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Healthcare associated infections, antimicrobial  
resistance, antibiotic use and infection control resources  
in European long term care facilities



**RESIDENT QUESTIONNAIRE**

**RESIDENT DATA**

GENDER	<input type="checkbox"/>	<i>Male</i>	<input type="checkbox"/>	<i>Female</i>				
BIRTH YEAR	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>							<i>(YYYY)</i>
LENGTH OF STAY IN THE FACILITY	<input type="checkbox"/>	<i>Less than 1 year</i>						
	<input type="checkbox"/>	<i>1 year or longer</i>						
ADMISSION TO A HOSPITAL IN THE LAST 3 MONTHS	<input type="checkbox"/>	<i>Yes</i>	<input type="checkbox"/>	<i>No</i>				
SURGERY IN THE PREVIOUS 30 DAYS	<input type="checkbox"/>	<i>Yes</i>	<input type="checkbox"/>	<i>No</i>				
<b>PRESENCE OF:</b>								
- URINARY CATHETER	<input type="checkbox"/>	<i>Yes</i>	<input type="checkbox"/>	<i>No</i>				
- VASCULAR CATHETER	<input type="checkbox"/>	<i>Yes</i>	<input type="checkbox"/>	<i>No</i>				
- INCONTINENCE (URINARY AND/OR FAECAL)	<input type="checkbox"/>	<i>Yes</i>	<input type="checkbox"/>	<i>No</i>				
- WOUNDS								
- PRESSURE WOUNDS	<input type="checkbox"/>	<i>Yes</i>	<input type="checkbox"/>	<i>No</i>				
- OTHER WOUNDS	<input type="checkbox"/>	<i>Yes</i>	<input type="checkbox"/>	<i>No</i>				
- DISORIENTED (in time and/or space)	<input type="checkbox"/>	<i>Yes</i>	<input type="checkbox"/>	<i>No</i>				
- MOBILITY	<input type="checkbox"/>	<i>Ambulant</i>	<input type="checkbox"/>	<i>Wheelchair</i> <input type="checkbox"/> <i>Bedridden</i>				

**On the day of the survey, the resident:**

<input type="checkbox"/> RECEIVES AN ANTIBIOTIC THERAPY	→ COMPLETE PAGE 2 OF THIS QUESTIONNAIRE
<input type="checkbox"/> PRESENTS SIGNS/SYMPTOMS OF AN INFECTION (not present or in incubation at admission)	→ COMPLETE PAGE 3/4 OF THE QUESTIONNAIRE
<input type="checkbox"/> BOTH: <b>AB AND</b> SIGNS/SYMPTOMS OF INFECTION	→ COMPLETE ALL THESE PAGES

**Important remark:**

We strongly recommend you to write the resident study number on each of following pages (right top of each page), in order to keep data from one single resident together.

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**ANTIBIOTIC TREATMENT DATA**

