Results of susceptibility testing are displayed as percentages of susceptible isolates of all non-duplicate isolates. The most frequent Gram-negative pathogens were E. coli, P. mirabilis, and K. pneumoniae; frequencies and percentages are shown in table 2. Analysis of susceptibility is based on non-duplicate isolates. Species identification and antimicrobial susceptibility testing is performed by VITEK 2, results are evaluated according to CLSI guidelines. Proportions of susceptible isolates were calculated for the following antibiotics: ampicillin (AMP), ampicillin/sulbactam (AMS), piperacillin (PIP), piperacillin/tazobactam (PIT), cefotaxime (CTX), ciprofloxacin (CIP), and co-trimoxazole (SXT).

Results

Results of susceptibility testing are displayed as percentages of susceptible isolates of all non-duplicate isolates tested in table 3. In E. coli overall proportions of susceptibility for the most frequently used antimicrobials in urinary tract infections as AMP, AMS, SXT and CIP vary from 54.5% (AMP) to 84.3% (CIP), in P. mirabilis the corresponding range spans from 64.2% (SXT) to 92.5% (AMS) and in K. pneumoniae proportions for selected antibiotics are all above 80%. Stratification by age groups shows lower levels of susceptibility for patients older than 60 for AMP, PIP, CIP and SXT in E. coli as well as in P. mirabilis. Regional differences with similar patterns are observed for CIP, SXT and PIP across species.

Conclusion

These first large-scale data from ambulatory care indicate that non-susceptibility of E. coli and to a lesser degree of P. mirabilis from urines to first-line antibiotics is highly prevalent, that it is even higher in patients older than 60 and that there are some regional variations. Interpretation of the data should consider that in ambulatory care settings specimens are mainly taken from pre-treated patients.

References

ARS-Website: https://ars.rki.de

Acknowledgements

We like to thank for their contribution to this presentation:
- Gemeinschaftspraxis für Laboratoriumsmedizin, Plön
- Labor 28 Medizinisches Versorgungszentrum, Berlin
- Labor Dr. Limbach & Kollegen, Heidelberg
- Medizinisches Versorgungszentrum Dr. Stein und Kollegen, Mönchengladbach

Table 1: composition of sample (N=96.191 urine samples) by region, specialty, sex and age group

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<th>Specialty</th>
<th>North Rhine-Westphalia</th>
<th>Brandenburg</th>
<th>Berlin-Brandenburg</th>
<th>South-West</th>
<th>Schleswig-Holstein</th>
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<td>35.850</td>
<td>23.9</td>
<td>36.85</td>
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Table 2: pathogens isolated from urine samples 2008/09

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<th>Pathogen/group</th>
<th>Region</th>
<th>AMP (%)</th>
<th>AMS (%)</th>
<th>PIP (%)</th>
<th>CIP (%)</th>
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