

An After-Hours Telephone Medicine Curriculum for  
Internal Medicine Residents

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# **INTRODUCTION**

## **Rationale**

### *National Need*

The telephone encounter has been a critical aspect of patient care in internal medicine for decades. Practicing physicians spend 25% of their time talking to patients or family members on the telephone<sup>1</sup>. In an era where physicians are becoming busier and office visits are less accessible, telephone medicine is an increasingly important point-of-care option.

Although there is no national requirement for residency programs to provide instruction in telephone medicine, three agencies describe educational and/or health care goals that include delivering patient care over the telephone. The Accreditation Council for Graduate Medical Education (ACGME) requires that residents have a longitudinal continuity clinic experience that is supervised by faculty. This experience should inherently include management of patients' after-hours medical concerns over the telephone. Additionally, telephone medicine encompasses several the ACGME's Core Competencies: Interpersonal Skills and Communication, Patient Care, and Professionalism<sup>7</sup>. These competencies are generally addressed during inpatient and outpatient care experiences, but they are equally important in telephone care. The Institute of Medicine (IOM), in "Crossing the Quality Chasm," states that a health system should allow patients to receive care "whenever they need it," while acknowledging that this cannot always be done in the traditional face-to-face encounter. In order to offer "care based on continuous healing relationships," the IOM specifically recommends the telephone as an alternative means to provide care<sup>8</sup>. This recommendation also relates to

the U.S. Department of Health and Human Services Healthy People 2020 initiative. The Healthy People 2020 objective to “reduce the proportion of individuals that experience difficulties or delays in obtaining necessary medical...care or prescription medications”<sup>9</sup> can be addressed, in part, by promoting effective after hours telephone management. Resident education should mirror the national call for health systems to provide after hours telephone care.

Nationally, program directors have poor confidence in their residents’ ability to handle after hours patient calls and residents have poor satisfaction with the calls, in general. Despite these attitudes, both residents and program directors consider telephone medicine to be an important aspect of medical training<sup>2,6</sup>. Additionally, improved training is known to improve physicians’ satisfaction and confidence in the practice of telephone medicine<sup>10</sup>. Despite a clear need for this skill, only 6% of residency programs nationally provide training in this subject<sup>2</sup>.

Because telephone medicine is distinct from routine face-to-face encounters, a focused curriculum is indicated<sup>11,16</sup>. Obviously, a hands-on physical exam is not possible during a telephone encounter, but some aspects of the interview itself are different as well. During in-person interviewing, responding to nonverbal cues and behaviors adds an often critical element not only to the development of a diagnosis, but also to the doctor/patient relationship<sup>12</sup>. For a successful telephone encounter, a physician needs to develop rapport more quickly and without these usual tools<sup>11</sup>. Additionally, poor communication over the telephone can cause a delay in patient care resulting in adverse medical outcomes and, potentially, litigation<sup>13-15</sup>.

## *Background*

Past research shows that instruction in telephone medicine improves residents' confidence in handling after-hours calls<sup>10</sup>. In internal medicine, two studies have shown the effectiveness of a curriculum<sup>3,4</sup>. The first, by Elnicki, et al, included all residents and addressed only the effectiveness of the curriculum; the second, by Roey, included only interns and addressed curriculum effectiveness as well as intern attitudes about telephone medicine.

Elnicki, et al developed an original curriculum that focused on four main components of telephone medicine: 1) office telephone systems, 2) skills necessary for telephone medicine, 3) medical-legal aspects of telephone medicine, and 4) special issues in telephone medical management. Each component was taught in a one-hour session that included a didactic lecture on basic concepts, videos of telephone encounters that the residents then analyzed, and scripted role-play exercises. The effectiveness was evaluated with pre- and post- curriculum objective structured clinical examinations (OSCEs).

Roey's curriculum was a modified version of Elnicki's. He included the same four units with similar instructional components, but allotted more time (two hours) for each unit. In addition to the techniques listed above, Roey also included small group discussions and problem solving exercises in his curriculum. His evaluation was two-fold: 3-way conference call evaluation of resident telephone communication using a checklist and a post-course questionnaire.

In her book, *Telephone Medicine*, Anna Reisman highlights the importance of focusing not only on the communication skills and knowledge needed for handling after hours telephone calls, but also on learners' attitudes and willingness to learn<sup>11</sup>. She recommends including group discussion of past experiences to enhance enthusiasm for the subject.

Our curriculum structure will be similar to these studies with some modifications for our institution. The evaluation of our residents, however, will be unique. During a regularly scheduled call night, the resident will be recorded taking a call from a simulated patient. Two or three evaluators will analyze this recording according to a checklist. The resident will also have an opportunity to listen to his/her recording and evaluate it with the checklist. The residents will also meet one-on-one with an evaluator to receive feedback. This will provide more reliable real-world data about how residents handle after hours calls. The opportunity for feedback will also be beneficial, as it has been shown to improve resident satisfaction with telephone medicine<sup>6</sup>.

### *Local Need*

At Michigan State University, second and third year residents handle after-hours clinic calls, usually when on-call at the hospital, with very little guidance. The residency manual includes several sentences indicating alternative points of care for the patient, reminding the residents to document the encounter and warning not to prescribe controlled substances over the phone<sup>5</sup>. Although these are very reasonable guidelines, the residents are not given any tools with which to approach these encounters, they

receive little to no feedback from an attending on these encounters and they are not informed of the medical-liability associated with these encounters.

