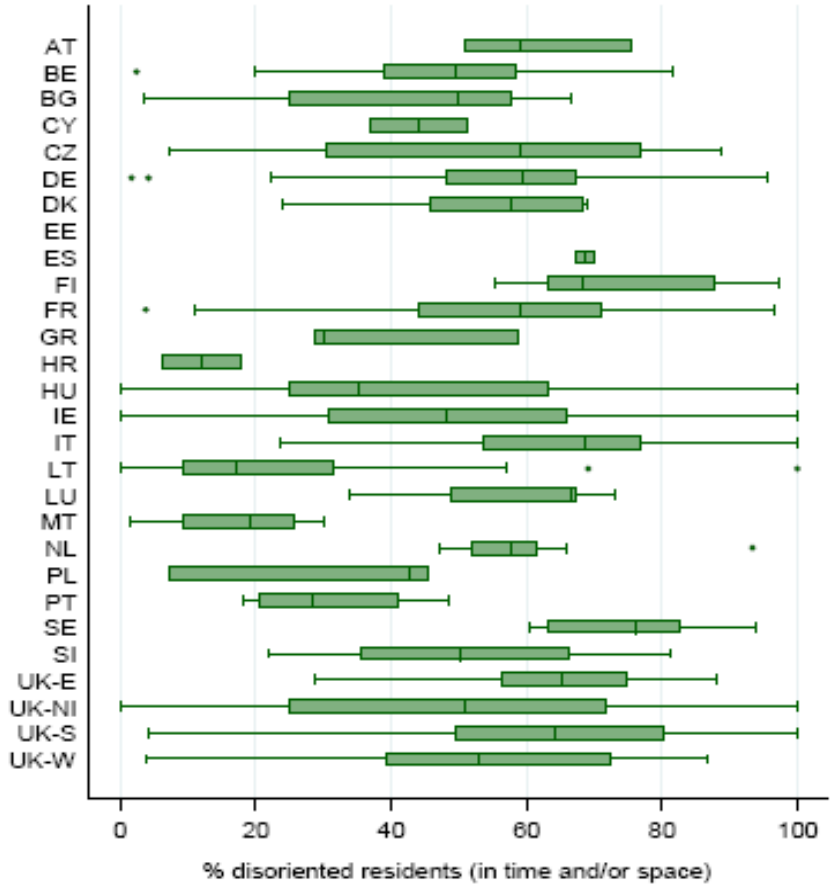
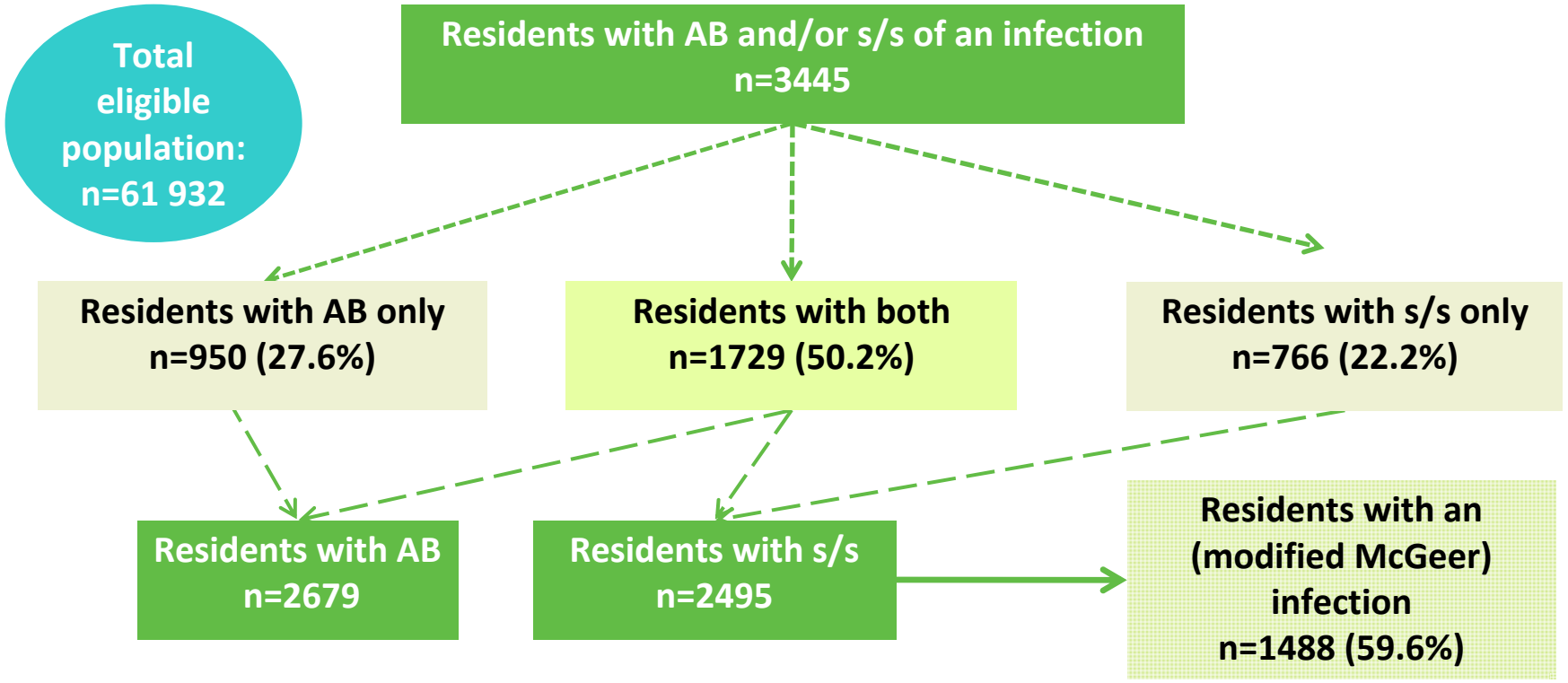
