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European research network for out-of-hours primary health care

# Guidelines on Lower Urinary Tract Infections in 9 European countries

Hilde Philips, Roy Remmen  
EurOOHnet ([www.euroohnet.eu](http://www.euroohnet.eu))



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## 1. Introduction

- Use of antibiotics
- Guideline adherence
- OOH care enables easy registration
- OOH care enables simple interventions
- Pilot study in Belgium: masterthesis 2009

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## 2. Methods part 1

- Search for national guidelines used in the countries of study
- Description of key-messages on:
  - Diagnose
  - Treatment
- Comparison of recommendations in 9 European countries on LUTI

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## 3. Research questions part 1



Which advises are given in European national guidelines concerning the diagnostic tests and treatment of uncomplicated lower urinary tract infections in women?



Are there any differences between countries?

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## 4. Results part 1

9 European guidelines (2000-2010):

- ✓ Belgium
- ✓ Denmark
- ✓ Germany
- ✓ The Netherlands
- ✓ Norway
- ✓ Poland
- ✓ Slovenia
- ✓ Spain
- ✓ Switzerland



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## 4. Results part 1

- 9 countries
- 11 guidelines
- Denmark: specific guideline in OOH care
- Oldest: 2000 Belgium
- Most recent: 2010 Switzerland

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## 4. Results part 1

**Recommendations on:**

- Diagnosis:
  - History: typical history for cystitis
  - Clinical examination
- Treatment:
  - Medicine
  - Dose
  - Duration



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### History: consensus

History: typical history for cystitis (one or more), in all guidelines

- Dysuria
- Stranguria
- Frequency
- Urgency

### History: differences

Symptoms mentioned in some guidelines:

- < 7 days
- Abdominal pain
- Back pain
- Hematuria
- Absence of vaginal discharge

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**Clinical examination**

Country	Clinical
Denmark	Not necessary
Germany	Not necessary (only ico risk)
The Netherlands	Not necessary (only ico risk)
Norway	None
Slovenia	Painful suprapubic palpation
Spain	None
Switzerland	None
Belgium	Painful suprapubic palpation
Poland (SIGN)	Not necessary (only ico risk)


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**Technical examination**


- Not necessary when history is suggestive
- In case of limited symptoms and signs
- If performed : dipstick first (nitrite)



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## Treatment

- Empirical treatment with AB is in general use
- First choice:
  - Trimethoprim (+/- sulfamethoxazol) or nitrofurantoin
  - Sulfamethizol, (piv)mecillinam
- Other:
  - fosfomycin, beta-lactamics, norfloxacin, ciprofloxacin


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## 5. Conclusions part 1

- History:
  - Some small differences
- Examination:
  - most guidelines: not necessary
  - Only 2 guidelines mention palpation of the abdomen
  - None of them recommends technical examination if history is suggestive for LUTI



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## 6. Introduction part 2


- Registration of 100 LUTI cases / country
- During OOH care
- Inclusion-criteria:
  - Females!
  - 20-80 years old
  - No risk factors
  - Not pregnant
  - U71 diagnoses (ICPC2)

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## 7. Research questions part 2



What is the guideline adherence in these countries during OOH care by general practitioners?



Is there a difference between countries?

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## 8. Methods part 2

Patient contact	Diagnosis	Treatment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Age of the patient	<input type="checkbox"/> History	<input type="checkbox"/> Medication
<input type="checkbox"/> Type of contact	<input type="checkbox"/> Clinical examination	<input type="checkbox"/> Dose
	<input type="checkbox"/> Technical examination	<input type="checkbox"/> Duration

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## 9. Results part 2

- We received data from 6 countries:
  - Belgium
  - Denmark
  - Germany
  - The Netherlands
  - Norway
  - Slovenia

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## 9. Results part 2


	Mean age	Telephone consult %	Consultation %	Home Visit %
Belgium	42,6	0	89	11
Denmark	41	88	11	1
Germany	47,8	No data		
The Netherlands	42,7	33,8	65,6	0,4
Norway	40,1	1	99	0
Slovenia	39,2	5,6	92,6	1,8



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## 9. Results part 2

Country	N cases	Data on history	Data on Clinical examination	Data on Technical Examination	Data on type of medication	Data on dose	Data on duration
Belgium	100	95%	75%	42%	95%	95%	No
Denmark	100	43%	No	16%	100%	100%	100%
Germany	100	20%	36% (clinical or technical)		45%	No	No
the Netherlands	494	100%	95,1%	59,5%	100%	100%	100%
Norway	196	99,5%	98,0%	99,0%	100%	100%	97,4%
Slovenia	54	100%	92,6%	72,2%	94,4%	94,4%	92,6%


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## 9. Results part 2

	Correct medication	Correct medication AND dose AND duration
Belgium	37%	Insufficient data
Denmark	100%	40%
Germany	25%	Insufficient data
The Netherlands	74.3%	72.7%
Norway	99.5%	44.9%
Slovenia	70.4%	22.2%

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## 10. Discussion and conclusion



1. 9 countries: similar guidelines
2. Large differences in treatment adherence:
  - 25% - 100%
3. Guideline adherence on diagnostic criteria:
  - Difficult
  - Underregistration of negative signs and symptoms
  - Different registrations in different countries

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## Authors

(B) Philips H, Remmen R,  
 (Dk) Christensen MB, Flarup L, Moth G,  
 (G) Leutgeb R, Laux G,  
 (NL) Huiber L, Giesen P, Wensing M,  
 (No) Bondevik GT, Holm-Hansen E,  
 (SI) Kersnik J,  
 (Sp) Muñoz Perez MA,  
 (Ch) Huber C,  
 (Pl) Koziak K



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[hilde.philips@ua.ac.be](mailto:hilde.philips@ua.ac.be)  
 Commission for Guideline Development Domus Medica  
 Researcher University of Antwerp  
 Member of EurOOHnet ([www.euroohnet.eu](http://www.euroohnet.eu))



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