

***Emergency Department Providers Post-Implementation Questionnaire***

1. What is your clinical training background (e.g. residencies and fellowships in what fields)
2. How long have you been in practice as an attending physician?
3. How long have you been working in the BWH ED?
4. Have you used antibiograms in the emergency department setting? Yes/No
  - In the last month?
  - In the last year?
5. We have several questions about antibiograms usefulness in the ED and generally
  - In your opinion, on a scale of 1 to 5 with '1' indicating very minimal usefulness and '5' very useful, how useful are antibiograms ***in the emergency department setting*** for selecting the most effective antibiotic for a particular infection or organism? \_\_\_\_\_. Please explain.
  - In your opinion, on a scale of 1 to 5 with '1' indicating very minimal usefulness and '5' very useful, how useful are antibiograms, *in general*, for selecting the most effective antibiotic for a particular infection or organism? \_\_\_\_\_ Please explain.
6. Have you used antibiograms at another health care setting? Yes/No
  - What setting?
    - a. Hospital Ward or ICU
    - b. Home Health
    - c. Clinic
    - d. Other \_\_\_\_\_
  - In your opinion, on a scale of 1 to 5 with '1' indicating very minimal usefulness and '5' very useful, how useful are antibiograms ***in the setting noted above*** for selecting the most effective antibiotic for a particular infection or organism? \_\_\_\_\_. Please explain.

7. If you are currently using antibiograms or have used them in the past, please answer the following:

- How is the information communicated to you?
  - a. Online (webpage, hospital internet)
  - b. Email
  - c. Posted in paper form in clinical area
  - d. Mail
  - e. Other \_\_\_\_\_
- Is this method of communication convenient and efficient? Yes/No
- How could communication of antibiograms be improved?  
\_\_\_\_\_

8. In your opinion, how well do you feel that you know the antibiotic sensitivity/resistance pattern of common infections in local nursing homes?

- Response coded on 5-point Likert scale with "1" indicating very well to "5" indicating very poorly.

9. Did you use the antibiogram report provided for [NAME OF NURSING HOME]? Yes/No

- If yes, do you have any suggestions on how the program could be improved?  
\_\_\_\_\_

- If no, why didn't you use the antibiogram; what were the barriers that prohibited their use?  
\_\_\_\_\_

### Vignettes

Please review the following vignettes and answer based on your current clinical practice at the Brigham and Women's Hospital. The goal of these questions is to identify your practice, not to quiz your medical knowledge – there is not a single right answer. Assume that the patients do not have other significant conditions and are not taking medications other than those mentioned.

1. Ms. Lee, a 71-year-old female, is a long-term resident of the nursing home. She has dementia and no recent hospitalizations. For review: she complained to a nurse of dysuria, urinary frequency and urinary urgency since 8 PM last night. You assess the patient and find that her vital signs are HR 88, RR 16, BP 136/84, T 100.2 F, SpO<sub>2</sub> 98%. A urine dip shows 2+ leukocytes and 2+ nitrites, 50 WBCs, 5 RBCs and 3+ bacteria. The patient is generally well appearing and has some mild suprapubic tenderness. A urine culture is pending.
  - a. Would you prescribe this patient an antibiotic?
    1. Prescribe an oral antibiotic.
    2. Prescribe an IV antibiotic.
    3. No antibiotic.
  - b. What disposition is most appropriate for this patient? (choose one)
    1. Discharge the patient and transfer back to the nursing home.
    2. Admit the patient to the hospital.
  - c. Please choose the most appropriate antibiotic(s) for the above described symptoms? [can choose more than one]
    - Oral quinolone (e.g. ciprofloxacin)
    - Bactrim (Trimethoprim and Sulfamethoxazole)
    - Cephalexin
    - Nitrofurantoin
    - Beta Lactam (e.g. amoxicillin)
    - Amoxicillin + clavulanate (Augmentin®)
    - An oral 3<sup>rd</sup> Gen cephalosporin
    - Other [please describe]

2. Mr. Jones is a 76 year old man who is a long-term resident of the nursing home facility. He has dementia and no recent hospitalizations. For review: His other medical problems include hypertension, and osteoarthritis. Mr. Jones was transferred to the ED because he has been coughing for 3 days and today developed a fever. He has a hacking cough, is bringing up yellow/green sputum and his vital signs are T 100.5 F, HR 88, RR 16, BP 136/84, SpO2 95%. His chest x-ray shows a right middle lobe infiltrate. His chem-7 and lactate are normal.

a. Would you prescribe this patient an antibiotic?