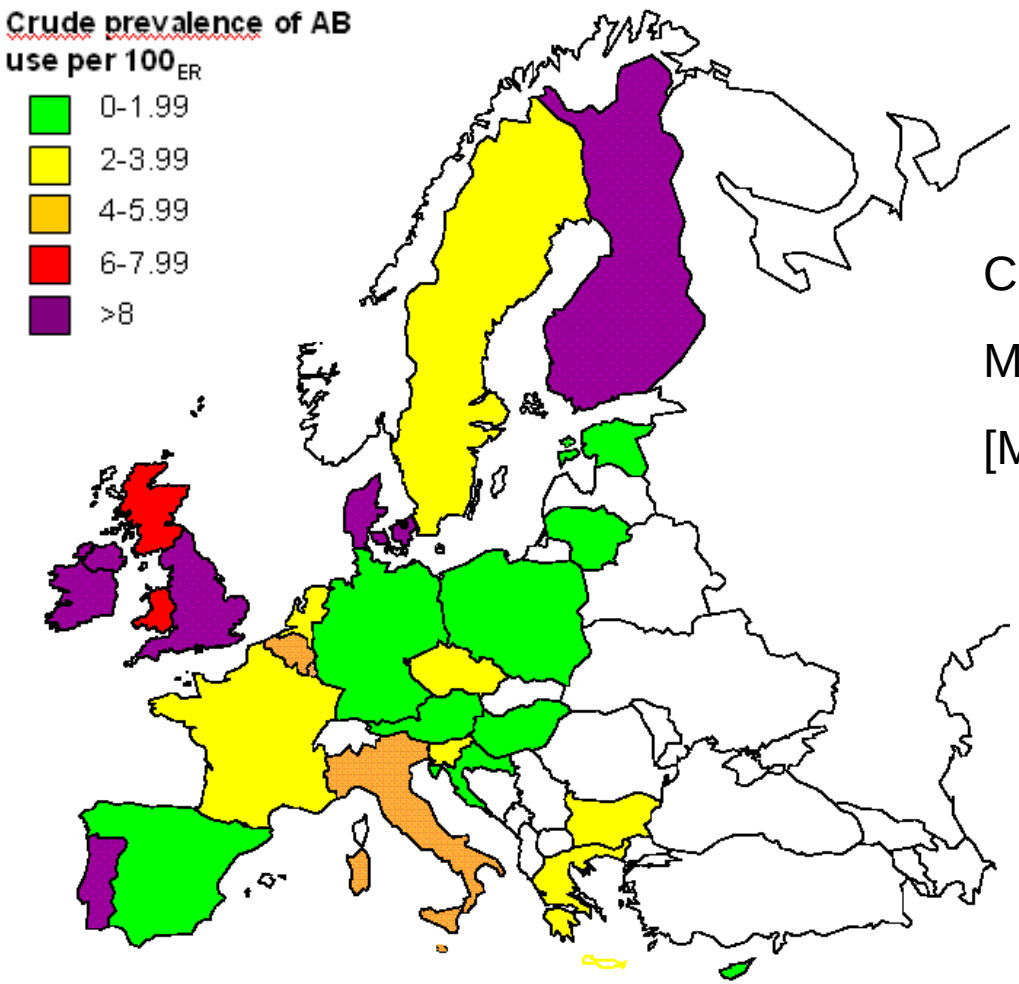


