

Forum

A NEWSLETTER ESTABLISHED AND COMPLETED BY THE MEDICAL & DENTAL STAFF OF ROCHESTER GENERAL HOSPITAL
MORE OF YOUR MONTHLY UPDATES CAN BE FOUND AT <http://www.rochestergeneral.org/mds>

RGH MDS ELECTED REPRESENTATIVES

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JEANNE GROVE, DO, EDITOR

24/7 PHYSICIAN HOTLINE NUMBER

922-4414

DIRECT ADMISSION NUMBER:

922-7333

CALL THE HOSPITALIST
FOR YOUR PATIENT

922-7444

2011 Quarterly Staff Meetings

6/17, 9/16, 12/16

7:30 - 9:00 a.m. Twig Auditorium

**50% attendance recommended
for all attending Physicians**

Message from the MDS President

Appreciating Spring

What's so special about spring? Plants grow all summer long yet the first swollen buds of spring are greeted with a disproportionately high degree of anticipation. Animals reproduce during every season but spring babies born after winter's hibernation capture life's symbolism more completely than other gestations. The day length of the Autumnal Equinox is precisely equal to the day length of the Spring Equinox but they are not the same. Perhaps it is a matter of seasonal juxtapositions. The contrasts between winter and spring seem more dramatic than those of the other seasons; dormancy – to – awakening, dark – to – light, cold – to – warm, brown – to – green. More than just contrasts, our ancestors would describe the difference between winter and spring as the difference between death and life. Surviving winter was not always easy in those days and the arrival of spring no doubt brought with it the hope of new crops, fresh water and freedom from the confining perimeter of a warm hearth. This centuries old seasonal cycle has indelibly imprinted the human spirit. Consequently, we anticipate Spring and despite her proclivity for fickle unpredictability, we appreciate her once she has arrived.

Appreciating Spring takes many forms and extends from individual preferences to national focus. Recently we witnessed a local tradition of appreciation on March 18th. It was an inspiring day. Fifteen physicians were recognized by patients, nurses and colleagues for exceptional medical care, teaching skills, multidisciplinary collaboration, passion and compassion. Quotes from the Father George Norton Physician Excellence Award nominations reflect tremendous appreciation: "His love of teaching and of mentoring all healthcare team members is evident." "He builds staff morale like no one else I have ever seen." "He is an extremely compassionate and caring individual and physician." "Various patients, after having seen this physician, have stated that they felt this was the first time that a physician had truly listened to them and their concerns."

"Always kind, a great listener, and offers support to all those who meet her." He has helped change the course and quality of their lives in countless compassionate ways with his smile, knowledge, experience and warm tone."



Dr. Robert Mayo,
President RGH MDS

Spring, continued

"Patients are continuously stating how wonderful he is and how glad they are that he is taking care of them." How fantastic to hear such amazing and appreciative words about the work of our physicians. Dr. Ron Sham, the recipient of this year's award is an exemplary physician, leader and contributor. Many congratulations to him and to all the exceptional nominees.

The Pat Lewis Adjunct Staff Award of Clinical Excellence was also awarded on March 18th. Physicians nominated 5 advanced practice professionals distinguished for their exemplary service, clinical excellence, and collaboration. Quotes from their nominations similarly express appreciation and gratitude: "There are a great number of patients who are alive solely because of the power of her astute observation and just-in-time acute care." "She will do whatever is necessary in a time of crisis." "She is the one person you would want on your side to help you get through when the chips are down." "This nominee is an extraordinary person and clinician who epitomized the advanced practice profession at its best." "She is the quintessential

physician's assistant." Zina Sciortino, NP was the recipient of this year's award. Many congratulations to her and all the exceptional nominees. What a privilege it is to work together!

On March 30th Physicians' Services lead by Kathy Peishal sponsored a wonderful Physicians' Day Breakfast to honor our work and contributions. Many departments and team members donated gift baskets that were raffled off to the physicians. Thank you for your beautiful expressions of appreciation and support.

The Spring of our appreciation is still unfolding. The calendar is filled with commemorative days focused on the infinite contributions of others. We would all do well to remember these days and add our voices to the chorus of gratitude. Administrative Professional's Day (Secretary's Day) is April 27th, Nurse's Day is May 6th and Memorial Day is May 30th to mention a few.