To identify resident and faculty impressions of telephone medicine training, the author conducted a local needs assessment (see Appendix A). This included surveys answered by both the general medicine faculty and the residents. The faculty responses indicated a strong agreement that telephone medicine training is important as well as general dissatisfaction with the current training. Several faculty members indicated no knowledge of what training is currently provided. Residents, who indicated receiving 1-4 calls a night, also felt that training in telephone medicine was important, but stated that they did not receive any training or any feedback on their encounters. Additionally, over half were not aware of the residency manual guidelines. Less than half of the resident responders were comfortable with these encounters and none were very comfortable. Based on these results, there is a clear need for a telephone medicine curriculum at this institution. After discussion with the program leadership, who provided support, the author moved forward with curriculum development.

## **Curricular Goal**

As internal medicine residents on call for after-hours coverage of the resident continuity clinic, graduates of this course will confidently complete telephone encounters.

## **Context of the Curriculum**

This course will be taught at Michigan State University/Sparrow Hospital Internal Medicine Residency Program. It is a community-hospital based, learner-centered

program, which includes a psychosocial rotation for residents that focuses on the doctor/patient relationship and highlights patient-centered medical encounters. A course emphasizing the telephone encounter fits very well into the program's patient-centered approach to physician training. The program is a three-year ACGME and AOA certified residency that serves the population of Lansing, Michigan and the surrounding areas. This area has patients from a wide range of socioeconomic backgrounds, from university and government professionals to urban poor to farmers. In addition to their inpatient duties and elective rotations, our residents spend at least one-half day per week in the clinic. They are also responsible for taking after-hours clinic calls, usually during their inpatient call rotations.

I plan to use a convenient sample of internal medicine residents in our program that will be available during the pilot testing time period. Ideally, residents participating in the curriculum would be late 1<sup>st</sup> year or early second year. At MSU, residents do not take after-hours clinic call until their second year. The curricula discussed above<sup>3,4</sup> will be adapted for this study and we will be able to assess second and third year residents' comfort level and effectiveness of the curriculum. The curriculum will consist of three hour-long sessions that will include a brief lecture by the instructor, audio demonstration of a telephone encounter, and guided role-play exercises. These sessions will fit easily into an afternoon that is traditionally protected for resident learning (Thursday afternoons).

Very little budget will be needed to accomplish this curriculum. The room and course time are already available for this purpose. The residency program provides some financial support for the purchase of the recording program (used for learner evaluation)



and to support the simulated patients' participation. The patients themselves are volunteers from the rosters of previous residents who are still affiliated with the program (chief resident and a local fellow). These are not formally trained standardized patients, although they will undergo brief training with the author and be given written instructions. It was necessary to use real patient volunteers to maintain the real-world effect for testing. These patients have a resident listed as their PCP in our electronic medical record (EMR) and, therefore, will automatically be routed by the answering service to the on-call resident. Additionally, the patients will have complete medical charts in the EMR for the resident to review and in which to document the encounter.

## OVERVIEW/STRUCTURE OF THE CURRICULUM

The goal of this curriculum is: As internal medicine residents on call for after-hours coverage of the resident continuity clinic, graduates of this course will confidently complete telephone encounters. The course will be divided into three main units:

- 1) The basic telephone encounter
- 2) Problem scenarios
- 3) Medical-legal consequences