Figure 2: Prevalence of disorientation in the eligible population

OVERVIEW RESULTS



ANTIMICROBIAL USE



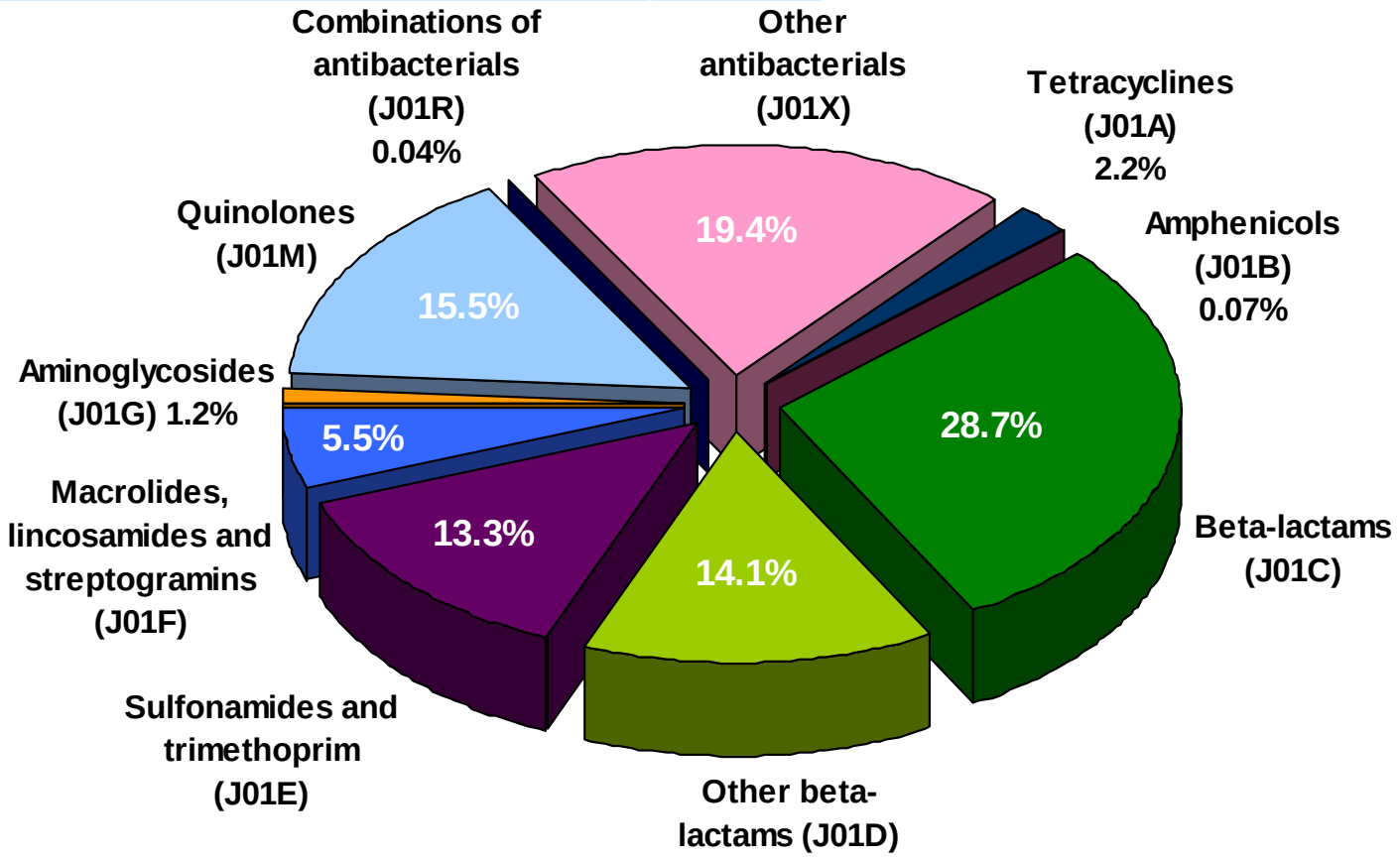
Crude prevalence: 4.3%

Mean prevalence: 4.9%

[Md: 3.4%, 95% CI 4.8% - 5.1%]

ANTIMICROBIAL USE

ATC level 2:	%		%
Antibacterials for systemic use (J01)	96.2	Other (A01, A07, D01, J04)	1.1
Antiprotozoals (P01)	1.4	Unknown	0.1
Antimycotics for systemic use (J02)	1.2	**Total: 2819 antimicrobials**	



