12.9. Prescription of anticholinergics in the elderly (ELD-10)

12.9.1. Documentation sheet

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage of persons aged ≥65 years prescribed anticholinergic drugs or antidepressant drugs with anticholinergic effects</th>
</tr>
</thead>
</table>
| Calculation | Percentage of elderly (≥65 years) with anticholinergics prescribed  
Numerator 1: Number of elderly (≥65 years) prescribed anticholinergic drugs (> 80 DDD)  
Numerator 2: Number of elderly (≥65 years) prescribed antidepressant drugs with anticholinergic effects (> 80 DDD)  
Denominator: Number of elderly ≥65 years |
| Rationale   | Because of their side effects especially in older patients, anticholinergic drugs should be avoided as much as possible in the elderly. Anticholinergic drugs are drugs that reduce acetylcholine activity. Acetylcholine is a neurotransmitter that plays an important role in the nervous system. Anticholinergic drugs can cause side effects like confusion, sedation and orthostatic hypotension. Older adults, especially those with dementia, are more at risk to have confusion and sedation side effects.  
The appropriateness of prescribing behaviours by clinicians within the health system can be increased through education and training and the use of guidelines. |
| Data source | EPS |
| Technical definitions | Anticholinergic drugs =  
N06AA09 *  
N06CA01 *  
N06AA04 *  
N05AH02  
R06AA02  
R06AA52  
N06AA12 *  
N05BB01  
N05BB51  
N06AA02 *  
N05AA02  
R06AD52  
N06AA10  
M03BX02 |
This list is based on a list of active substances with anticholinergic properties (n = 41) identified in drug lists of older adults in Belgium.  

Note that a threshold is used of >80 DDD as an indicator for chronic use of the drug.

<table>
<thead>
<tr>
<th>Limitations</th>
<th>Farmanet does not include hospital pharmacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>International comparability</td>
<td>No international data available</td>
</tr>
<tr>
<td>Dimension</td>
<td>Appropriateness / safety</td>
</tr>
</tbody>
</table>

**Keywords**
12.9.2. Results

In 2016, 22% of the population over 65 years was prescribed >80 DDD of anticholinergic drugs, amongst which 12% were prescribed an antidepressant drug with anticholinergic effects. Figure 182 illustrates that this indicator has not shown any improvement over the years 2011-2013-2016. Woman are more likely to be prescribed these drugs than men: 25% of woman over 65 years are prescribed anticholinergic drugs, versus 17% of men (see Figure 183). Prescriptions also increase with age, 29% of the population over 85 years was prescribed anticholinergic drugs, compared to 19% of the population aged 65-74 years (see Figure 184. There is also some regional variation: prescriptions are highest in Wallonia (26% of population over 65 years), followed by Brussels-Capital (24%) and Flanders (20%) (see Figure 185). Finally, the problem appears most acute in institutions, where 52% of residents over 75+ are prescribed anticholinergic drugs, compared to 22% in persons 75+ living at home (Figure 186).

Figure 182 – Percentage of the Belgian population aged ≥65 years prescribed anticholinergic drugs or antidepressant drugs with anticholinergic effects (>80 DDD): evolution 2011-2013-2016

Source: RIZIV – INAMI (data EPS)
Figure 183 – Percentage of the Belgian population aged ≥65 years prescribed anticholinergic drugs or antidepressant drugs with anticholinergic effects (>80 DDD), by gender (2016)

Source: RIZIV – INAMI (data EPS)
Figure 184 – Percentage of the Belgian population aged ≥65 years prescribed anticholinergic drugs or antidepressant drugs with anticholinergic effects (>80 DDD), by age group (2016)

Source: RIZIV – INAMI (data EPS)
Figure 185 – Percentage of the Belgian population aged ≥65 years prescribed anticholinergic drugs or antidepressant drugs with anticholinergic effects (>80 DDD), by region and province (2016)

Source: RIZIV – INAMI (data EPS)
Because of their side effects especially in older patients, anticholinergic drugs should be avoided as much as possible in the elderly.

In 2016, 22% of the population over 65 years was prescribed >80 DDD of anticholinergic drugs, amongst which 12% were prescribed an antidepressant drug with anticholinergic effects. Woman are more likely to be prescribed these drugs than men. The problem appears most acute in institutions, where 52% of residents over 75+ are prescribed anticholinergic drugs, compared to 22% in persons 75+ living at home. There is also considerable regional variation.

This indicator has not shown any improvement since 2011.

References