Indeed, Spring is a special season of the year. It is the greening of our landscape, the melting of our winter, the illumination of our days, the warming of our hearts. Let's all appreciate it.

*The Office of Physician Services at Rochester General Health System
Invites you to join us for the
Annual Spring Physician Social*

Tuesday, May 10, 2011
5:30pm-8:30pm
Monroe Country Club
155 Golf Avenue
Pittsford, New York 14534

Get reacquainted with colleagues and meet the newest members
of the Medical and Dental Staff.
Enjoy delicious hors d'oeuvres, pasta, carving stations and desserts.

Please respond to Michelle Simmons at (585) 922-2955 or
email: michelle.simmons@rochestergeneral.org
no later than May 2, 2011

Pharmacy Corner

THESE 2 ORDERS WERE RECEIVED BY THE PHARMACIST. CAN YOU READ THE FIRST DRUG NAME?

cydabergin 50mg PO q day
vancomycin 5mg IV BID

Second order shows the importance of using the leading zero. The order was written for .5 gm and should have been written as 0.5 gm. Failure to use leading zeros is on the RGH list of unapproved abbreviations.

NURSING UPDATE:

Patient Care Services Leadership

by Cheryl Sheridan BS, RN, MPA, NE BC
 Senior Vice President and Chief Nursing Officer

I would like to announce the following changes in Patient Care Services Leadership, effective immediately:

- **Diana Blauw** has been appointed Interim Nurse Manager for MICU/CCU and the MAT Unit.
- **Monica Irvine** will assume leadership of the Administrative Clinical Coordinators.
- **Betsy Bess** will continue to lead 2800 and will additionally assume the role of Interim Nurse Manager of the SICU.
- **Shari McDonald** will continue to lead the Adult Emergency Department and will assume the role of Interim Nurse Manager of 4800.
- **Sue Trimboli** will continue to lead 4200 and has assumed leadership of the IV Services Team.

Please do not hesitate to contact me if there are any questions related to these changes. Thank you.

CDIP CORNER – THE POWER OF THE PEN

Mechanical Fall as Principal Diagnosis

Margie Dailey, RHT



Mechanical Fall as a final (principal) diagnosis is neither appropriate nor justifiable for an inpatient stay. Although there are specific ICD9 codes that can describe the external causes of a fall (slipping, tripping, fall on stairs), these codes are not acceptable to use as the Principal Diagnosis. If your patient has sustained a mechanical fall, consider the following possibilities as an appropriate diagnosis:

1. **Syncope**
(document the underlying cause)
 - a. Dehydration
 - b. Cardiac arrhythmia
 - c. Electrolyte imbalance
2. **Generalized weakness**
(document the underlying cause)
 - a. Unsteady gait due to previous CVA
 - b. Acute exacerbation of arthritis
 - c. Anemia
 - d. Malnutrition
3. **Dementia**
 - a. Confusion or acute delirium above baseline

The next time you're inclined to document "Mechanical Fall," remember the final diagnosis (reason for the patient's admission) must reflect and substantiate medical necessity, severity of illness and risk of mortality.



RIT & RGHS Alliance Announces Institute of Health Sciences & Technology

Outreach and Research Centers and Ninth College Will Open This Fall

Rochester General Health System and Rochester Institute of Technology will open the Institute of Health Sciences and Technology in September. The announcement was made by RIT President Bill Destler and RGHS President and CEO Mark Clement at a well-attended news conference last month. The new institute will channel the strengths and expertise of the RIT-RGHS Alliance, formed in 2008 to produce technological solutions to health-care delivery and improve the efficiency of the “smart hospital.”

The institute will address three aspects of health care and position the RIT-RGHS Alliance as a contributing player in the reform of the nation’s health-care system by educating the next generation of health-care professionals, cultivating innovative research and addressing community health needs. Three distinct prongs comprise the institute:

- the College of Health Sciences and Technology,
- the Health Sciences Research Center and
- the Health Science Outreach Center.

“This is another tremendous milestone for the university and Rochester General Health System,” says Destler. “Our partnership creates a climate for the kind of innovative problem solving that will improve quality health-care delivery. The unlimited possibilities of technology drive the collaborative research of our physicians, faculty and students.”