### **Curriculum Structure**

*Figure 1: Basic Curriculum Structure*

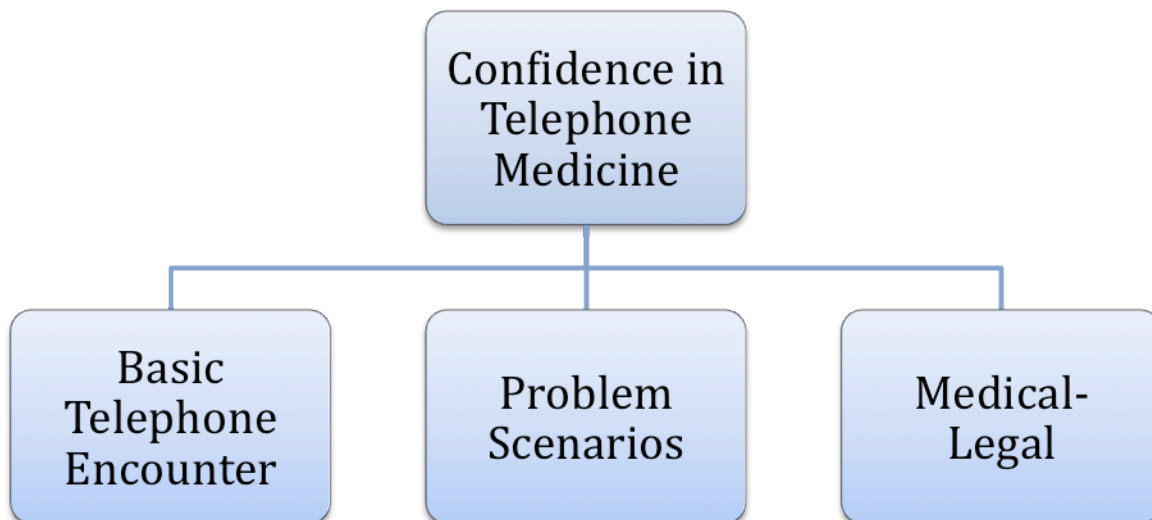
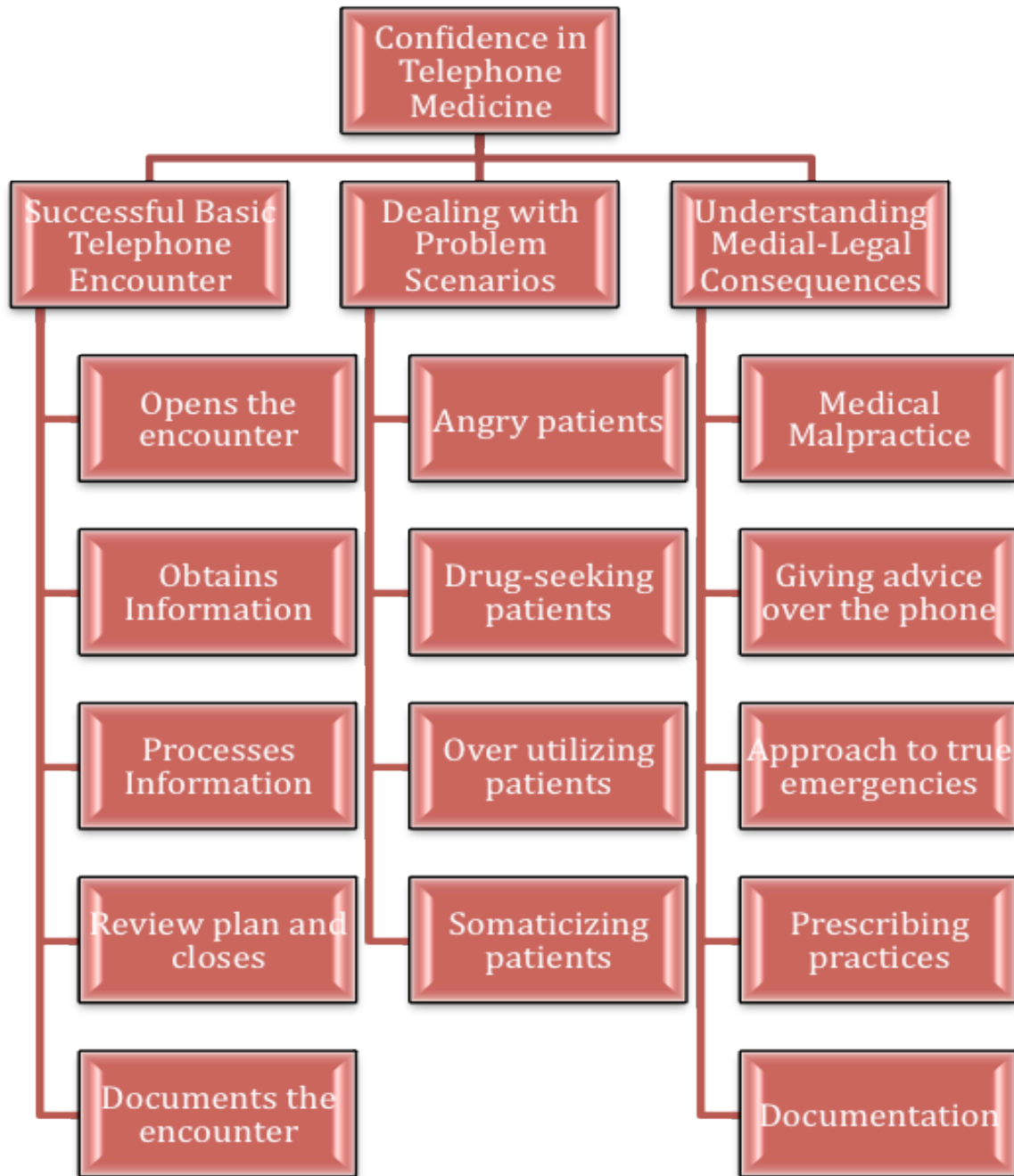


Figure 2: Curriculum Structure with details on each unit



## **Curriculum Content Outline (see Appendix B)**

### **I. The Basic Telephone Encounter**

- a. Goal: Internal medicine residents, when taking after-hours call for the resident continuity clinic, will be able to complete a successful telephone encounter.
- b. Content:
  - i. Opening the encounter
  - ii. Obtaining information
  - iii. Processing the information
  - iv. Reviewing and Closing the encounter
  - v. Documenting the encounter in the EMR

### **II. Difficult Scenarios in Telephone Medicine**

- a. Goal: Internal medicine residents, when taking after-hours call for the resident continuity clinic, will be able to complete a successful telephone encounter with a difficult patient.
- b. Content:
  - i. Angry patients
  - ii. Drug-seeking patients
  - iii. Over utilizing patients

### **III. Medical – Legal Consequences in Telephone Medicine**

- a. Goal: Internal medicine residents, when taking after-hours call for the resident continuity clinic, will be able to understand the potential medical-legal consequences of telephone medicine and be able to avoid them.

- b. Content:
  - i. Medical malpractice
  - ii. Giving advise over the phone
  - iii. Approach to true emergencies
  - iv. Prescribing practices
  - v. Documentation

## **PILOT UNIT: THE BASIC TELEPHONE ENCOUNTER**

### **Pilot Unit Description**

Prior to implementing the entire curriculum, the first unit (The Basic Telephone Encounter) has been fully developed and will be pilot tested this spring. This unit was chosen, as it is essential to have a strong grasp of these basic communication strategies prior to learning about more complicated scenarios.

