Calls about sick children: A triage system for the office

By Barton D. Schmitt, MD

Daytime calls about sick children got you down? A good triage system will free up more of your time for the patients in your office without jeopardizing the care of phone-in patients. First of two parts.

Incoming telephone calls are one of the most frustrating parts of pediatric practice. The average pediatrician receives approximately 20 calls per day asking advice about sick children and an equal number from parents who want a sick-child appointment. More and more pediatricians are delegating sick-child and well-child phone calls to an office nurse.

A 1987 survey of Denver and Pittsburgh pediatricians revealed that physicians who hadn't delegated most of their daytime calls were the most dissatisfied with office practice.[1] Dissatisfied physicians answered more than 10 calls per day personally and perceived that they didn't have enough time to handle the calls.

The system described in this two-part series will help you delegate your office sick-child calls. If you have delegated these calls already, the information should help you improve your present system.

Why delegate daytime calls?

Although the physician is the person most qualified to give medical advice over the telephone, delegating much of this task has several advantages. The main one is that it increases physician satisfaction with the practice of medicine. Being interrupted during office visits and getting behind in the appointment schedule is very stressful. Delegating calls also allows physicians to focus their energy on what they're good at: patient care and office flow. It is cost-effective, because nurse time is less expensive than physician time. Finally, delegating calls increases parent satisfaction because calls are returned more quickly and reliably than they can be by a busy physician during his "break."

Most telephone calls are routine and can be managed with routine answers. Nurses can be trained to handle the three types of calls that physicians usually take:

- They can call in refills or new prescriptions to pharmacies if approved by the physician (and permitted under state law).
- They can manage most calls about well children (behavioral or immunization questions, for example) from personal experience, past reading, or reference books.
- They can handle most sick-child calls safely using protocols.

TABLE 1

Which calls to transfer to the physician

Emergency calls when triage nurse is uncertain whether patient should be seen in office or ED
Calls from other professionals
Calls about patients with chronic diseases
Follow-up calls on patients seen by physician
Calls about results of special laboratory studies
Calls from parents who demand to speak to the physician

A system for sick-child calls

Figure 1 shows the most common system for managing sick-child calls. The data is from a 1997 survey of over 50 Denver pediatricians.[2] Calls about sick children are

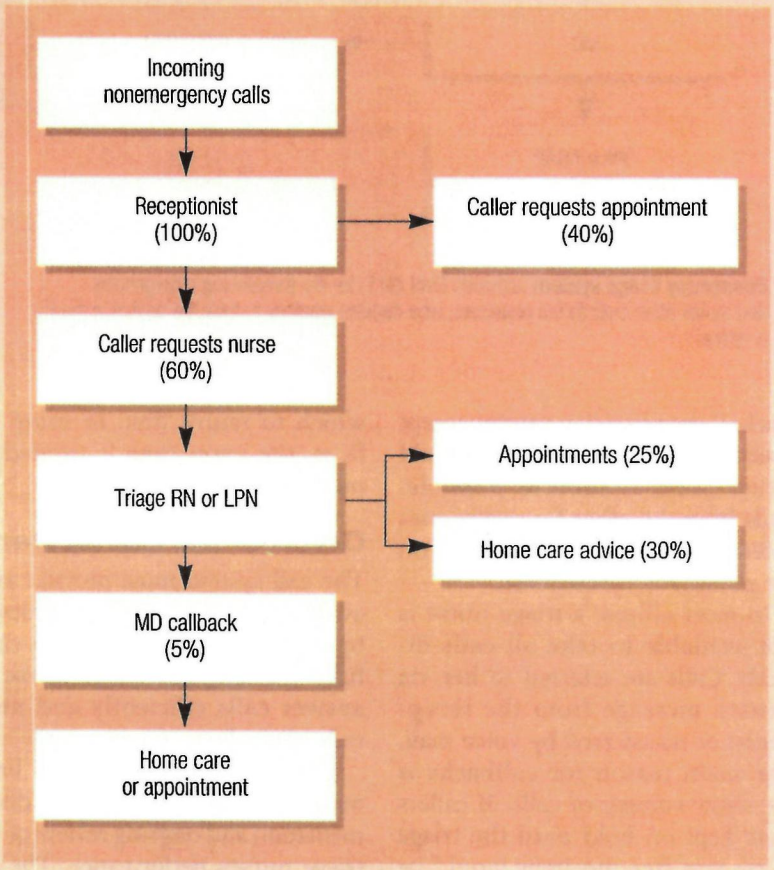
percentage of calls are transferred to the physician (Table 1). Calls about potential emergencies and where to see the patient need to be dealt with immediately (Figure 2). Calls from professionals (especially other physicians, psychologists, teachers, and lawyers) also should be expedited because these people are often extremely difficult to