“The launch of the Institute of Health Sciences and Technology is a unique collaboration that will allow the alliance to innovatively respond to the growing convergence of medicine and technology in the advancement of clinical practice as well as the unprecedented changes expected to come from health-care reform,” says Clement. “By combining institutional strengths of clinical medicine, research and technology, the institute will train a growing number of future health-care professionals while advancing technology-based research that will benefit our community locally and the health-care delivery system nationally.”

A vice president/dean will be hired by July to lead the institute and will report directly to RIT Provost Jeremy



Haefner. The new vice president will facilitate interactions with colleagues and CEOs at other institutions and will initially direct the outreach and research centers until those positions are filled. Destler and Clement will co-chair the institute’s advisory board, consisting of faculty, physicians, staff, trustees and students. Plans for a potential \$27 million building to house the programs on the RIT campus will begin in 2012, with an anticipated completion date in 2015.

COLLEGE OF HEALTH SCIENCES AND TECHNOLOGY

The College of Health Sciences and Technology will become RIT’s ninth college and will educate the next generation of health-care providers and related researchers. Existing programs that will move to the new college include physician assistant (B.S./M.S.), diagnostic medical sonography (B.S. and certificate program), biomedical sciences (B.S.), clinical chemistry (M.S.), nutrition/management (B.S.), health systems administration (M.S.) and medical illustration (M.F.A.).

Destler announced four RGHS appointments to RIT faculty: Richard Gangemi, M.D., senior vice president of academic and medical affairs at RGHS; Ralph Pennino, interim chief of surgery at RGHS; Michael Pichichero, M.D.,

director of the Rochester General Hospital Research Institute, and Joseph Vasile, M.D., president/CEO of the Greater Rochester Independent Practice Association.

INSTITUTE OF HEALTH SCIENCES AND TECHNOLOGY RESEARCH AND OUTREACH CENTERS

Two additional components of the institute—the Health Sciences Research Center and the Health Science Outreach Center—will meet work force and community needs and apply innovative technologies in health care delivery.

The Health Sciences Research Center will focus on infectious disease and immunology, cancer, cancer vaccines and blood disorders, cardiovascular disease, health systems engineering, biotechnology, bioengineering, imaging science, computing and information science, deaf technologies and medical devices.

The RIT-RGHS Alliance already has awarded a total of nearly \$280,000 to 14 research teams in “seed” funding for projects including a vaccine candidate that could prevent ear infections in children, an artificial bicep and non-invasive methods of monitoring women in labor.

“By combining institutional strengths of clinical medicine, research and technology, the institute will train a growing number of future health-care professionals”

Mark Clement, RGHS President and CEO

HEALTH SCIENCES OUTREACH CENTER

The third component of the institute, the Health Sciences Outreach Center, will aid regional work force development programs by retraining displaced workers in Lean Six-Sigma for health care, an approach to streamlining and improving patient-care processes. The center will also partner with regional work force development agencies and develop and support community health initiatives.

For more information about the alliance, go to www.rit.edu/rghs.

CHANGES TO YOUR RGH DIRECTORY

For those of you who have access to the RGHSNet, don't forget the on-line directory in Departments and Medical & Dental Staff. For those of you who do not have access to the ViaNet, there is a monthly excel directory available for you upon request. Contact Mary Lou McKeown at 922-4259 or marylou.mckeown@rochestergeneral.org. And Finally, when you are in CCS you will find a full directory under VIEW and STAFF DIRECTORY for your use.

NEW MEMBERS

Louis Cerami, RPA-C, Dept of Medicine/Internal Medicine
1425 Portland Ave #340, Rochester, NY 14621
585-922-4101

William Curtin, MD, Dept of OB/GYN
601 Elmwood Ave Box 668, Rochester, NY 14642
585-275-7480

Debra Gates, NP, Dept of Medicine/Endocrinology
224 Alexander St #200, Rochester, NY 14607
585-922-8400

C. Michael Henderson, MD, Dept of Medicine/
Internal Medicine
1425 Portland Ave #340, Rochester, NY 14621
585-922-3460

Tiffanie Lowy, RPA-C, Dept of Emergency Medicine/
Observation Unit
1425 Portland Ave, Rochester, NY 14621, 585-922-9080

Elizabeth Nagle, RPA-C, Dept of Surgery/Otolaryngology
2561 LacDeVille Blvd #100, Rochester, NY, 14618
585-442-4200