#### *Unit Goal*

Internal medicine residents, when taking after-hours call for the resident continuity clinic, will be able to complete a successful telephone encounter.

#### *Unit Objective*

Given a simulated patient on the telephone, on-call residents will complete a successful telephone encounter according to a checklist.

#### *Unit Content (see Appendix C)*

The content will include a presentation of the main components of a successful telephone encounter and tools with which to execute the encounter. These components are highlighted by the checklist, which was adapted from Reisman's Checklist for Skills Practice<sup>11</sup>. There will be several example cases of telephone encounters that will be used during the session and for the learner evaluation.

### *Unit Instructional Strategies*

This one hour pilot unit will include three methods of instruction. First, the instructor will give a brief lecture introducing telephone medicine and outlining the successful telephone encounter checklist. Next, the instructor will explain and demonstrate the skills using a scripted encounter. Finally, the residents will work in groups of three with two role-playing a telephone encounter while a third observes the encounter with the checklist. The instructor will be observing and listening to the role-play to provide feedback.

### *Learner Evaluation Methods*

During a resident's regular call night, a simulated patient will contact the resident via the answering service. The resident will be expected to call the patient back in a timely manner and complete the encounter according to the checklist. The encounter will be digitally recorded using an online service, RecordiaPro<sup>17</sup>. The resident will be notified during the informed consent process (see Appendix E) that, as part of the course, they will be recorded during a telephone encounter. They will not, however, know in advance which call is being recorded. This way, we will be able to evaluate an interaction that is very likely representative of the resident's real-world performance. The course instructor, as well as two other general medicine faculty members, will analyze the recording according to the checklist. Finally, the resident will meet one-on-one with the instructor to review his/her encounter checklists and to receive feedback. If a resident demonstrates need for remediation, this will be discussed at the feedback session and a second recorded encounter will be done to re-evaluate.

## Pilot Unit Development Table

Unit Objective(s)	Unit Content	Instructional Strategies		Learner Evaluation
<p>Given a simulated patient on the telephone, residents, while on-call, will complete a successful telephone encounter according to a checklist.</p>	<p>Definition of a successful telephone encounter and explanation of the five main components.            1) Open            2) Obtain info            3) Process info            4) Review            5) Document</p>	<p><b>Explanation:</b>            Direct Instruction            – Lecture teaching the main components of a successful telephone encounter.</p> <p><b>Documents:</b>            - Slides of didactic session            - Checklist handout            - Course evaluation form</p> <p><b>Demonstration:</b>            Teacher will “think allowed” and highlight behaviors during an audio recording of a successful encounter.</p>	<p><b>Practice:</b>            Residents will work in groups of three – two will role-play a telephone encounter and the third will use the checklist to evaluate.</p> <p><b>Documents:</b>            -role-play cases and instructions</p>	<p>1) A simulated patient will contact the resident while he/she is on call and the resident will complete a telephone encounter according to a checklist.</p> <p><b>Documents:</b>            -Checklist            -Standardized patient cases and instructions</p>



## **Curriculum Implementation Plan**

The curriculum will be implemented during the residents' protected education time on Thursday afternoons. It will occur once a year in late summer or early fall. The three units will be taught in consecutive weeks.

The first two units will have similar structures consisting of a brief didactic presentation, instructor demonstration and role-play opportunity. The third unit on Understanding Medical-Legal Consequences of Telephone Medicine will not include a role-play, but will include a review of several phone note documents and discussion.

Similarly, the learner evaluation of the first two units will be the same: an encounter on the telephone with a standardized patient will be recorded and analyzed. For the third unit, the encounter will also be recorded, but it will be the resident's phone note documentation that will be analyzed according to a checklist.

## **Curriculum Evaluation Plan**

The curriculum will be evaluated in several ways (see Appendix D). The pilot unit itself will be evaluated in two ways. The learner's will be asked to complete an evaluation survey that will provide learner feedback on the content itself as well as presentation of the materials. The survey will include two retrospective pre-test/post-test questions that will provide a sense of how effective the course is. Additionally, we will also have the learners' completed checklists from their 'test' telephone encounters.

In addition to this feedback from the learner's themselves, the curriculum will be evaluated by experts in the field for content (Dr. Michael Elnicki and Dr. Anna Reisman)

and instructional strategy (Dr. Kent Sheets). Each evaluator will be asked a list of specific questions pertaining to their area of expertise.

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## **APPENDIX A: LOCAL NEEDS ASSESSMENT**

Telephone Medicine Curriculum  
MSU Faculty Questionnaire

Telephone medicine is the practice of providing patient care over the telephone. In particular, this questionnaire focuses on after-hours calls.

1) I think that training in telephone medicine is important.  
Strongly Disagree    Disagree    Indifferent    Agree    Strongly Agree

2) I feel satisfied with current resident training for telephone medicine at MSU.  
Strongly Disagree    Disagree    Indifferent    Agree    Strongly Agree  
N/A

3) How comfortable are you with residents' handling of after-hours telephone calls?  
Very uncomfortable    Uncomfortable    Indifferent    Comfortable    Very comfortable

4) How comfortable are you with residents prescribing medications after hours?  
a. Refills non-narcotics?  
Very uncomfortable    Uncomfortable    Indifferent    Comfortable    Very comfortable

b. Refills narcotics?  
Very uncomfortable    Uncomfortable    Indifferent    Comfortable    Very comfortable

c. New non-narcotics?  
Very uncomfortable    Uncomfortable    Indifferent    Comfortable    Very comfortable

d. New Narcotics?  
Very uncomfortable    Uncomfortable    Indifferent    Comfortable    Very comfortable

5) Do you give residents feedback on their after-hours patient telephone encounters?  
N/A    Never    Rarely    Sometimes    Often    Always  
a. Formal face-to-face feedback?