answered by a receptionist who asks how she can help the caller. If the caller requests an appointment, it is made. If the caller wishes to speak with the advice nurse or isn't certain what she needs, the call is transferred to a nurse. If the nurse is not on the phone, the call is transferred directly. If the nurse is handling another call, the second caller is placed on hold. If more calls are waiting, the receptionist records information (including time the call was received) for a nurse callback.

During telephone triage, the nurse decides whether the patient needs an appointment or can be managed safely at home. A small

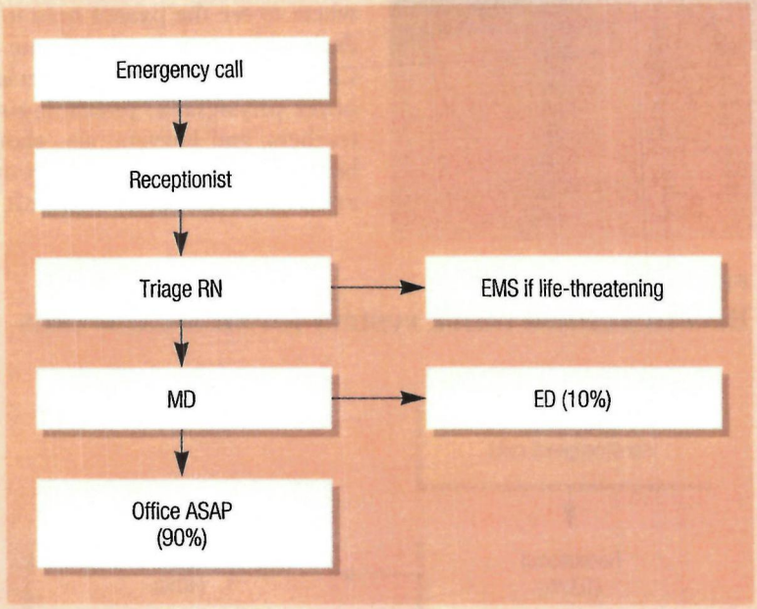
THE AUTHOR is Professor of Pediatrics at the University of Colorado School of Medicine and Director of General Consultative Services and Medical Director, After-Hours Call Center, The Children's Hospital, Denver. He is a member of the Editorial Board of *Contemporary Pediatrics*.

FIGURE 1
Recommended office system for sick-child calls



An office triage system for nonemergency calls about sick children delegates most calls to the receptionist or triage nurse.

FIGURE 2
Recommended office system for emergency calls



Emergency triage system activates EMS (911) for life-threatening emergencies and routes other calls to the physician, who decides whether to treat the patient in the ED or office.

TABLE 2
Prerequisites for delegating calls

- Triage and advice protocols
- Documentation system
- Training system for nurses performing telephone triage
- Quality monitoring and improvement system

reach. If the physician cannot accept these calls immediately, she should return them as soon as possible. Calls from the other four categories listed in Table 1 can be placed on the physicians' callback list.

In most offices, a triage nurse is not available to take all calls directly. Calls are referred to her via written message from the receptionist or transferred by voice mail. The main reason for callbacks is the sheer volume of calls. If callers were kept on hold until the triage nurse was free, no lines would be open for other incoming calls. Callbacks also allow the nurse to scan her call requests and prioritize which to return first. In some offices, the extra time is needed to pull a chart.

Goals of the call system

The call system must provide safe, quality care. This can be achieved by using triage protocols and carefully training the triage nurse to answer calls efficiently and meet callers' needs.