Maureen VanCura, NP, Dept of Family Practice/
Internal Medicine/Pediatrics
4425 Old Ridge Rd, Williamson, NY 14589, 315-483-3280

Zachary Williams, MD, Dept of Medicine/Hospitalist
1425 Portland Ave # 287, Rochester, NY 14621
585-922-5067

CHANGE TO INACTIVE

John R. Bosco, MD
Nancy Brown, RPA-C
Mark Chodoff, MD
Michelle Cilento, RPA-C

John Peachey, MD
Michael Reichert, RPA-C
Catherine Spielberg, NP

GRIPA
Publishes

2010 VALUE REPORT

GRIPA is excited to announce that the GRIPA 2010 Value Report is finalized! The report has been published and is available on the GRIPA.org website. It represents a comprehensive presentation of GRIPA's achievements in 2010 as well as the strategic initiatives underway for 2011 and beyond.

GRIPA is a nationally recognized, clinically integrated group with multiple employer and health plan contracts. Many physician and hospital groups around the country seek to model their programs after the GRIPA paradigm. During 2010, GRIPA refined its medical program to target very specific and meaningful areas – and subsequently designated by the physicians as, GRIPA's Accountable Care Medical Program. GRIPA applied this program's precepts to the employers' and health plans' members and refers to these patients as GRIPA's 'contracted members'. GRIPA is reporting very favorable results for this defined population.

Accordingly, the GRIPA 2010 Value Report demonstrates the impact of GRIPA's three clinical programs on the Contracted Members:

- Chronic Condition Management Program,
- Cardiac Risk Management Program, and
- Diabetes Prevention Program.

These programs align physicians, care managers and other providers within GRIPA's Accountable Care Medical Program (ACMP) – distinguishing the medical care that the GRIPA network delivers from the general provider population by

GRIPA is a nationally recognized, clinically integrated group with multiple employer and health plan contracts.... During 2010, GRIPA refined its medical program to target very specific and meaningful areas – and subsequently designated by the physicians as, GRIPA's Accountable Care Medical Program.

demonstrating, using outcomes data, performance superior to the norm. The Value report illustrates the impact of the GRIPA network of physicians providing a coordinated approach to health care. As a result, Contracted Members of a GRIPA Connect Clinical Integration program demonstrate significant improvement in meeting care



measures as compared to historical data as well as national and community averages. These achievements result in a higher quality of care for the member, increased member satisfaction, and overall cost efficiencies.

In 2011, GRIPA continues to focus on Clinical Integration and its ACMP by providing physicians' practices a tool : identifying members with specific conditions as needing appropriate office visits, blood tests, and related care. The Patient Outreach report is available to every GRIPA Clinical Integration provider and displays GRIPA contracted members – LiDestri Food and Beverage, RGHS, Paychex, Essence, and WellCare – needing appropriate care, filtered by practice/provider. The Patient Outreach report is available on the GRIPA Connect portal. If you need assistance to access the report, GRIPA Provider Relations awaits your call at (585)922-1525.

The GRIPA 2010 Value Report can be viewed on the GRIPA website at www.gripa.org. Review the report and appreciate how your commitment to the GRIPA Connect Clinical Integration Program and the ACMP is actually impacting the quality of health care.

gripa
health care
could look like this™

ANTIBIOTIC SUSCEPTIBILITY PROFILE (JANUARY-DECEMBER 2010) PERCENT SUSCEPTIBLE TO ACHIEVABLE SERUM LEVELS

O r g a n i s m	I S O L A T E S ^a	A M P I C I L L I N	A M P I C I L L I N / S U L B	A M P I C I L L I N	C E F A Z O L I N	C E F E P I M E	C E F T R I A X O N E	C I P R O F L O X A C I N	C L I N D A M Y C I N	E R Y T H R O M Y C I N	G E N T A M I C I N	I M I P E N E M	N I T R O F U R A N T O I N ^b	O X A C I L L I N	P E N I C I L L I N	P I P E R / T A Z O	T E T R A C Y C L I N E	T O B R A A M Y C I N	T R I M / S U L F A	V A N C O M Y C I N
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RGHS Rochester General Hospital Inpatient Sensitivities