- b. Centricity flag?
  - c. Informal “by the way...”?
  - d. Other?
- 6) OR are you aware of the mechanism by which residents may or may not be given FB on after-hours encounters?

Telephone Medicine Curriculum  
MSU Resident Questionnaire

- 1) Do you currently receive training in telephone medicine?  
Yes No Don't know
- 2) Are you familiar with the after-hours guidelines in the MSU Resident Manual?  
Yes No Don't know
- 3) On average, how many after-hours outpatient calls do you receive in a call night?
- 4) How comfortable are you managing these patient calls?  
Very uncomfortable Uncomfortable Indifferent Comfortable Very comfortable
- 5) When on call, whom do you ask for assistance with after-hours clinic calls? (all that apply)  
Other residents Inpatient Attending Fellows Clinic  
Attending No one
- 6) How comfortable are you prescribing over the phone?
- a. Refills non-narcotics?  
Very uncomfortable Uncomfortable Indifferent Comfortable Very comfortable
- b. Refills narcotics?  
Very uncomfortable Uncomfortable Indifferent Comfortable Very comfortable
- c. New non-narcotics?  
Very uncomfortable Uncomfortable Indifferent Comfortable Very comfortable
- d. New Narcotics?  
Very uncomfortable Uncomfortable Indifferent Comfortable Very comfortable
- 7) How satisfied are you with your telephone encounters?  
Very Unsatisfied Unsatisfied Indifferent Satisfied Very satisfied

8) How often do you receive attending feedback on your after-hours telephone calls?

Never          Rarely          Sometimes          Often          Always

- a. Formal face-to-face feedback?
- b. Centricity flag?
- c. Informal "by the way..."?
- d. Other?

9) How often do you document these calls in Centricity?

Never          Rarely          Sometimes          Often          Always

10) Do you feel a curriculum in telephone medicine is important?

Yes    No    Don't know



## **APPENDIX B: UNIT DEVELOPMENT TABLES**

**TABLE 1: The Basic Telephone Encounter**

**Unit Goal:** Internal medicine residents, when taking after-hours call for the resident continuity clinic, will be able to complete a successful telephone encounter

Unit Objective(s)	Unit Content	Instructional Strategies		Learner Evaluation Strategies
<p>Given a simulated patient on the telephone, residents, while on-call, will complete a successful telephone encounter according to a checklist.</p>	<p>Definition of a successful telephone encounter and explanation of the five main components.</p> <ol style="list-style-type: none"> <li>1) Open</li> <li>2) Obtain info</li> <li>3) Process info</li> <li>4) Review</li> <li>5) Document</li> </ol>	<p><b>Explanation:</b> Direct Instruction – Lecture teaching the main components of a successful telephone encounter.</p> <p><b>Documents:</b> - Slides of didactic session - Checklist handout - Course evaluation form</p> <p><b>Demonstration:</b> Teacher will “think allowed” and highlight behaviors during an audio recording of a successful telephone encounter.</p>	<p><b>Practice:</b> Residents will work in groups of three – two will role-play a telephone encounter and the third will use the checklist to evaluate.</p> <p><b>Documents:</b> -role-play cases and instructions</p>	<ol style="list-style-type: none"> <li>2) A simulated patient will contact the resident while he/she is on call and the resident will complete a telephone encounter according to a checklist.</li> <li>3) Retrospective pre/post survey</li> <li>4) Course accessibility (“happiness”) survey</li> </ol> <p><b>Documents:</b> -Checklist -Standardized patient cases and instructions -Retrospective pre/post survey -Accessibility survey</p>

**TABLE 2: Dealing with Problem Scenarios**

**Unit Goal:** Internal medicine residents, when taking after-hours call for the resident continuity clinic, will be able to complete a successful telephone encounter with a difficult patient.

Unit Objective(s)	Unit Content	Instructional Strategies		Learner Evaluation Strategies
<p>Given a simulated difficult patient on the telephone, residents, while on-call, will complete a successful telephone encounter according to a checklist.</p>	<p>Brief review of a basic successful telephone encounter:            1) Open            2) Obtain info            3) Process info            4) Review            5) Document</p> <p>Difficult behaviors and solutions:            1) Anger            2) Drug Seeking            3) Over-Utilizers</p>	<p><b>Explanation:</b>            Direct Instruction – Lecture teaching addressing the key components diffusing a difficult patient interaction.</p> <p><b>Documents:</b>            -Slides            -Audio cases            -Checklist of tools for difficult patient encounters.</p> <p><b>Demonstration:</b>            Teacher will “think allowed” and highlight behaviors during a scripted or audio recording.</p>	<p>Residents will get in groups of 3. Two will role-play a telephone encounter and the third with use the checklist to evaluate.</p> <p><b>Documents:</b>            -role-play cases and instructions</p>	<p>1) A simulated difficult patient will contact the resident while he/she is on call and the resident will complete a telephone encounter according to a checklist.</p> <p>2) Course accessibility survey</p> <p><b>Documents:</b>            -Checklist            -Standardized patients cases and instructions            -Course accessibility survey</p>

**TABLE 3: Understanding Medical-Legal Consequences**

**Unit Goal:** Internal medicine residents, when taking after-hours call for the resident continuity clinic, will be able to understand the potential medical-legal consequences and be able to avoid them.

