

# Pharmacist Interventions to Promote Patient Adherence for Long Term Antibiotic Infusion Therapy

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# Objectives

- Explain the importance of patient adherence when receiving long term antibiotic infusion therapy
- Identify areas of opportunity for pharmacist intervention
- Establish procedures for pharmacist interventions

# TLRMC Outpatient Infusion Services

- 6 patient chairs
- 2 full time RNs and 2 part time RNs
- 2,545 visits for 2019 (avg 7 patients/day)
- H-OPAT (Hospital Outpatient Parenteral Antibiotic Therapy)
  - Pharmacy consultation for dosing
- Other infusions and injections (iron, fluids, blood, electrolytes, IVIG, PICCs, etc).
- Chemotherapy

# H-OPAT

(Hospital Outpatient Parenteral Antibiotic Therapy)

## Patient Population

- Skin and Soft Tissue Infections
- Osteomyelitis
- Wound Infections (diabetic, surgical, etc)
- UTI
- Abdominal Infections
- Respiratory Infections

(Diabetics, Elderly and Immunocompromised)

# Concerns

- Data unknown for non-compliance specific to TLRMC
  - (2015) 34% of providers have no method of ensuring patient adherence to outpatient visits for antibiotic therapy
- Pharmacist and nurses expressed concern for patients that missed doses due to non-compliance and increased risk of antibiotic resistance
- Recognized need for enhanced measures to ensure compliance with antibiotic infusion therapies

# Intervention Opportunities

- Increased antimicrobial stewardship education for pharmacist, nurses, providers and patients
  - Expert resources available
- Pharmacist consultation with patients initially and then weekly when receiving long term antibiotic infusions (length of therapy >1 day)
  - Direct supervision
- Custom treatment plans
  - Time of infusion, labs, dosing regimens, etc.
- Signed treatment agreements to enhance patient adherence

# Barriers

- Patient Adherence
  - Limited hours of operation (8-4 M-F & weekends for daily therapies only)
  - Travel cost
  - Accountability and understanding of disease state/treatment requirements
- Access
  - Hospital-quality care in outpatient clinic
  - Parking, ease of access, registration, etc.
- Resources
  - Infectious disease provider/pharmacist consultations
  - Appropriate training for provider/pharmacist

# New Process

- Initial pharmacist consult
  - Occurs prior to initiation of therapy
  - Complete review of medications
  - Weekly and as needed consultations with pharmacist
  - Visit with patient if dose missed
- Infusion Center Treatment Agreement
  - Initial agreement (signed by patient, provider, nurse or pharmacist)
  - Involuntary termination warning
  - Involuntary termination notice



# Treatment Agreement



**Twin Lakes Regional Medical Center  
Infusion Center  
910 Wallace Avenue  
Leitchfield KY 42754  
270-259-1695**

## Infusion Center Treatment Agreement

This Agreement between \_\_\_\_\_ ("Patient") and TLRMC Infusion Center ("Provider") is for the purpose of establishing agreement between Provider and Patient on clear conditions for the use of infusion center treatment(s) prescribed by the Provider for the Patient. Provider and Patient agree that this Agreement is an essential factor in maintaining the trust and confidence necessary in a provider/patient relationship.

**The Patient agrees to and accepts the following conditions for the treatment prescribed by the Provider for the Patient:**

- ▶ I understand that a treatment that I will receive will improve my quality of life and are the goals of this program.
- ▶ I realize that all of the medications have potential side effects, and I will have the recommended laboratory studies required to keep the regimen as safe as possible.
- ▶ If there is any question of impairment of my ability to safely perform any activity once I've received treatment, I agree that I will not attempt to perform the activity until I am able to do so.
- ▶ I agree that one missed appointment or cancellation would be a breach of the agreement and may lead to dismissal.
- ▶ The first missed dose of therapy will result in the discontinuation of the provider's order and must be reviewed for appropriateness of continuation of therapy, as well as, a new order to start therapy.
- ▶ Only one restart of therapy will be allowed. If second dose of medication is missed, therapy will not be restarted and therapy will be terminated.
- ▶ I will treat the staff at the office/hospital respectfully at all times. I understand that if I am disrespectful to staff or disrupt the care of other patients my treatment will be stopped.
- ▶ I agree to follow these guidelines that have been fully explained to me. All of my questions and concerns regarding treatment have been adequately answered.
- ▶ I agree and understand the importance of compliance to my treatment plan. Inability to adhere to my treatment plan and goals set forth by my care team, may lead to dismissal from the Infusion Center.

## INFORMED SHORT/LONG TERM ANTIBIOTIC USE FOR ACUTE/CHRONIC CONDITIONS

*This document is called an "Informed Consent" form. The purpose of this document is to explain important information to you about treatment and expectations that you must adhere to in order to remain a patient of the Infusion Center. You are responsible for reading this document, asking your provider questions about the conditions and signing this form.*

Provider and Patient agree that this Agreement is essential to the Doctor's ability to treat the condition effectively and that failure of the Patient to abide by the terms of this Agreement will result in corrective adjustments to the treatment plan and may result in the termination of the Provider and Patient relationship.