<i>Acinetobacter calcoaceticus</i>	51	82				49		37				71	100			41	53	90	37	
<i>Citrobacter freundii</i>	61	91						90				90	92	97		85		90	89	
<i>Enterobacter cloacae</i>	145	100						95				95	99	50		79		94	94	
<i>Enterococcus sp.</i> ^c	551							56 ^b				78 ^d		95			26 ^b			100 ^c
<i>Escherichia coli</i> ^e	1353	100	63	58	91	97	98	79				92	100	98		98		92	82	
<i>Klebsiella oxytoca</i> ^f	101	98	53		61	93	93	97				96	99	92		92		96	92	
<i>Klebsiella pneumoniae</i> ^g	467	100	85		95	95	95	95				95	100	68		98		95	95	
<i>Morganella morganii</i>	51	100						92				96	100	14		100		96	54	
<i>MRSA/ORSA</i> ^h	576								48								0	98	99	100
<i>MSSA/OSSA</i> ⁱ	461								79	69				98	100		96		99	100
<i>Proteus mirabilis</i>	245	99	98	89	89	91	98	88				97	99	0		99		97	84	
<i>Pseudomonas aerug.</i>	310	97				90		78				86	87			89		92		
<i>Serratia marcescens</i>	78	100						99				100	99	0		95		97	100	
<i>Staph. sp. coagulase neg.</i>	265								65	40				100	38		88		63	100

a= average number of isolates tested b=drug should be used for treatment of urinary tract infections only c=VRE (vancomycin resistant *Enterococcus*) prevalence was 22% for 2010
d= high level gentamicin aminoglycoside susceptibility in *Enterococcus sp.* e=*E. coli* ESBL prevalence for 2010: 2%; CRE (KPC): <1% f=*K. oxytoca* ESBL prevalence for 2010: 5%; CRE (KPC): 2%
g=*K. pneumoniae* ESBL prevalence for 2010: 2%; CRE (KPC): 1% h=methicillin/oxacillin resistant *Staph. aureus* prevalence for 2010: 56% i=methicillin/oxacillin sensitive *Staph. aureus*
Streptococcus pneumoniae penicillin susceptibility was 90% for all isolates recovered during 2010 (n=205, 4% displayed high level resistance with MIC₂ 2 µg/ml)

Prepared by:
Rochester General Hospital
Clinical Laboratories
Microbiology Department
585-922-4555

Roberto L. Vargas, M.D.
Director of Microbiology

Theodor K. Mayer, M.D., Ph.D.
Chief of Clinical Labs and Pathology

C. Difficile Update & New Clinical Guidelines for Treatment

Alexandra V. Yamshchikov M.D., Hospital Epidemiologist

Dear Colleagues,

I am writing you today to appraise you that we at RGH are currently experiencing a cluster of ***Clostridium difficile*** cases associated with increased disease severity and poor clinical outcomes. You may be aware that similar issues have been garnering media attention due to outbreaks experienced by other hospitals in the Western New York region. While it is not clear at this point whether the cluster of infections at RGH represents a true outbreak, we at RGH Hospital Epidemiology, RGH Environmental Services, and RGH Infection Prevention are collaborating with the NYS Department of Health to determine if the cases represent a single strain of *Clostridium difficile* affecting multiple patients or an institution-wide trend towards a more virulent type of *Clostridium difficile* here at RGH.

Although we have not seen an increase in our overall rates of *Clostridium difficile*, the increasing disease severity of the cases that we are seeing at our hospital has prompted us to introduce several interventions, focusing on 1) working with EVS to enhance our room cleaning and disinfection strategies for discharge rooms, 2) improving compliance with contact precautions for suspected or confirmed *Clostridium difficile* cases, and 3) enhancing provider education regarding prompt diagnosis and treatment of *Clostridium difficile*, including the introduction of new RGHS "Clinical Guidelines for the Treatment of *Clostridium difficile* Infection" available on the Pharmacy webpage of RGHS Portal, and included in this mailing.