Unit Objective(s)	Unit Content	Instructional Strategies		Learner Evaluation Strategies
<p>Given a simulated patient on the telephone, residents, while on-call, will complete a successful telephone encounter AND document it according to a checklist.</p>	<p>Brief review of a basic successful telephone encounter and difficult patient strategies.</p> <p>Discuss medical-legal consequences.</p> <ol style="list-style-type: none"> <li>1) Malpractice</li> <li>2) Giving phone advise</li> <li>3) Approach to true emergencies</li> <li>4) Prescribing practices</li> <li>5) Documentati on</li> </ol>	<p><b>Explanation:</b> Direct Instruction – Lecture teaching addressing the key components of documenting a telephone encounter.</p> <p><b>Documents:</b> -Slides</p> <p><b>Demonstration:</b> Teacher will “think allowed” during a recorded encounter and develop phone note.</p>	<p>Residents will get in groups of 3. Several examples of documentati on will be given and evaluated by the residents</p> <p><b>Documents</b> -Handout with phone note examples (some good, some poor)</p>	<p>A simulated patient will contact the resident while he/she is on call and the resident will complete a telephone encounter with appropriate documentation according to a checklist.</p> <p><b>Documents:</b> -Checklist -Cases</p>

## **APPENDIX C: PILOT UNIT MATERIALS**

## CHECKLIST FOR A SUCCESSFUL BASIC TELEPHONE ENCOUNTER

<b>Opening the Encounter</b>	<b>Well Done</b>	<b>Done</b>	<b>Done Marginally</b>	<b>Not Done</b>	<b>N/A</b>
Introduced self					
Explained role (covering for PCP)					
<b>Obtaining Information</b>					
Elicited chief complaint with open-ended questions					
Used silence and/or neutral utterance					
Identified patient's primary cause of concern					
Assessed/Addressed patient's emotion					
Asked for details, including intensity and progression of symptoms					
Uncovered pertinent positives and negatives (ROS)					
Obtained relevant past medical history					
Asked for Medications/Allergies					
Summarized patient's concerns					
<b>Processing Information</b>					
Stated opinion about nature of problem					
Stated opinion about seriousness					
Recommended appropriate triage					
Co-developed a plan for management with patient					
<b>Closing the Encounter</b>					
Summarized the plan					
Educated the patient about assessment and plan					

Explained alarm symptoms/reasons for call back					
Confirmed patient's understanding and provided opportunity for questions					
Assured patient that info will be relayed to PCP					
<b>Communication Skills</b>					
Voice was clear and easily understood					
Tone was relaxed and interested					
Avoided medical jargon					
Used appropriate reassurance					
<b>Documentation</b>					

Adapted from Reisman A, ed., Telephone Medicine: A Guide for the Practicing Physician (Philadelphia: American College of Physicians), 2002.

**Comments:**

# PILOT UNIT LECTURE SLIDES

## Telephone Medicine: The Basic Telephone Encounter

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March 24, 2011

### Introduction



### Introduction



### Introduction

- Telephones have been a critical part of practicing medicine for decades
- Doctors spend at least 25% of their time on the telephone

### Introduction

- Telephone medicine is different than clinic medicine
  - No non-verbal cues
  - No physical exam
  - Not at a dedicated time for patient care
- Poor telephone communication can result in poor medical outcomes

### Objectives

- Understand the importance of telephone medicine
- Appreciate the differences between telephone medicine and clinic medicine
- Be familiar with the main components of a successful telephone encounter
- Be comfortable executing a successful telephone encounter



### Agenda

- Outline the main components of a successful telephone encounter
- Listen to a demonstration
- Practice telephone encounters in small groups

### Overview: Basic Telephone Encounter

- Open the encounter
- Obtain Information
- Process Information
- Close the encounter
- Document the encounter

### Opening the Encounter

- Introduce yourself
- Explain your role
- Pay attention to patient's tone

### Obtaining Information

- Chief complaint
- Actual concerns
- Details and ROS
- PMH, Meds, Allergies
- Use open-ended questions
- Pay attention to emotions
- Listen!
- Summarize

### Processing Information

- What is it
- How bad is it
- What should happen next (triage)
- Work with patient to develop a plan

### Closing the Encounter

- Summarize
- Educate
- Review alarm symptoms/reasons to call back
- Confirm patient's understanding
- Mention PCP

### Document the Encounter

- ALWAYS!
- Route to PCP

- More details on this in a later unit...

Play Demo

PRACTICE!

### Summary

- Open the encounter
- Obtain Information
- Process Information
- Close the encounter
- Document the encounter

## TELEPHONE MEDICINE PILOT UNIT CASES

### Role Play Case #1: Urinary Tract Infection

#### Patient Instructions:

You are a 23 year-old female graduate student at MSU without any medical problems. Over the last 2 days, you have noticed some urinary discomfort – burning, frequency and urgency. You feel it has been getting worse and so you called your doctor.