The call system must also limit malpractice liability by proper documentation and ongoing review of the triage nurse's performance. The infrastructure for delegating calls must thus include a protocol system, documentation system, training system, and quality improvement system (Table 2).

Protocols for decision making

Triage protocols provide a sequence of questions covering situations from most severe to least severe and from most urgent to least urgent. A positive answer to a question places a patient into a particular disposition category. Triage protocols determine which patients need to be seen rather than cared for at home, when they need to be seen, and where they should be seen (at the least expensive site that can manage the problem adequately). Protocols try to make most office visits necessary visits. This is even more important after hours (nights and weekends) than during office hours.

Triage protocols try to walk the tightrope between under-referral and over-referral. Under-referral can delay evaluation, diagnosis, and treatment, resulting in serious complications and adverse outcomes. These in turn increase malpractice liability. Examples include failure to bring in

for evaluation a child who has appendicitis, a foreign body aspiration, or meningitis.

Over-referral risks apply mainly to unnecessary emergency department visits after hours, which can be stressful to the child and are costly. During office hours, over-referral results in unnecessary loss of work time and wages for parents. Seeing children for symptoms that could have been managed by phone can also lead to a sense of medical vulnerability and exacerbate the parents' worry. This increases the likelihood that they will expect future unnecessary visits, thereby using up time slots needed for sicker children.

It is best to adapt existing triage protocols to your needs rather than trying to write your own, which is very time consuming. Two books that provide such protocols are *Pediatric Telephone Protocols* and *Telephone Medicine*.[3,4]

Reasons for triage protocols. Physicians don't need protocols for triaging sick children. During their medical training and experience, they have incorporated triage systems into their clinical judgment. Determining the acuity or urgency of a sick child is not part of basic nursing training, however. Unlike physicians, most nurses haven't seen the full range of serious complications that can be part of each acute illness. Physicians, therefore, are more comfortable about medical liability if the nurse learns how to triage phone calls by protocol. Moreover, in many states, the Nurse Practice Act requires that nurses use standardized protocols if their role crosses over into medical practice.

TABLE 3

Triage categories for office-hours calls

Activate EMS (911) immediately (life-threatening emergencies)

See patient immediately (emergent or urgent patients)
- Office or ED
- Discuss site with physician

See today, by appointment (urgent or uncomfortable patients)

See today or tomorrow (nonurgent patients)

See within two weeks (recurrent or persistent symptoms)

Don't see and give instructions for home care (mildly ill patients)

In some offices, most moderately ill patients are seen by the physician and there is little triage. The main reason for protocols in these practices is that they help the nurse provide consistent, targeted advice with little variation from nurse to nurse. They also improve the nurse's productivity in dealing with unfamiliar symptoms. In a broader sense, they improve the quality of care.

Triage disposition categories range from activating emergency medical services (911) for life-threatening emergencies to recommending care at home for children with mild illnesses. Table 3 lists the dispositions useful for an office protocol system. They are based on a survey that asked 100 Denver pediatricians how they would refer urgent or emergent symptoms.[5]

When the office is open, most patients who need to be seen are given a same-day appointment. To help working parents, most offices stay open long enough to work in any acutely ill child who needs to be examined.

Once life-threatening emergencies have been referred to EMS, patients with potential emergencies usually receive better, less expensive care if they come to the primary care physician's (PCP) office first. There are several reasons for this:

- If the child might need referral to a subspecialist (such as a neurologist) or a surgeon (such as an orthopedist), it makes more sense for the PCP to do the initial assessment than for the child to make an extra stop in the emergency department.
- Most parents can't accurately assess dehydration, difficulty breathing, a stiff neck, and other potentially serious symptoms. Referring all patients suspected of having these conditions on the basis of a telephone assessment would lead to many unnecessary ED visits.
- The PCP can see the patient faster because he or she already knows the family and the past medical history.
- The office setting is less stressful than the ED, and the child is more likely to cooperate with the PCP than with ED physicians he doesn't know.
- The PCP usually needs less lab work and fewer imaging studies to reach a decision than an ED physician.
- Most offices can provide minor emergency care, such as nebulization treatments, suturing, minor burn treatment and orthopedic

care, wound and bite irrigation, and basic lab tests.