While our investigation is ongoing, we'd like to solicit your involvement with the following recommendations:

- **Adhering with enhanced contact precautions** (pink sign, gown, gloves upon entry + alcohol hand gel followed by handwashing with soap and water upon exit) for all patient encounters in cases of proven or suspected *Clostridium difficile* at RGH
- **Empowering frontline care givers** (RN's, PCA's, physicians) on patient floors to intervene in all instances where breaks in isolation procedures are observed
- **Maintaining a heightened vigilance** for *Clostridium difficile* in patients with diarrhea in the hospital,

especially if signs of infection such as fever and elevated white blood cell count are present. A higher index of clinical suspicion may be necessary in some, as *Clostridium difficile* may present atypically, with predominance of upper GI symptoms (ileus, nausea/vomiting before onset of diarrhea)

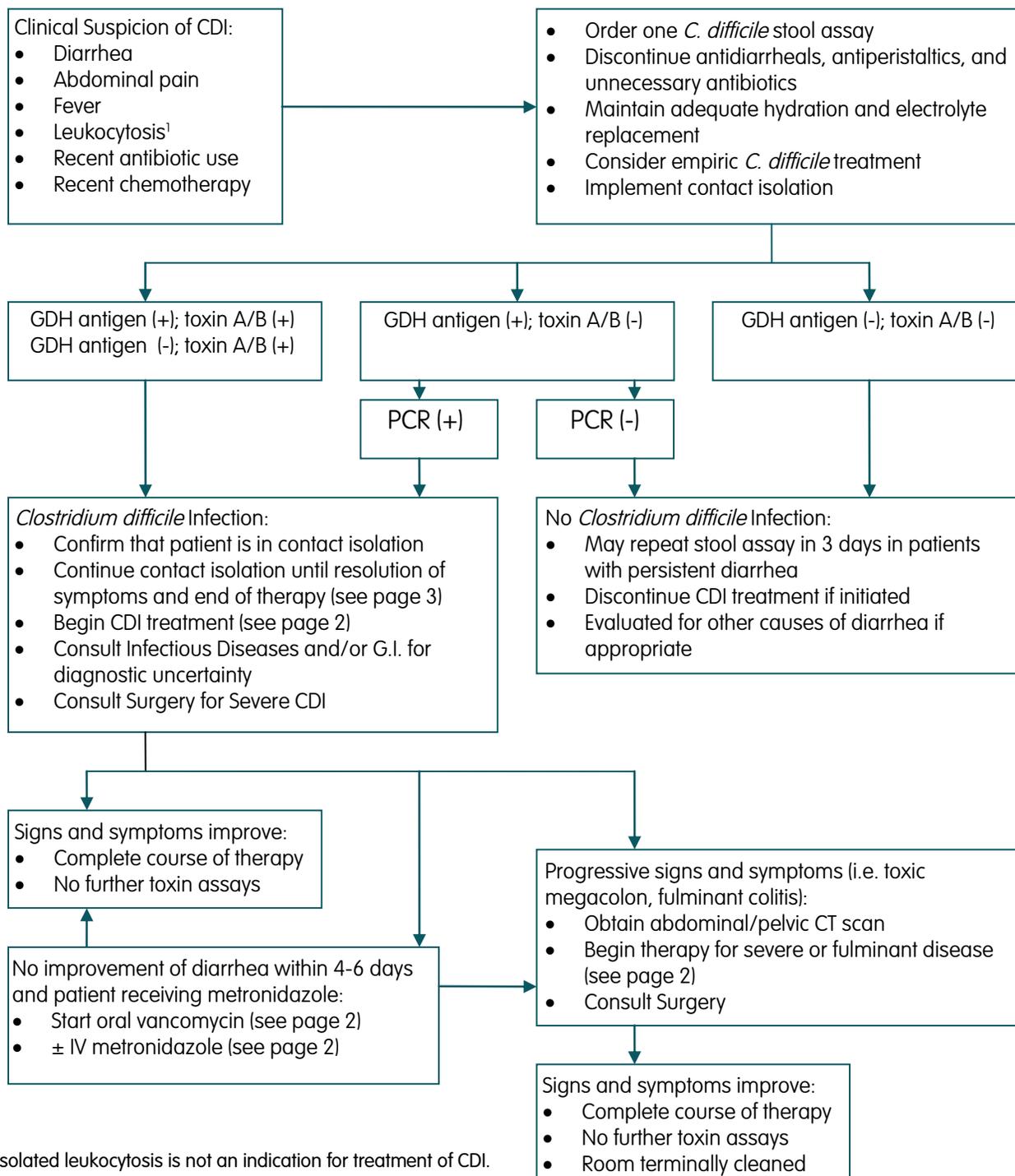
- **Pursuing expedited stool testing** with any suspicion of *Clostridium difficile* (results are usually available within 4-6 hours)
- **Prompt initiation of treatment** for *Clostridium difficile* upon diagnosis, or empirically while awaiting stool testing in high risk/high suspicion cases, in order to decrease infectiousness and to maximize patient outcomes
- **Adhering to RGHS "Clinical Guidelines for the Treatment of *Clostridium difficile* Infection"** for treatment of mild, moderate, severe or fulminant disease
- **Reviewing and discontinuing any additional antimicrobial or anti-acid** (i.e. H2 blockers, ppi's) medications if use not clearly indicated, in order to maximize patient outcomes for severe *Clostridium difficile*
- **Securing urgent surgical evaluation and transfer to higher level of care** in cases of fulminant *Clostridium difficile* infection (marked abdominal distention, sudden decrease in stooling in patient with *Clostridium difficile* diarrhea, shock)

