Antibiotic resistance of *Escherichia coli* in 312 non-hospitalised nursing home acquired Urinary tract infection.

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CONFLICT OF INTEREST DISCLOSURE

I have no potential conflict of interest to report

*For this presentation*
Background

Urinary tract infection = major infection in Nursing home

Antibiotic-therapy in Nursing Home vary from 2-10%.

UTI is the number reason for empirical use, Prophylactic use of ATB

Inappropriate empirical therapy in a high-risk population 40-60%

Leads to the risk of emerging resistance / Highly variable

Background

*E coli* is the main bacteria responsible for UTI and bacteraemia and takes part of Intestinal flora in older population.

**Hypothesis**

The surveillance of *E coli* antibiotic susceptibility is of clinical importance and may represent an overview of ATBic susceptibility in NH.

**Aim of the study**

Analyse ATBic resistance of *Escherichia coli* in urine culture collected in 12 NH of the same French area.

Methods

Retrospective study From 03 2014 to 09 2015
Bacteriological analysis from urine sample
Community private laboratory

All positive performed in 12 NH because of UTI suspicion.

All urine cultures positives for *E. coli*

All usual antibiotics were tested.
(penicillin/ cephalosporin/ Aminosides, furan / fosfomycin)
for C3G resistance, Cephalosporinasis and ESBL differenciation
## Results

<table>
<thead>
<tr>
<th>Uricult number</th>
<th>Positive Uricult (%)</th>
<th>Positive for <em>E. coli</em></th>
<th><em>E. coli</em> Rate %</th>
<th><em>E. coli</em> with ESBL</th>
</tr>
</thead>
<tbody>
<tr>
<td>167</td>
<td>95 (56.9%)</td>
<td>29</td>
<td>30.5%</td>
<td>3 (11%)</td>
</tr>
<tr>
<td>160</td>
<td>79 (49.4%)</td>
<td>31</td>
<td>39.3%</td>
<td>-</td>
</tr>
<tr>
<td>57</td>
<td>38 (66.6%)</td>
<td>12</td>
<td>31.6%</td>
<td>2 (5.5%)</td>
</tr>
<tr>
<td>193</td>
<td>112 (58%)</td>
<td>34</td>
<td>30.4%</td>
<td>1 (3.3%)</td>
</tr>
<tr>
<td>187</td>
<td>108 (57.8%)</td>
<td>30</td>
<td>28.6%</td>
<td>1 (2.7)</td>
</tr>
<tr>
<td>137</td>
<td>87 (63.5%)</td>
<td>37</td>
<td>42.5%</td>
<td>1 (3.2)</td>
</tr>
<tr>
<td>129</td>
<td>78 (60.5%)</td>
<td>31</td>
<td>39.7%</td>
<td>-</td>
</tr>
<tr>
<td>102</td>
<td>74 (72.5%)</td>
<td>30</td>
<td>40.5%</td>
<td>-</td>
</tr>
<tr>
<td>59</td>
<td>30 (50.8%)</td>
<td>7</td>
<td>23.3%</td>
<td>-</td>
</tr>
<tr>
<td>35</td>
<td>19 (54.9%)</td>
<td>9</td>
<td>47.4%</td>
<td>-</td>
</tr>
<tr>
<td>178</td>
<td>138 (77.5%)</td>
<td>45</td>
<td>32.6%</td>
<td>4 (9.5%)</td>
</tr>
<tr>
<td>59</td>
<td>46 (77.9%)</td>
<td>17</td>
<td>36.9%</td>
<td>-</td>
</tr>
</tbody>
</table>

| Total          |                       | 312                    | 34.5%           | 12 (3.8%)          |

2014 to 09 2015
Antibiotic resistances

N = 312

- Amoxicillin: 52%
- Amoxicillin + clavulanate: 34%
- Ceftriaxone: 11.8%
- Cefexime: 14.1%
- Ciprofloxacine: 17.9%
- Imipenems: 0%
- Gentamycine: 2.2%
- Furane: 1.9%
- Fosfomycine: 2.5%

Global ESBL E coli: 3.8%

However, 2 nursing homes with ESBL E coli rate 10%
Regarding the high level of resistance Amoxicillin, coamoxiclav can no longer be used as empirical treatment;

Of concern, resistance to 3rd cephalosporin generation, becoming higher than one at the university Hospital of the area. ESBL was already very high in some NH

This suggests that NH may act as a reservoir of multidrug resistance bacteria and A risk of cross transmission

Yet, Surveillance of the resistance is critical in NH to better guide the empirical therapy.

The most simple and frequent Is Urinculture

Discussion / Conclusion
Thank you for your Attention

“...too less..."

“The good physician treats the disease; the great physician treats the patient who has the disease.”

William Osler

“...or too much..."