02.08.2017

FROM THE DESK OF:

Anthony P. Weiss, MD, Chief Medical Officer, Associate Dean for Clinical Affairs, Upstate University Hospital



Hepatitis C Screening Update

Applies to All Physicians

Hep C Update As a follow up note to last week's Hepatitis C advisory, just wanted to remind you that patients with a positive screen can be referred to our Upstate GI or ID physicians for help in continued evaluation and management. We have capacity to care for patients with Hep C and follow up comprehensively within our system. Below are some further details from our GI and ID services, respectively:

Hepatitis C virus (HCV) is one of the most important causes of cirrhosis and liver cancer in the US. One time testing for HCV is recommended for all persons born between 1945 and 1965, and for all patients with behaviors, exposures and conditions associated with an increased risk of HCV infection. It is estimated that more than 4 million Americans have antibody to HCV, which indicates current or previous infection with the virus. It is important that the infected patient is evaluated by specialists who have the expertise to treat the infection and complications of liver disease, if present. At Upstate, the Division of Gastroenterology has various trained providers, including a transplant hepatologist, to provide care for all patients with HCV infection and chronic liver disease. University Gastroenterology at 1000 E Genesee St welcomes referrals for all patients with new or existing diagnosis of HCV infection.

Immune Health Services offers comprehensive HIV prevention and treatment as well as primary care. We provide treatment for chronic hepatitis C infection to patients who are co-infected with HIV and HCV, or who are HCV mono-infected and are receiving HIV prevention services in our care. Our clinic benefits from social work and care management support for insurance navigation, nurses experienced in HCV prior authorizations, an embedded infectious disease pharmacist with extensive HCV experience, and a growing track record of curing patients utilizing new direct acting agents.

Code Blue – Crowd Control

Applies to All Physicians

Code Blue Advisory The Resuscitation Committee has reviewed several cases in which excessive staff are responding to Code Blue calls at the DT campus. Although the intent is to help, it causes confusion with the identification of essential Code Team Members, and obstructs the team from providing resuscitative measures.

This involves all disciplines: Nursing, Physician, Respiratory Therapy.

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If you are an essential Code Blue Team member, please do not bring additional personnel. Staff present for educational purposes must remain away from the immediate patient care area and observe from a distance.

The Administrative Supervisor will direct those without an active role to step away from the immediate patient care area. UPD will enforce the maintenance of crowd control as needed.

On behalf of the Resuscitation Committee, we greatly appreciate your assistance with sharing this message with your teams, so that we may provide the best quality care for our patients at Upstate University Hospital.

Thank You.

Drug Shortage

Applies to All Physicians

Shortage High Advisory The institution is currently experiencing actionable drug shortages with heparin (for subcutaneous use/VTE prophylaxis), IV compazine, and IV promethazine. As such, the following action steps intend to be implemented:

Subcutaneous Heparin:

We are currently experiencing a shortage of subcutaneous heparin. Pharmacy will be making efforts to bring in alternative heparin formulations to cover some of our needs. However, in light of the shortage we feel expanding our use of enoxaparin in appropriate patients is also a prudent approach. Existing policy (CM T13) allows pharmacy to interchange heparin prophylaxis orders with enoxaparin on the Downtown Campus (please see table below from existing policy). Given the shortage and previously measured benefits of preferentially using enoxaparin over heparin (reduced injections and improved patient comfort, reduced nursing administration time / reduction in missed VTE prophylaxis doses, reduced risk for HIT), pharmacy intends to enhance our use of this interchange policy in qualified patients. Pharmacy will also be working with IMT/EPIC to make the preference for enoxaparin more apparent when prescribers initially order VTE prophylaxis. This should reduce the need for pharmacy to make interchanges after the initial order is placed.