Hospital Epidemiology and Infection Prevention will communicate developments and further updates regarding this evolving cluster of infections as they occur. Your thoughtful review of the "Clinical Guidelines for the Treatment of *Clostridium difficile* Infection", and your assistance with incorporating the above recommendations into your daily practice here at RGHS is greatly appreciated.

Alexandra V. Yamshchikov M.D., Hospital Epidemiologist
Infection Prevention Program, RGHS

Linda Greene, R.N., Director
Infection Prevention Program, RGHS

Clinical Treatment Guidelines for Clostridium Difficile Infection (CDI) In Adults



¹ Isolated leukocytosis is not an indication for treatment of CDI.

Clinical Treatment Guidelines for Clostridium Difficile Infection (CDI) In Adults

DISEASE SEVERITY AND TREATMENT RECOMMENDATIONS:

General Note: for patients requiring continued broad-spectrum antimicrobial therapy, *C. difficile* pharmacotherapy should be continued for the duration of concomitant antimicrobial therapy.

- **Mild to Moderate *C. difficile* Infection:** minimal evidence of toxicity.
 - ◆ Initial episode:
 - Metronidazole 500 mg PO q8h for 10 – 14 days
 - If no clinical improvement within 4 – 6 days of initiating treatment, consider changing to oral vancomycin therapy
 - ◆ First recurrence:
 - Repeat course of metronidazole 500 mg PO q8h for 14 days
 - ◆ Second Recurrence or greater (within 1 year):
 - Vancomycin 125-250 mg PO q6h for 10 – 14 days
 - Consider an oral vancomycin taper after completion of therapy in patients with multiple recurrences. Start on week 1 if the initial dose was 250 mg or on week 2 if the initial dose was 125 mg:
 - Week 1: vancomycin 125 mg PO q6h
 - Week 2: vancomycin 125 mg PO q12h
 - Week 3: vancomycin 125 mg PO q24h
 - Week 4: vancomycin 125 mg PO q48h
 - Week 5 and 6: vancomycin 125 mg PO q72h
- **Severe *C. difficile* Infection:** endoscopic evidence of pseudomembranous colitis **OR** requires treatment for *C. difficile* in the ICU **OR** at least 2 of the following not attributable to other causes: age > 60 years, temperature > 38.3°C, albumin < 2.5 mg/dL, peripheral WBC count ≥ 15,000 cells/mm³, acute renal failure (> 1.5 x baseline).
 - ◆ Encourage Surgical/Infectious Diseases and/or GI consult
 - Vancomycin 500 mg PO q6h for 10 – 14 days
 - +/- metronidazole 500 mg IV q8h for 10 – 14 days
 - If complete ileus: consider adding rectally administered vancomycin 500 mg in 500 mL of 0.9% NaCl PR q4 – 12 hours
 - **Please Note:** combined oral metronidazole and oral vancomycin offers no clinical benefit over oral vancomycin alone.
- **Fulminant *C. difficile* Infection:** evidence of ileus, toxic megacolon, hypotension or shock, or colonic perforation.
 - ◆ **Urgent Surgery consult.** Strongly encourage Infectious Diseases and/or GI consult
 - Vancomycin 500 mg PO q6h for 10 – 14 days
 - PLUS metronidazole 500 mg IV q8h for 10 – 14 days
 - If complete ileus: consider adding rectally administered vancomycin 500 mg in 500 mL of 0.9% NaCl PR q4 – 12 hours
 - **Please Note:** combined oral metronidazole and oral vancomycin offers no clinical benefit over oral vancomycin alone.