1. Prescribe an oral antibiotic.
2. Prescribe an IV antibiotic.
3. No antibiotic.

b. What disposition is most appropriate for this patient? (choose one)

1. Discharge the patient and transfer back to the nursing home.
2. Admit the patient to the hospital.

b. Please choose the most appropriate antibiotic(s) for the above described symptoms? [can choose more than one]

- 3<sup>rd</sup> or 4<sup>th</sup> generation quinolone (e.g. levofloxacin)
- Macrolide (e.g. azithromycin)
- Beta Lactam (e.g. amoxicillin)
- Amoxicillin + clavulanate (Augmentin®)
- Bactrim (Trimethoprim and Sulfamethoxazole)
- Doxycycline
- 3<sup>rd</sup> Gen cephalosporin (e.g. cefpodoxime)
- Other [please describe]

3. Ms. Williams is a 66 year old woman who a long-term resident of the nursing home. She has dementia and no recent hospitalizations. For review: She has a past medical history of osteoarthritis, and elevated cholesterol, for which she takes acetaminophen and simvastatin. She was transferred to the ED after a nurse noticed an area on her right ankle and lower leg that is red, warm, and tender. The rest of her leg is not remarkable and her calf is soft, non-tender and not swollen compared to the left side. Her vitals: T 100.5 F, HR 88, RR 16, BP 136/84, SpO2 97%. Her chem-7 and lactate are normal.

a. Would you prescribe this patient an antibiotic?

1. Prescribe an oral antibiotic.
2. Prescribe an IV antibiotic.
3. No antibiotic.

b. What disposition is most appropriate for this patient? (choose one)

1. Discharge the patient and transfer back to the nursing home.
2. Admit the patient to the hospital.

- c. Please choose the most appropriate antibiotic(s) for the above described symptoms? [can choose more than one]
- 1<sup>st</sup> gen cephalosporin (cephalexin)
  - Beta Lactam (e.g. amoxicillin)
  - Amoxicillin + clavulanate (Augmentin®)
  - 1<sup>st</sup> generation is quinolone (e.g. ciprofloxacin)
  - 3<sup>rd</sup> or 4<sup>th</sup> generation quinolone (e.g. levofloxacin)
  - Clindamycin
  - Other [please describe]
4. Mr. Jackson is a 75-year-old who is a long-term resident of your facility, with no recent hospitalizations. For review: In addition he has a history of post-herpetic neuralgia and depression for which he takes gabapentin and citalopram. Mr. Jackson is transferred to the ED after having had a fever throughout the day: 101F in the morning and 101.8F when repeated this afternoon. His current vital signs are HR 90, BP 120/80, RR 14, SpO2 95%. He appears to be his normal self and does not have any specific complaints except that he is tired and has had some chills. You do not find anything new on his exam. A urine dip shows 1+ nitrites and no leukocyte esterase, 5 WBCs, 3 RBCs, and 1+ bacteria. A chest x-ray shows no acute process. You ordered cultures (blood and urine). His chem-7 and lactate are normal. His WBC count is 12,000 without bands.
- a. Would you prescribe this patient an antibiotic?
1. Prescribe an oral antibiotic.
  2. Prescribe an IV antibiotic.
  3. No antibiotic.
- b. What disposition is most appropriate for this patient? (choose one)
1. Discharge the patient and transfer back to the nursing home.
  2. Admit the patient to the hospital.
- c. Please choose the most appropriate antibiotic regimen for the above described symptoms? Please list names, doses and routes. If your regimen includes more than one antibiotic, please list all. [please describe]

Please review the following vignettes and answer based on your current clinical practice and with the availability of the following antibiogram.