If asked, you will tell the doctor that you have never had this before and that you are very worried. You are otherwise feeling fine. If asked, you will volunteer that you had sexual intercourse 3 days ago.

If not asked about other concerns before the conversation ends, you will ask if it might be an STD.

#### Resident Instructions:

You are a senior resident at Sparrow Hospital on a busy call night. You receive a page from the answering service about one of your colleague's clinic patients. The patient is a young woman who tells you she's been having urinary burning and urgency for two days.

You have 10 minutes to complete the following task:

- Following the checklist for a successful telephone encounter, take a focused history and co-develop a treatment plan.
- Remember to address the patient's concerns.

## Role Play Case #2: Rash

### Patient Instructions:

You are a 40 year-old patient with a history of hypertension and hyperlipidemia and you just developed a rash in the last hour or so after eating at a restaurant. It does not seem to be getting worse, but you are calling your doctor because you are very uncomfortable and don't think you'll be able to sleep.

If asked, you describe it as very itchy, pale red bumps that look like welts. If asked, you think you have had this once before, but you don't remember what caused it or what you did for it. If asked, you have not started any new medications recently.

If not suggested before the conversation ends, you will if you can take an over the counter medication for this problem. If not asked, you will express concerns about interactions with your other medications (hydrochlorothiazide and simvastatin).

### Resident Instructions:

You are a senior resident at Sparrow Hospital on a busy call night. You receive a page from the answering service about one of your colleague's clinic patients. The patient tells you he/she has a rash and is very uncomfortable.

You have 10 minutes to complete the following task:

- Following the checklist for a successful telephone encounter, take a focused history and co-develop a treatment plan.
- Remember to address the patient's concerns.

## Role Play Case #3: Chest Pain

### Patient Instructions:

You are a 57 year-old patient with a history of CAD (MI 2007), HTN, DM. You were seen in the clinic 1 week ago for nasal congestion and cough, but now you have had chest pain for 2 days. You were not too worried about it initially, but your daughter said you should call your doctor.

If asked, it is a sharp left sided chest pain that hurts only with coughing and deep breaths. It feels better with shallow breathing. If asked, it does not feel like the MI you had 3 years ago. If asked, your only other symptoms are nasal congestion that is still bothersome and a dry, hacking cough. You do not have any nausea, SOB or diaphoresis.

If not addressed before the conversation ends, you will ask if this could be serious.

### Resident Instructions:

You are a senior resident at Sparrow Hospital on a busy call night. You receive a page from the answering service about one of your colleague's clinic patients. The patient tells you that he/she is having chest pain for 2 days.

You have 10 minutes to complete the following task:

- Following the checklist for a successful telephone encounter, take a focused history and co-develop a treatment plan.
- Remember to address the patient's concerns.

## Evaluation Case #1: Diarrhea

### Simulated Patient Instructions:

You are calling your doctor because you have been having diarrhea for 2 days. You are having 5-7 very loose, watery stools each day and it is always worse after eating. You have not been eating much at all and, although you have been taking in fluids, it “goes right through you.” You are having cramping abdominal pain, but no nausea or vomiting. You don’t think there has been any blood in the stool, but you’re not sure. You feel weak and run down, but not lightheaded or dizzy. You do not have a fever.

If asked, you have not had antibiotics recently or eaten any suspicious foods. Your spouse has similar symptoms, but yours is much worse. If asked, you are worried about not being able to eat much and you are concerned that it has lasted 2 full days.

In general, you are friendly and agreeable. You just want to feel better and wonder what you can do to get better faster.

If not addressed, you will ask if you need to be seen in the office.

## Evaluation Case #2: Upper Respiratory Illness

### Simulated Patient Instructions:

You are calling your doctor about cold symptoms. You have had nasal congestion, sore throat and cough for 3 days. You thought you would be feeling better by now, but you still feel run down and congested. You are not having any fevers. Your sore throat is uncomfortable, but lozenges help.

If asked, you are not using any over the counter medicines, except for the lozenges. If asked, you are concerned that you might be contagious to your family and co-workers.

In general, you are friendly and agreeable. You sound tired, though, and slightly annoyed that you are still sick after 3 days.

## Evaluation Case #3: Ankle Sprain

### Simulated Patient Instructions:

You are calling your doctor because you slipped on the ice 3 days ago and twisted your ankle. At first, you could not stand on it and it got pretty swollen. After an hour or two, you could walk on it, but it still hurt quite a bit. Now it has been a few days and you are still having pain. It is still swollen and now has some bruising. You are walking ok, but you can still “feel” it. You tried putting ice on it, but it did not help much. You took one Advil, which didn’t help much either.

If asked, you are calling now because it’s always worse at night. You are concerned that you might need an X-ray.

In general, you are friendly and agreeable.



## Demonstration Case: Neck Pain

A patient calls the doctor on call complaining of neck pain. He states that he noticed it when he woke up in the morning and it's been getting worse throughout the day. He's concerned that he will not be able to sleep tonight due to pain.

A discussion between patient and physician that demonstrates use of the checklist for a successful telephone encounter will be played during the 1-hour pilot session.