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Low Molecular Weight Heparin Interchanges (See also Renal Dosing of Medications Procedure) - continued

Original Order for: Will be interchanged to: Interchange from heparin SQ (DVT prophylaxis) to enoxaparin SQ (DT only) Low molecular weight heparins (Enoxaparin) are the preferred pharmacologic modality for VTE prophylaxis at Upstate University Hospital. Due to considerations which include frequency of administration, nursing time, and potential for missed doses, enoxaparin is preferred over subcutaneous heparin therapy for most patients. Providers are encouraged to prescribe enoxaparin for pharmacologic VTE prevention unless there are specific reasons to avoid its use. The ensure enoxaparin is being used preferentially in appropriate patients, the following therapeutic substitution process will be executed by pharmacy. All orders for subcutaneous heparin will be reviewed by pharmacy and changed to enoxaparin when the patient's creatinine clearance is ≥15 ml/min. Enoxaparin dosing will be chosen as follows: CrCl ≥30 ml/min: Substitute with enoxaparin 40mg SQ once daily CrCl 15-29 ml/min: Substitute with enoxaparin 30mg SQ once daily Order written as: Heparin 5000 units subcutaneous every 12 CrCl <15 ml/min: Do not substitute hours or every 8 hours with enoxaparin

IV Compazine:

IV compazine is currently not available from any manufacturer. Oral formulation remains available. If an order is placed, pharmacy will contact the prescriber to use an alternative agent. Given the long term nature of this shortage, IV compazine will be hidden from existing order sets until further supply becomes available.

IV Promethazine:

IV promethazine is on shortage, and the pharmacy currently has limited supply. Oral formulation remains available. Pharmacy will fulfill orders while supplies last, but providers may be contacted by pharmacy to use alternative therapies if/when supplies are exhausted.

Thank you for your time and cooperation with these issues. If you have any questions, please contact Chris Miller. Pharm.D., BCPS, Associate Director of Clinical Pharmacy Services, at 464-4214.

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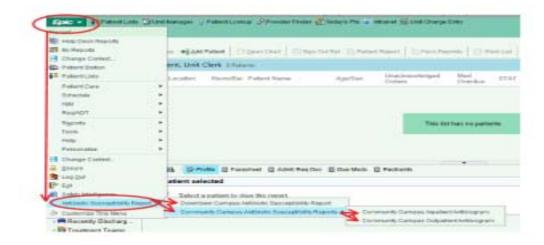
Anthony P. Weiss, MD, Chief Medical Officer, Associate Dean for Clinical Affairs, Upstate University Hospital



New Location for Antibiotic Susceptibility Report

Applies to All Physicians

Antibiotic Update The antibiogram has recently been placed in a more accessible spot in EPIC so that providers will be able to pull it up when needed. The new location is shown in the picture below.



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Outstanding Physician Comments

Applies to All Physicians

Comments Informational Each week we receive written comments from our patients regarding the care we provide within the Hospital. Below are this week's comments from grateful patients receiving care on the units and clinics at Upstate:

Breast Imaging - Dr. Adhikary was great.

Center for Children's Surgery— Dr. Giraud - he was very detailed in his explanations and very friendly.

Drs. Michel, Resti, & Nicholas and Child Life were polite, anticipated our needs, knowledgeable, child friendly, and put us at ease.

Dr. Kistler has been fantastic through both surgeries and f/u appointments.

Vascular Surgery Clinic - CG – Dr. Surowiec. He takes his time and explains everything I ask him

Radiology CG – Dr. Karmel, Joan and Tanya were wonderful. You are extremely lucky to have these people helping patients

Upstate Outpatient Surgery Center – Dr. Trussell was very reassuring about the test.

Dr. Riddell was excellent!

Pediatric Surgery – Dr. Ahmed was so good with the kids.

Dr. Meier's compassion for me & child

Dr. Meier was very informative

The Surgery Center CG – Dr. Halleran, the entire nursing staff and the entire anesthesiology staff - all AMAZING. Thank you.

Dr. Shaw and the whole team!

University Center for Vision Care – Dr. Swan has been amazing!

Dr. Swan is very caring and a great doctor.

Dr. Swan is very concerned about my health.

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MORNING CMO R

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University Cardiology - Dr. Michiel is a gift that there are no words to adequately describe! He is meticulous, knowledgeable, up to date, accessible.

> Dr. Michiel is the best. Knowledgeable; professional and goes above and beyond in his care. He makes sure you know what's going on in terms of your own health.

Dr. Szombathy respects my intelligence; clear explanations.

Dr. Carhart explained thoroughly.

Dr. Carhart is a practical cardiologist.

Dr. Liu is by far an excellent doctor of cardiology and I would recommend him to all patients.

Upstate Urology – Dr. Ginzburg is an awesome doctor; she is so sweet and soft spoken.

She listens and explains very well.