## Sample Facility Antibigram

### Blood Isolates - Percent Susceptible (antibiotic key at bottom of chart)

Gram Negative Rods	Isolates Tested*	AMP	CTX	CAZ	CZO	CRO	FEP	GEN	LEV	NIT	CTT	SXT
Escherichia coli	51	41.2	***	92.2	88	92	92.2	90.2	66.7	98	100	66.7
Klebsiella pneumoniae ss. Pneumoniae	13	0	***	92.3	91.7	92	92.3	92.3	84.6	33.3	100	76.9
Gram Positive Cocci and Rods		AMP	CHL	CLI	ERY	LEV	OXA	PEN	TCY	VAN	SXT	
Staphylococcus aureus	61		93.2	74.6	27.1	50.8	49.2	11.9	98	100		98.3
Stapylococcus coag. Neg	130		99	72	37	45	77	19	88.9	100		58.9
Enterococcus faecalis	20	100	80		15	50	0	100	18.2	90		

### Urine Isolates - Percent Susceptible (antibiotic key at bottom of chart)

Gram Negative Rods	Isolates Tested*	AMP	CTX	CAZ	CZO	CRO	FEP	GEN	LEV	NIT	CTT	SXT
Escherichia coli	365	23.5		94.1		94.1	94.1	84.1	88	95	100	47.1
Klebsiella pneumoniae ss. Pneumoniae	68	0	***	64		64	64	72.7	86	37	100	45.5
Gram Positive Cocci and Rods		AMP	CHL	CLI	ERY	LEV	OXA	PEN	TCY	VAN	SXT	
Staphylococcus aureus	24		100	62.5	25	37.5	50	12.5	95	100		95.8
Stapylococcus coag. Neg	30		***	***	***	***	***		***	***		
Enterococcus sp	47	83	83		14.9	40.4	0		33.3	78.7		

### Wound Isolates - Percent Susceptible (antibiotic key at bottom of chart)

Gram Negative Rods	Isolates Tested*	AMP	CTX	CAZ	CZO	CRO	FEP	GEN	LEV	NIT	CTT	SXT
Escherichia coli	14	42.9	***	100	91.7	100	100	85.7	64.3	100	94.1	64.3
Gram Positive Cocci and Rods		AMP	CHL	CLI	ERY	LEV	OXA	PEN	TCY	VAN	SXT	
Staphylococcus aureus	93	0	97.8	86	43	70	63.4	9.7	100	100		98.9
Stapylococcus coag. Neg	54		100	100	66.7	66.7	66.7	0	100	100		
Enterococcus sp	19	84.2	78.9		26.3	68.4	0		25	73.7		

**AMC =amox/clav**    **CAZ =ceftazidime**    **CLI =clindamycin**    **CTX =cefotaxime**    **FEP=cefepime**    **NIT =nitrofurantoin**    **SXT = sulfa/trimethoprim**  
**AMK =amikacin**    **CEP =cephalothin**    **CRO =ceftriaxone**    **CXM =cefuroxime**    **GEN =gentamicin**    **OXA =oxacillin**    **TCY =tetracycline**  
**AMP =ampicillin**    **CHL =chloramphenicol**    **CTT =cefotetan**    **CZO=cefazolin**    **IPM=imipenem**    **PEN =penicillin**    **VAN =vancomycin**  
**ATM = aztreonam**    **CIP= ciprofloxacin**    **CTT=cefotetan**    **ERY =erythromycin**    **LEV = levofloxacin**    **PIP =piperacillin**

\*\* AMP and PEN are represented by susceptibility to OXA; \*\*\* no longer tested; Isolates that test R to Ery and S to CLI may be induced to R to CLI during treatment.

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- a. Would you prescribe this patient an antibiotic?
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  3. No antibiotic.
  
- b. What disposition is most appropriate for this patient? (choose one)
  1. Discharge the patient and transfer back to the nursing home.
  2. Admit the patient to the hospital.
  
- c. Please choose the most appropriate antibiotic(s) for the above described symptoms? [can choose more than one]
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  - Bactrim (Trimethoprim and Sulfamethoxazole)
  - Doxycycline
  - 3<sup>rd</sup> Gen cephalosporin (e.g. cefpodoxime)
  - Other [please describe]
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  - Clindamycin
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