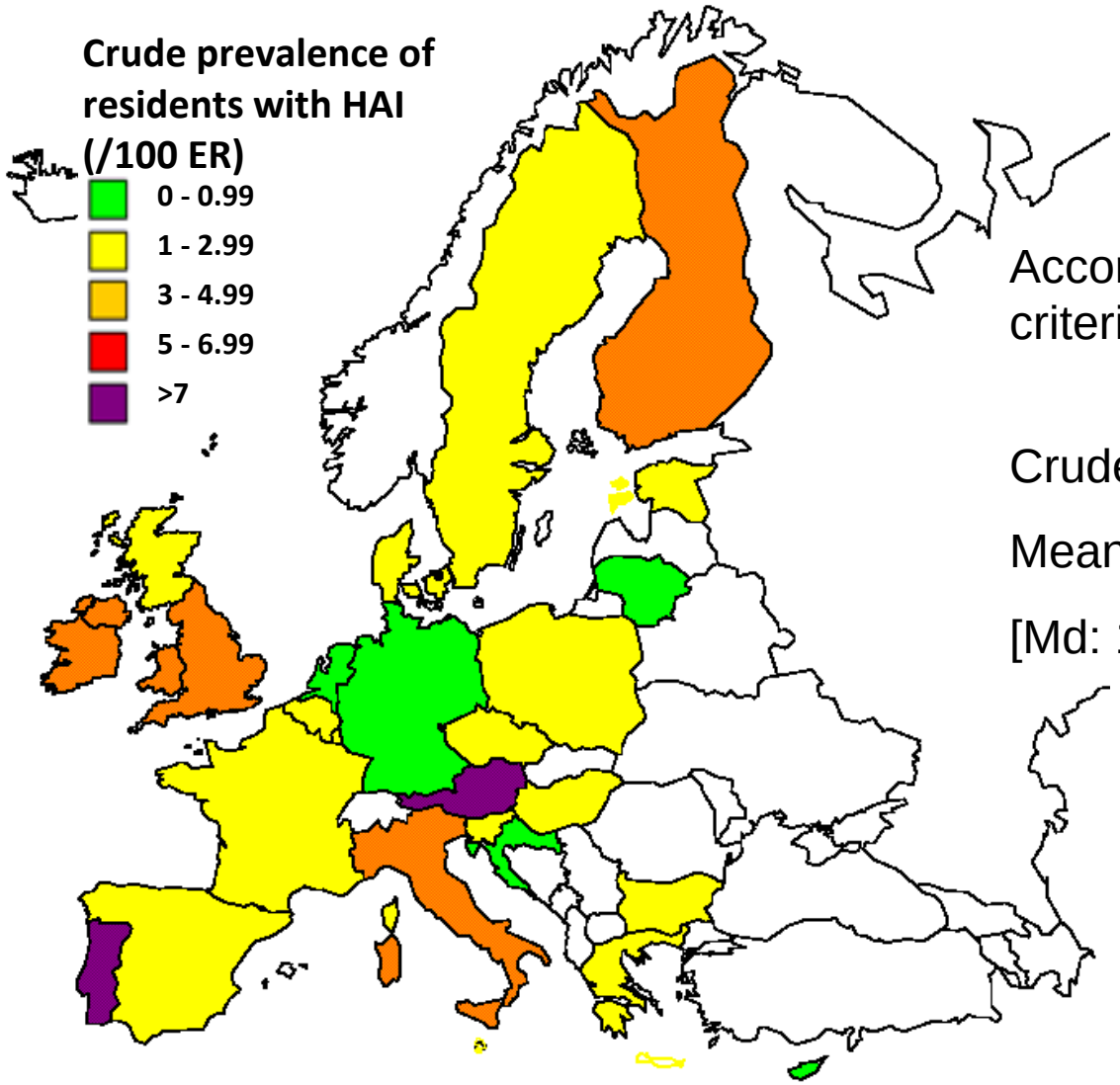
INDICATIONS FOR ANTIMICROBIAL USE

Infection site	Prophylactic	Therapeutic	Total	
Urinary tract	608	710	1318	48.9%
Respiratory tract	37	715	752	27.9%
Skin or wound	29	356	385	14.3%
Other infections	23	59	82	3.0%
Ear, nose, mouth	11	55	66	2.4%
Gastrointestinal	5	41	46	1.7%
Unexpl. febrile episode	2	20	22	0.8%
Systemic infections	3	18	21	0.8%
Eye infections	1	5	6	0.2%
	719 (27.7%)	**1979 (72.4%)**	**2698***	**100%**