I have received excellent care from Dr. B.

Dr. Nikolavsky is very competent and a straight shooter.

Medicine Subspecialties - Dr. Yu is wonderful.

Dr. Ghimire was very kind and informative. I really appreciated the visit and his willingness to listen to my situation and assist with a solution.

Breast Care Center - Dr. Charlamb is always caring, professional, knowledgeable and thorough.

Joslin Center – Dr. Dhaliwal is wonderful. Professional, friendly, easy to understand.

Dr. Dhaliwal is extremely personable and very professional.

Dr. Nadkarni was pleasant.

Dr. Feuerstein was an excellent listener, open-minded and provided thoughtful advice and input regarding my health issues.

Dr. Weinstein is knowledge about diabetes and the care she gives to me is outstanding.

Dr. Hopkins is always willing to listen and take my thoughts into consideration when planning my care.

UHCC Neurology – Dr. Mejico is the best!

Dr. Jubelt is thoughtful, caring and attentive to my personal needs.

Dr. Bradshaw always shows the highest level of caring expertise.

ENT – Dr. Suryadevara was very thorough with checking my neck and then on his own also took care to check past surgery he did to see if I was free of issues.

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Understanding an Antibiogram

Definition:

An antibiogram is an aggregate of *in vitro* antibiotic susceptibilities obtained from culture and sensitivity results within a given time frame. It provides the percentage of samples for a given organism which were sensitive to a particular antibiotic. Antibiograms are usually divided into inpatient and outpatient reports due to the variation in antibiotic susceptibilities between these settings, and are typically produced and distributed on an annual basis.

Purpose:

An antibiogram is intended to guide the prescriber when selecting empiric therapy prior to culture results being available. In many cases, guidelines are available to recommend empiric treatment options, however, these guidelines do not account for local susceptibility patterns. An antibiogram is often used in conjunction with guideline recommendations to select agents that will be the most effective where you are practicing.

Reading & Interpreting the Antibiogram:

The antibiogram is a chart with organisms listed in rows and antibiotics listed in columns. The number seen where these two intersect is the percentage of tested isolates that were susceptible to that drug. An "R" represents intrinsic resistance. The number of isolates appears in parenthesis next to the organism name. Organisms may not be reported if the number of isolates was too small to yield an accurate susceptibility rate. The antibiogram also has a section with resistance rates, i.e MRSA and VRE and trends over the last few years.

Inpatient Antibiotic Susceptibility Report

% Susceptible

	F	Penic	illins		Cephalosporins			Carba- penems	Fluoroq- uinolones		Amino- glycosides			Other					
Organism (N)*	Penicillin	Ampicillin	Oxacillin	Pip/Tazo	Cefazolin	Cefuroxime	Ceftriaxone	Ceftazidime	Meropenem	Ciprofloxacin	Levofloxacin	Gentamicin	Tobramycin	Amikacin	Clindamycin	Nitrofurantoin ^A	Tetracycline	Trimeth/Sulfa	Vancomycin
Enterobacter aerogenes/cloacae (105)	R	R	R	70	R	R	69	70	99	97		96	96	100	R			90	R
Escherichia coli (535)	R	49	R	94	85		93	96	99	73		90	91	99	R	92		73	R
Klebsiella oxytoca (53)	R	R	R	89	68		91	96	96	96		94	94	100	R			91	R
Klebsiella pneumoniae (158)	R	R	R	92	86		92	92	98	93		94	92	99	R	36		89	R
Proteus mirabilis (74)	R	81	R	99	93		96	97	100	74		96	99	100	R	R	R	85	R
Pseudomonas aeruginosa (220)	R	R	R	86	R	R	R	89	83	85		93	95	98	R	R	R	R	R
Serratia marcescens (45)	R	R	R	100	R	R	96	100	100	96		100	93	100	R	R		100	R
Enterococcus spp. (369)		70			R	R	R	R		47		78			R	70		R	75 ^F
Coag. pos. staphylococci - MSSA (350)			100		100										76		95	96	100
Coag. pos. staphylococci - MRSA (256)			0 ^E		0										71		96	96	100
Coag. neg. staphylococci (143)			38		38										46		79		100
S. pneumoniae/non-meningitis (70) ^B	94 ^C					67	94				96								100
S. pneumoniae/meningitis (70) ^B	44 ^D						75												100
S. anginosus group (71)	92						100								66				100