	Antibiotic – 1	Antibiotic – 2	Antibiotic – 3	Antibiotic – 4
ANTIBIOTIC NAME (capital letters)	.....	.....	.....	.....
TOTAL PRESCRIBED DAILY DOSE	.....	.....	.....	.....
UNIT	<input type="checkbox"/> <i>gr./ day</i> <input type="checkbox"/> <i>mg./ day</i> <input type="checkbox"/> <i>I.U./ day</i>	<input type="checkbox"/> <i>gr./ day</i> <input type="checkbox"/> <i>mg./ day</i> <input type="checkbox"/> <i>I.U./ day</i>	<input type="checkbox"/> <i>gr./ day</i> <input type="checkbox"/> <i>mg./ day</i> <input type="checkbox"/> <i>I.U./ day</i>	<input type="checkbox"/> <i>gr./ day</i> <input type="checkbox"/> <i>mg./ day</i> <input type="checkbox"/> <i>I.U./ day</i>
ADMINISTRATION ROUTE	<input type="checkbox"/> <i>Oral</i> <input type="checkbox"/> <i>IM or IV</i> <input type="checkbox"/> <i>Inhalation</i> <input type="checkbox"/> <i>Rectal</i>	<input type="checkbox"/> <i>Oral</i> <input type="checkbox"/> <i>IM or IV</i> <input type="checkbox"/> <i>Inhalation</i> <input type="checkbox"/> <i>Rectal</i>	<input type="checkbox"/> <i>Oral</i> <input type="checkbox"/> <i>IM or IV</i> <input type="checkbox"/> <i>Inhalation</i> <input type="checkbox"/> <i>Rectal</i>	<input type="checkbox"/> <i>Oral</i> <input type="checkbox"/> <i>IM or IV</i> <input type="checkbox"/> <i>Inhalation</i> <input type="checkbox"/> <i>Rectal</i>
TYPE OF AB TREATMENT	<input type="checkbox"/> <i>Prophylactic</i> <input type="checkbox"/> <i>Therapeutic</i>	<input type="checkbox"/> <i>Prophylactic</i> <input type="checkbox"/> <i>Therapeutic</i>	<input type="checkbox"/> <i>Prophylactic</i> <input type="checkbox"/> <i>Therapeutic</i>	<input type="checkbox"/> <i>Prophylactic</i> <input type="checkbox"/> <i>Therapeutic</i>
AB THERAPY GIVEN FOR	<input type="checkbox"/> <i>Urinary tract</i> <input type="checkbox"/> <i>Skin or wound</i> <input type="checkbox"/> <i>Respiratory tract</i> <input type="checkbox"/> <i>Gastrointestinal</i> <input type="checkbox"/> <i>Eye</i> <input type="checkbox"/> <i>Ear, nose, mouth</i> <input type="checkbox"/> <i>Systemic infection</i> <input type="checkbox"/> <i>Unexplained fever</i> <input type="checkbox"/> <i>Other</i>	<input type="checkbox"/> <i>Urinary tract</i> <input type="checkbox"/> <i>Skin or wound</i> <input type="checkbox"/> <i>Respiratory tract</i> <input type="checkbox"/> <i>Gastrointestinal</i> <input type="checkbox"/> <i>Eye</i> <input type="checkbox"/> <i>Ear, nose, mouth</i> <input type="checkbox"/> <i>Systemic infection</i> <input type="checkbox"/> <i>Unexplained fever</i> <input type="checkbox"/> <i>Other</i>	<input type="checkbox"/> <i>Urinary tract</i> <input type="checkbox"/> <i>Skin or wound</i> <input type="checkbox"/> <i>Respiratory tract</i> <input type="checkbox"/> <i>Gastrointestinal</i> <input type="checkbox"/> <i>Eye</i> <input type="checkbox"/> <i>Ear, nose, mouth</i> <input type="checkbox"/> <i>Systemic infection</i> <input type="checkbox"/> <i>Unexplained fever</i> <input type="checkbox"/> <i>Other</i>	<input type="checkbox"/> <i>Urinary tract</i> <input type="checkbox"/> <i>Skin or wound</i> <input type="checkbox"/> <i>Respiratory tract</i> <input type="checkbox"/> <i>Gastrointestinal</i> <input type="checkbox"/> <i>Eye</i> <input type="checkbox"/> <i>Ear, nose, mouth</i> <input type="checkbox"/> <i>Systemic infection</i> <input type="checkbox"/> <i>Unexplained fever</i> <input type="checkbox"/> <i>Other</i>
<i>Specify:</i>				
WHERE PRESCRIBED?	<input type="checkbox"/> <i>In this facility</i> <input type="checkbox"/> <i>In the hospital</i> <input type="checkbox"/> <i>Elsewhere</i>	<input type="checkbox"/> <i>In this facility</i> <input type="checkbox"/> <i>In the hospital</i> <input type="checkbox"/> <i>Elsewhere</i>	<input type="checkbox"/> <i>In this facility</i> <input type="checkbox"/> <i>In the hospital</i> <input type="checkbox"/> <i>Elsewhere</i>	<input type="checkbox"/> <i>In this facility</i> <input type="checkbox"/> <i>In the hospital</i> <input type="checkbox"/> <i>Elsewhere</i>
WHO PRESCRIBED?	<input type="checkbox"/> <i>GP</i> <input type="checkbox"/> <i>Specialist</i> <input type="checkbox"/> <i>Pharmacist</i> <input type="checkbox"/> <i>Nurse</i> <input type="checkbox"/> <i>Other</i>	<input type="checkbox"/> <i>GP</i> <input type="checkbox"/> <i>Specialist</i> <input type="checkbox"/> <i>Pharmacist</i> <input type="checkbox"/> <i>Nurse</i> <input type="checkbox"/> <i>Other</i>	<input type="checkbox"/> <i>GP</i> <input type="checkbox"/> <i>Specialist</i> <input type="checkbox"/> <i>Pharmacist</i> <input type="checkbox"/> <i>Nurse</i> <input type="checkbox"/> <i>Other</i>	<input type="checkbox"/> <i>GP</i> <input type="checkbox"/> <i>Specialist</i> <input type="checkbox"/> <i>Pharmacist</i> <input type="checkbox"/> <i>Nurse</i> <input type="checkbox"/> <i>Other</i>
<i>FOR URINE: DIPSTICK BEFORE AB-THERAPY</i>	<input type="checkbox"/> <i>No</i> <input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i> <input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i> <input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i> <input type="checkbox"/> <i>Yes</i>
WAS A CULTURE SAMPLE TAKEN?	<input type="checkbox"/> <i>No</i> <input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i> <input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i> <input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i> <input type="checkbox"/> <i>Yes</i>