22.5%

* Unknown type of treatment and treated infection site : n=121

HEALTHCARE ASSOCIATED INFECTIONS



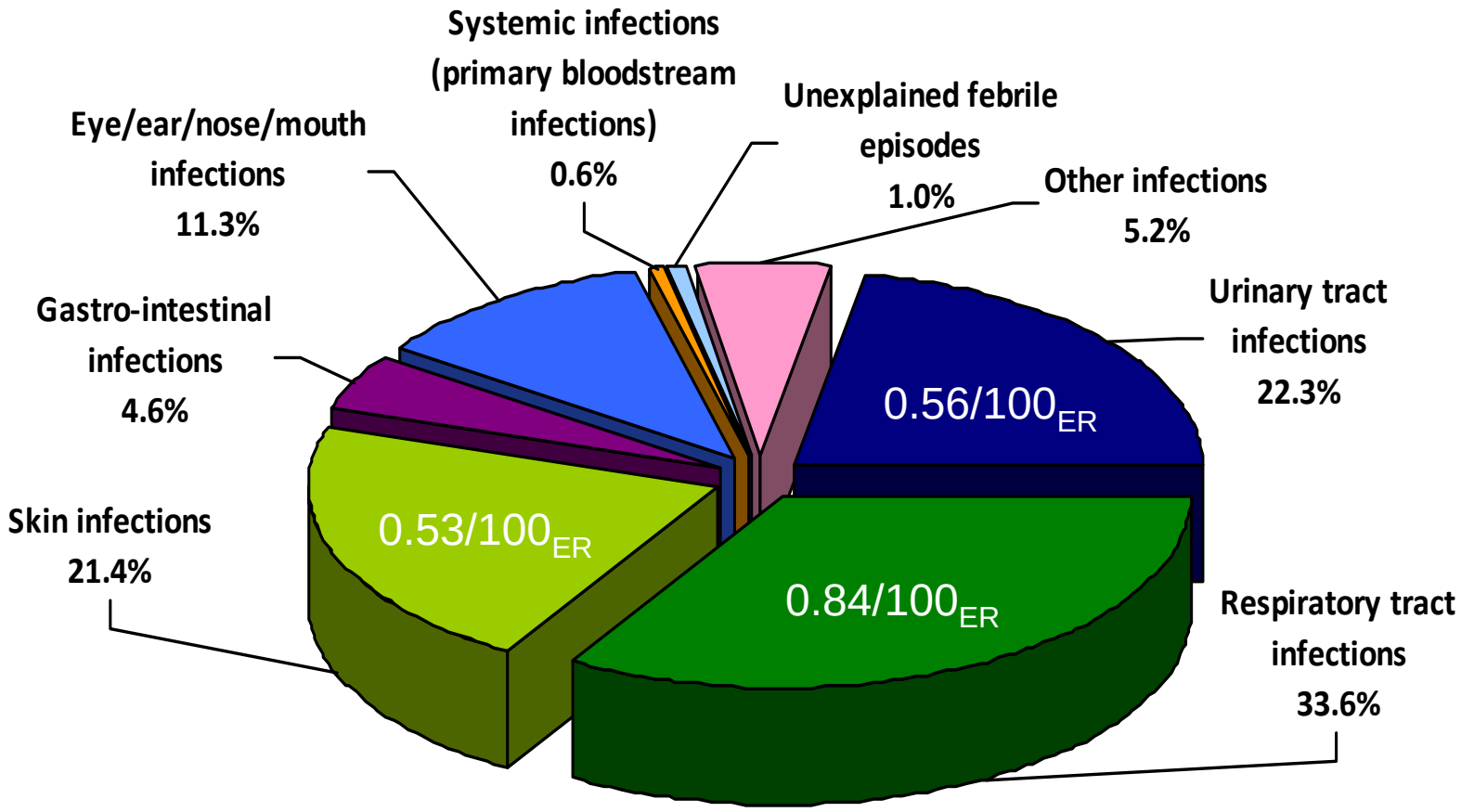
According to modified McGeer criteria

Crude prevalence: 2.40%

Mean prevalence: 2.55%

[Md: 1.53%, 95% CI 2.43 – 2.67%]

HEALTHCARE ASSOCIATED INFECTIONS



86.4% Cellulitis/soft tissue/wound
$0.46/100_{ER}$

50.4%	lower RTIs	$0.42/100_{ER}$
26.5%	common cold/pharyngitis	$0.22/100_{ER}$
22.1%	pneumonia	$0.18/100_{ER}$

CONCLUSIONS

- **Non-representative data**
  - Voluntary participation
  - Large differences in participation rate (2 to 111 LTCFs)
  - Large variety of institutions
  - Definition for whole concept of LTC in European context?
    - How long is “long”?
    - LTC dependent of other health care services / cultural practices
- **Raise awareness for LTC** (less resources & expertise)
- **Use data!**
  - Identify priorities for further research
  - National and local initiatives

CONCLUSIONS

- **Seasonal influence**
- **Urinary tract infections**
  - 48.9% of all antimicrobials prescribed
  - 22.5% of all antimicrobials = uroprophylaxis
  - Antimicrobial resistance!
- **HAI**
  - "Signs/symptoms" based system = risk for underreporting
  - Less experienced staff ➔need for training
  - Modified McGeer criteria (add 'diagnosed by the attending physician)

    ➔ Validation of HAI case definitions