## **APPENDIX D: CURRICULUM EVALUATION**

## CONTENT REVIEWER FORM

### Questions:

- 1) Are there any gaps in the content that need to be addressed?
- 2) Is the content up-to-date?
- 3) Is the content valid for my goals?
- 4) Is there relevant content that is missing?
- 5) Are there topics that should be deleted?
- 6) Is the organization of the content reasonable?
- 7) Do the objectives seem attainable in the time allotted?
- 8) Are there any critical components not included in the checklist?
- 9) Are the chosen cases effective for evaluation? Demonstration? Role-play?

### Comments:

## **DESIGN REVIEWER FORM**

### Questions:

- 1) Do the teaching strategies make sense?
- 2) Are the instructional methods appropriate for the topic? For the learners?
- 3) Does the learner evaluation strategy make sense?
- 4) Is the evaluation strategy appropriate for the topic? For the learners?
- 5) Do the objectives seem reasonable and attainable, given the time allotted?
- 6) Does the implementation plan seem achievable?

### Comments:

# TELEPHONE MEDICINE RESIDENT UNIT EVALUATION

Page 1

1=Strongly Agree    2=Agree    3=Neutral    4=Disagree    5=Strongly Disagree

- |    |   |   |   |   |   |   |
|----|---|---|---|---|---|---|
| 1) | The course objectives were clear.                         | 1 | 2 | 3 | 4 | 5 |
| 2) | This course was relevant to my job as a resident.         | 1 | 2 | 3 | 4 | 5 |
| 3) | The lecture material was presented clearly.               | 1 | 2 | 3 | 4 | 5 |
| 4) | The role-playing exercises helped me learn.               | 1 | 2 | 3 | 4 | 5 |
| 5) | I had enough time to practice these skills.               | 1 | 2 | 3 | 4 | 5 |
| 6) | I received adequate feedback during practice              | 1 | 2 | 3 | 4 | 5 |
| 7) | This course will change my approach to after-hours calls. |   |   |   |   |   |
|    |   | 1 | 2 | 3 | 4 | 5 |

8) Overall, how would you rate the effectiveness of this course?

Excellent    Good    Adequate    Fair    Poor

9) After completing this course, how comfortable are you managing after-hours calls?

Very comfortable    Comfortable    Indifferent    Uncomfortable    Very uncomfortable

10) How would you rate your understanding of the subject of telephone medicine NOW as compared with prior to taking this course?

Significantly Improved    Improved    Unchanged

11) How would you rate your confidence in telephone medicine NOW as compared with prior to taking this course?

Significantly Improved    Improved    Unchanged

**TELEPHONE MEDICINE**  
**RESIDENT UNIT EVALUATION**

Page 2

12) What did you like most about this course?

13) What did you like least about this course?

## **APPENDIX E: INFORMED CONSENT**

## Research Participant Information and Consent Form

You are being asked to participate in a research project. Researchers are required to provide a consent form to inform you about the study, to convey that participation is voluntary, to explain risks and benefits of participation, and to empower you to make an informed decision. You should feel free to ask the researchers any questions you may have.

**Study Title:** An After-Hours Telephone Medicine Curriculum for Internal Medicine Residents.

**Researcher and Title:**

Laura Freilich, MD

**Department and Institution:**

Michigan State University  
Department of Internal Medicine  
Division of General Medicine

**Address and Contact Information:**

Clinical Center B-327  
[laura.freilich@hc.msu.edu](mailto:laura.freilich@hc.msu.edu)  
517-353-8585

**1. Purpose of Research and What You Will Do:**

- You are being asked to participate in a research study on a curriculum on telephone medicine.
- You have been selected as a possible participant in this study because you are either a second or third year resident in the CHM Internal Medicine Residency Program who routinely handles outpatient after-hours calls.
- From this study, the investigator is hoping to show that a curriculum in telephone medicine improves residents' handling of after-hours patient calls.
- In the entire study, 22 residents are being asked to participate.
- If you are under 18, you cannot be in this study without parental permission.
- You will be present and participate in 3 one-hour educational sessions where you will learn about telephone medicine.
- You will receive a checklist highlighting key points to a successful telephone encounter.
- While on call for the clinic, you will receive a phone call from a simulated patient.
- The simulated patient will have a specific problem to discuss and you will complete a telephone encounter according to the checklist.



- This simulated patient encounter will be recorded.
- Your encounter will be analyzed by the investigator, according to the checklist.
- You will meet with the investigator to review the checklist for your test encounter and receive feedback on your performance.
- This study is NOT blinded. The investigator will know which encounter was yours in order to provide feedback.
- If interested, you will be provided with the aggregated data from the study, but not individual data from anyone other than yourself.

**2. Your rights to participate, say no, or withdraw.**

- Participation in the curriculum is mandatory as part of your residency training.
- Including your aggregated data in this research project, however, is completely voluntary. You have the right to say no.
- You may change your mind at any time and withdraw.
- To withdraw at anytime, email the investigator at the email address listed above.
- Whether you choose to participate or not will have no affect on your grade or evaluation.

**3. Contact information for questions and concerns:**

- If you have concerns or questions about this study, such as scientific issues or how to do any part of it, please contact the researcher:

Laura Freilich, MD  
 B-327 Clinical Center  
[Laura.freilich@hc.msu.edu](mailto:Laura.freilich@hc.msu.edu)  
 517-353-8585

- If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail [irb@msu.edu](mailto:irb@msu.edu) or regular mail at 207 Olds Hall, MSU, East Lansing, MI 48824.

**4. Documentation of informed consent:**

Your signature below means that you voluntarily agree to participate in this research study.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

You will be given a copy of this form to keep.