^{*} Does not include cystic fibrosis isolates

A. For urine isolates only

[&]quot;R" = intrinsically resistant

Yeasts (non-urine) ¹	Fluconazole
Candida albicans (63)	98
Candida sp. not albicans (66)	86

¹ Data from 2014-15

B. Represents isolates from all sources and patient locations

C. Penicillin non-meningitis breakpoints: 94% S, 4% I, 2% R

D. Penicillin meningitis breakpoints: 44% S, 0% I, 56% R E. MRSA: 2015=42%, 2014=44%, 2013=44%, 2012=45%

F. VRE: 2015=25%, 2014=44%, 2013=44%, 2012=45% F. VRE: 2015=25%, 2014=25%, 2013=23%, 2012=34%

Combination Antibiogram

The downtown campus has produced a combination antibiogram aimed at helping clinicians pick a second agent for patients that warrant combination therapy or "double coverage". Interpretation of the combination antibiogram is different from the traditional antibiogram. The number provided is the percentage of organisms susceptible to ciprofloxacin or aminoglycosides if non-susceptible to a beta lactam. For instance, if 86% of Pseudomonas isolates were sensitive to piperacillin/tazobactam (PT), and 53% of PT non-susceptible isolates were sensitive to ciprofloxacin, the % susceptible for the combination is ~93%.

Percentage susceptible to ciprofloxacin or aminoglycosides if non-susceptible to one of the following beta-lactams*										
	Citrobacter	Enterobacter	Escherichia	Klebsiella	Klebsiella	Pseudomonas				
	spp.	spp.	coli	oxytoca	pneumoniae	aeruginosa				
If resistant to piperacillin/tazobactam	(n=14)	(n=79)	(n=64)	(n=25)	(n=54)	(n=76)				
Ciprofloxacin	93	94	34	72	69	53				
Gentamicin	86	89	72	80	76	67				
Tobramycin	93	89	69	76	63	78				
Amikacin	100	99	97	100	93	89				
If resistant to ceftazidime	(n=12)	(n=80)	(n=61)	(n=8)	(n=29)	(n=67)				
Ciprofloxacin	100	94	48	-	28	61				
Gentamicin	92	89	74	-	45	76				
Tobramycin	100	89	67	-	28	87				
Amikacin	100	99	97	-	90	88				
If resistant to imipenem or meropenem	-	(n=5)	(n=1)	(n=1)	(n=4)	(n=117)				
Ciprofloxacin	-	-	-	-	-	52				
Gentamicin	-	-	-	-	-	71				
Tobramycin	-	-	-	-	-	80				
Amikacin	-	-	-	-	-	88				

^{*}Data from inpatient isolates during the period Jan 2012 - Dec 2014; non-susceptible = intermediate or resistant

Limitations of the Antibiogram:

- Does not account for differences in pharmacokinetic parameters between drugs; i.e concentration at the site of infection, inactivation of the drug at the site of infection, etc.
- Does not account for the development of resistance, i.e fluoroquinolones and MRSA, 3rd generation cephalosporins and AmpC-producing bacteria like Enterobacter.
- Clinical evidence demonstrating superiority of one drug over another
- Outside influences, such as imported resistance, is not accounted for
- Resistance and high antibiotic density may not occur in the same hospital unit

Considerations Based on UH Antibiograms

 Antibiotic susceptibility changes over time. Drugs once effective for certain bacteria, may no longer be ideal due to development of resistance. A few situations are highlighted below based on the 2015 antibiogram (downtown campus)

CLINDAMYCIN

- 24% of MSSA isolates and 29% of MRSA isolates from the inpatient setting were resistant to clindamycin. The resistance rates for tetracycline and trimethoprim/sulfamethoxazole were ~5%
- The rate of clindamycin resistance in group A and group B streptococcus has risen significantly in the past few years. Based on data from the Laboratory Alliance of Central New York (LACNY), 44% of group A strep is resistant to clindamycin vs 0% resistance to penicillin.

FLUOROQUINOLONES

27% of E. coli and 26% of Proteus mirabilis were resistant to ciprofloxacin. Once the drug of choice for UTI and intra-abdominal infection, ciprofloxacin is no longer an ideal empiric choice for these conditions.