Based on my treatment plan and goals discussed and agreed upon with my provider, the following expectations are agreed upon in regards to the use of antibiotic/anti-infective therapy to treat my condition:

- ▶ Non-compliance builds drug resistant organisms that may spread to my family and others and become impossible to treat.
- ▶ Incomplete therapy may result in the bacteria becoming resistant to the antibiotic/anti-infective treatment prescribed.
- ▶ The chosen therapy must be completed, start to finish, in its entirety to be effective in treating my condition.
- ▶ The use of antibiotics/anti-infectives is being used to treat an infection. The medication and length of therapy have been reviewed by your provider and pharmacist.
- ▶ I realize that all of the medications have potential side effects, and, I will have the recommended laboratory studies required to keep the regimen as safe as possible. As with any medication, there are risks associated with the use. Those risks will be explained to me prior to initiation of therapy.
- ▶ I am aware of the possible risks and benefits of my treatment plan, and if I have questions, I will ask my provider.

Provider and Patient agree that this Agreement is essential to the Provider's ability to treat the Patient's condition effectively and that failure of the Patient to abide by the terms of this Agreement will result in termination of the Provider-Patient relationship.

This agreement is entered into on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

### **Have you read and do you understand this document? (Initial one)**

\_\_\_ I was satisfied with the above description and did not want any more information.

\_\_\_ I requested and received further explanation about the treatment, alternatives, or risks.

I agree to follow the terms of this agreement I understand this document will be maintained as a permanent component of my chart.

Patient Signature \_\_\_\_\_ Date \_\_\_\_\_

Witness Signature \_\_\_\_\_ Date \_\_\_\_\_

Provider Signature \_\_\_\_\_ Date \_\_\_\_\_

*You will get a copy of this form and we will keep a copy of it in your patient file.*



# Termination Warning



**Twin Lakes Regional Medical Center  
Infusion Center  
910 Wallace Avenue  
Leitchfield KY 42754  
270-259-1695**

Involuntary Termination Warning

Date: \_\_\_\_\_

Dear \_\_\_\_\_ (Patient Name)

Individuals receiving Infusion Center services may be involuntarily terminated for an inability or unwillingness to comply with their plan of treatment or other policies of the Twin Lakes Regional Medical Center Infusion Center.

A physician-patient relationship is established when the physician provides service to a person to address medical needs. Once a physician-patient relationship is established, a person remains a patient until the relationship is terminated.

Patients may be involuntarily terminated if they meet one or more of the following criteria. We may dismiss you from our practice for the following reason:

- o The patient harasses or threatens the physician or other department staff.
- o The patient refuses to comply with treatment recommendation and plans including non-compliance issues (missed dose, missed appointment, etc.)
  - Please list treatment plan, medication order and diagnosis which patient is being treated for in Infusion Center:

- o The patient violates policies of the Twin Lakes Regional Medical Center Infusion Center
- o Other reason deemed necessary by the physician or other provider.

**It is your responsibility to be present for all appointments. If an appointment is missed, regardless of reason, continued participation in the Twin Lakes Regional Medical Center Infusion Center will be evaluated. Failing to do so may result in involuntary termination from Twin Lakes Regional Medical Center Infusion Center.**

Sincerely,

Twin Lakes Regional Medical Center Infusion Center |



# Termination Notice



Twin Lakes Regional Medical Center  
Infusion Center  
910 Wallace Avenue  
Leitchfield KY 42754  
270-259-1695

## Involuntary Termination

Date: \_\_\_\_\_

Dear \_\_\_\_\_ (Patient Name)

Individuals receiving Infusion Center services may be involuntarily terminated for an inability or unwillingness to comply with their plan of treatment or other policies of the Twin Lakes Regional Medical Center Infusion Center.

A physician-patient relationship is established when the physician provides service to a person to address medical needs. Once a physician-patient relationship is established, a person remains a patient until the relationship is terminated.

You are being dismissed from our practice for the following reason:

- o The patient harasses or threatens the physician or other department staff or exhibits other inappropriate behavior.
- o The patient refuses to comply with treatment recommendation and plans including non-compliance issues (missed dose, missed appointment, etc.)
  - Please list treatment plan, medication order and diagnosis which patient is being treated for in Infusion Center:

- o The patient violates policies of the Twin Lakes Regional Medical Center Infusion Center
- o Other reasons deemed necessary by the physician or other provider

Other comments:

Sincerely,

Twin Lakes Regional Medical Center Infusion Center.

# References

- Eavan G. Muldoon, Karen Switkowski, Alan Tice, David R. Snyderman & Geneve M. Allison (2015) A national survey of infectious disease practitioners on their use of outpatient parenteral antimicrobial therapy (OPAT), *Infectious Diseases*, 47:1, 39-45, DOI: 10.3109/00365548.2014.967290
- Petrak, R., & Allison, G. (2016). *Outpatient Parenteral Antimicrobial Therapy for Infectious Diseases* (3rd ed.). Retrieved from [https://www.idsociety.org/globalassets/bb-complex-pages/idsa/opat-ebook/opat\\_epub\\_finalv2.pdf](https://www.idsociety.org/globalassets/bb-complex-pages/idsa/opat-ebook/opat_epub_finalv2.pdf)

# Q & A

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