Clinical Treatment Guidelines for Clostridium Difficile Infection (CDI) In Adults

CLOSTRIDIUM DIFFICILE ASSAY RESULTS AND INFECTION PREVENTION MEASURES:

GDH Result	Toxin Assay Result	Interpretation	Recommendations
Negative	Negative	No <i>C. difficile</i> present	No further action. Repeat testing is discouraged. Discontinue isolation.
Discrepancy between GDH and Toxin assay results ↓ DNA confirmatory test performed automatically by the Microbiology Lab.		Negative: No <i>C. difficile</i> present	No further action. Repeat testing is discouraged. Discontinue isolation.
		Positive: Toxigenic <i>C. difficile</i> is present	Continue contact isolation precautions and begin therapy according to algorithm. Repeat testing is discouraged.
Positive	Positive	Toxigenic <i>C. difficile</i> is present	Continue contact isolation precautions and begin therapy according to algorithm. Repeat testing is discouraged.

Negative predictive value of the GDH and toxin assay is ~99%

- All patient care units will use the same procedures for testing, treatment, and isolation.
- All patients with presumed or suspected *C. difficile* should be isolated.
 - ◆ Isolation procedures include: universal glove and gown use, with soap and water hand hygiene.
 - ◆ The patient is cleared of the need for isolation if it has been at least 1 week since treatment is completed, if they are asymptomatic (formed stools), and if the flag is removed by the Infection Prevention Program.
 - ◆ Terminal cleaning of rooms of all patients with *C. difficile* infection must occur once the isolation status is discontinued or the patient is discharged. Contact Infection Prevention and Environmental Services for assistance.

Cohen S et al. Infection Control and Hospital Epidemiology 2010; 31:5
Zar F et al. Clinical Infectious Diseases 2007; 45: 302

Clinical Treatment Guidelines for Clostridium Difficile Infection (CDI) In Adults

OUTPATIENT ORAL VANCOMYCIN THERAPY:

Pharmacotherapy with oral vancomycin products for the treatment of *Clostridium difficile* infections in adults is extremely costly (see table below). In an attempt to help reduce medication expenses, some retail pharmacies readily compound oral vancomycin solution from the commercially available vancomycin powder for injection. Please consider providing this information to your patients if oral vancomycin therapy is warranted. Other neighborhood pharmacies may be capable of compounding oral vancomycin solution; however, it is recommended to call in advance if the below pharmacies are not a feasible option.

Product	Drug Acquisition Costs*	Total Cost of Therapy* (14 Days)
Vancomycin Oral Capsule – 125 mg	\$23.54/capsule	\$1318.24
Vancomycin Oral Capsule – 250 mg	\$43.40/capsule	\$2430.40
Vancomycin Oral Capsule – 500 mg	\$86.80/2 capsules	\$4860.80
Vancomycin Powder for Injection – 1 gram (powder used to compound solution)	\$4.25/vial	\$119 (maximum recommended dose)
Vancomycin Powder for Injection – 5 grams (powder used to compound solution)	\$24.28/vial	\$ 135.97 (maximum recommended dose)
Vancomycin Powder for Injection – 10 grams (powder used to compound solution)	\$35.79/vial	\$107.37 (maximum recommended dose)

* Total Cost of Therapy based on 2010 drug acquisition costs at RGH

Oral Vancomycin Solution Concentration: 250 mg/5 mL

Readily Available Compounding Pharmacies in Rochester, NY and Surrounding Areas:

THE GENERAL APOTHECARY

Rochester General Hospital
1415 Portland Ave, Suite 125
Rochester, NY 14621
(585) 922-3970

R DRUGS ETC

222 Alexander Street, #2700
Rochester, NY 14607
(585) 262-3760

PINE PHARMACY

5110 Main St, Suite 101
Williamsville, NY 14221
(716) 332-2288

TWELVE CORNERS APOTHECARY

1832 Monroe Avenue
Rochester, NY 14618
(585) 244-8600

RMH RETAIL PHARMACY LLC

1500 N James St
Rome, NY 13440
(315) 338-7690