**ISOLATED MICROORGANISMS**

NAME OF ISOLATED MICROORGANISM (please use code-list)	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

## SIGNS AND SYMPTOMS OF AN INFECTION

### URINARY TRACT INFECTION

- Fever (> 38°C)
- Chills
- New or increased burning pain on urination
- New or increased frequency on urination
- New or increased urgency on urination
- New flank or suprapubic pain or tenderness
- Change in character of urine (or smell)
- Worsening of mental or functional status (may be a new or increased incontinence)
- Diagnosed by the attending physician

### SKIN INFECTION

#### *Cellulitis/soft tissue/ wound infection*

- Pus present at a wound, skin, or soft tissue site
- Fever (> 38°C)
- Worsening of mental or functional status
- New or increasing heat at the affected site
- New or increasing redness at affected site
- New or increasing swelling at affected site
- New or increasing tenderness or pain at the affected site
- New or increasing serous drainage at the affected site
- Diagnosed by the attending physician

- Local antibiotic used for treatment (antibiotic ointment, unguent, etc ...)

#### *Fungal skin infection*

- Maculopapular rash
- Physician diagnosis or laboratory confirmation

#### *Herpes simplex & herpes zoster infection*

- Vesicular rash
- Physician diagnosis or laboratory confirmation

#### *Scabies*

- Maculopapular and/or itching rash
- Physician diagnosis or laboratory confirmation

### RESPIRATORY TRACT INFECTION

#### *Common cold syndromes/pharyngitis*

- Runny nose or sneezing
- Stuffy nose (e.g., congestion)
- Sore throat or hoarseness or difficulty in swallowing
- Dry cough
- Swollen or tender glands in the neck (cervical lymphadenopathy)
- Diagnosed by the attending physician

#### *Influenza-like illness*

- Fever (> 38°C)
- Chills
- New headache or eye pain
- Myalgias
- Malaise or loss of appetite
- Sore throat
- New or increased dry cough
- Diagnosed by the attending physician

#### *Pneumonia/ other lower respiratory tract infections (bronchitis, tracheobronchitis)*

- Interpretation of a chest radiograph as demonstrating “pneumonia”, “probable pneumonia”, or the presence of an infiltrate. If a previous radiograph exists for comparison, the infiltrate should be new.
- New or increased cough
- New or increased sputum production
- Fever (> 38°C)
- Pleuritic chest pain
- Physical findings on chest examination (rales, rhonchi, wheezes, bronchial breathing)
- Shortness of breath or respiratory rate > 25 per min.
- Worsening mental or functional status
- Pneumonia diagnosed by the attending physician (focus of crepitant rales on chest examination)
- Other lower respiratory tract infection diagnosed by the attending physician

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## SIGNS AND SYMPTOMS OF AN INFECTION

### GASTROINTESTINAL TRACT INFECTION

- Diarrhoea: two or more loose or watery stools within a 24-hour period
- Vomiting: two or more episodes of vomiting in a 24-hour period
- A stool culture positive for a pathogen (Salmonella, Shigella, E. coli 0157:H7, Campylobacter, Clostridium difficile) and/or a toxin assay positive for C. difficile toxin
- Nausea
- Abdominal pain or tenderness
- Diagnosed by the attending physician

### EYE INFECTION

#### *Conjunctivitis*

- Pus appearing from eyes, present for at least 24 hours
- Conjunctival redness, with or without itching or pain present for at least 24 hours (also known as "pink eye")
- Diagnosed by the attending physician)

- Local antibiotic used for treatment (antibiotic drops, ointment, etc ...)

#### *Ear infection*

- New drainage from one or both ears (non purulent drainage must be accompanied by additional symptoms, such as ear pain or redness.
- Diagnosed by the attending physician

#### *Mouth and perioral infection*

- Diagnosed by the attending physician

#### *Sinusitis*

- Diagnosed by the attending physician

### SYSTEMIC INFECTION

#### *Primary bloodstream infection*

- Two or more blood cultures positives for the same organism
- A single blood culture documented with an organism thought not to be a contaminant
- Fever ( $> 38^{\circ}\text{C}$ )
- New hypothermia ( $< 34.5^{\circ}\text{C}$ )
- A drop in systolic blood pressure of  $> 30$  mmHg from baseline
- Worsening mental or functional status
- Diagnosed by the attending physician

### UNEXPLAINED FEBRILE EPISODE

- The resident must have documentation in the medical record of fever ( $> 38^{\circ}\text{C}$ ) on two or more occasions at least 12 hours apart in any 3-day period, with no known infectious or non-infectious cause
- Diagnosed by the attending physician

- OTHER**  
*please specify*