Because PCPs' comfort with evaluating potentially emergent symptoms varies widely, the protocols for office practice include a category that asks the physician to decide whether patients with potentially emergent conditions can best be cared for in the office or referred directly to a surgeon or subspecialist. The physician can speak directly with the caller or make a decision based on the triage nurse's information. Figure 3 outlines a triage protocol for headache as an example.[3]

Customizing triage protocols. Most physicians who use existing telephone protocols review them and make some modifications. The most common change is in the site (office or emergency department) specified as most appropriate for potential emergencies. Others include modifications in home care advice, recommended OTC medications, and which prescriptions can be called in to the pharmacy. In general, changes should be standardized for all members of a pediatric group to minimize confusion for the triage nurse. Customizing the protocols for each practitioner makes it difficult for the nurse to memorize standard advice and reduces productivity.

To customize existing protocols, cross out any sentence or paragraph you disagree with. If you wish to replace a paragraph, type up the new version and tape it over the existing one. If you wish to add advice, type up the additional instructions and tape them at the end of the protocol.

FIGURE 3

Headache protocol

See another protocol
Headache followed a head injury within last 48 hours (see HEAD TRAUMA protocol)

Activate EMS (911)
Patient is difficult to awaken (rule out increased ICP)

See patient immediately in ED or office (ask physician)
Neurologic symptoms (rule out encephalitis, subdural hematoma)
- Confused thinking
- Blurred or double vision
- Slurred speech
- Unsteady walking
- Weakness

Stiff neck (rule out meningitis, subarachnoid bleed)
Child sounds very sick or weak to the triager (rule out serious cause)

See patient immediately in office
Severe headache with fever (rule out sinusitis, meningitis)
Severe headache with vomiting (EXCEPTION: previous migraine headaches) (rule out increased intracranial pressure, subarachnoid bleed, first migraine)

See today
Parent wants child seen
Sore throat present longer than 24 hours (rule out strep throat)
Sinus pain or pressure (rule out frontal sinusitis)
Severe pain that has not improved after two hours of pain medicine
Headache present longer than 24 hours (EXCEPTION: analgesics have not yet been tried or headache is part of a generalized illness) (rule out sinusitis or other treatable cause)

See within two weeks
Recurrent headaches (rule out tension headaches, migraine, school avoidance)

Home care
All other patients

Home care advice for mild headaches
Reassure the caller. "It doesn't sound like a serious headache."
Pain medicine. Give acetaminophen or ibuprofen for pain relief (see dosage table). Teens: 650 mg acetaminophen or 400 mg ibuprofen. Headaches caused by fever are also helped by fever reduction.
Food. Give fruit juice or food if the child is hungry or hasn't eaten in longer than four hours (skipping a meal can cause a headache in many children).
Rest. Have the child lie down in a quiet place and relax until he feels better.
Local cold applications. Apply a cold washcloth or ice pack to the forehead for 20 minutes.
Muscle stretching. Stretch and massage any tight neck muscles.
Call back if:
Severe headache persists longer than 2 hours after giving pain medicine
Headache lasts longer than 24 hours despite using a pain medicine

Triaging phone calls by protocol helps the nurse identify emergencies and make consistent decisions on when to consult the physician.

Using telephone protocols. Telephone triaging is a five-step process. The triage nurse must first identify the main problem or symptom. Asked what he or she considers the most serious symptom, the caller often focuses on fever, which is not the symptom that most deserves triage. Once the nurse has identified the most serious symptom, she selects the appropriate protocol. She then collects data using the questions in the protocol. When the nurse obtains a positive response, she stops asking ques-

FIGURE 4
Call documentation

Date 5/21/98
Time 0940
Patient
Dawson, Rose
Age 11 years
Sex M ☐ F ☒
Phone
798-0201
Nurse
J. Cameron

Symptoms
Runny nose x 2–3 weeks clear discharge, eyes itch.
Protocol used Hay fever ☒
Drug CTM 8 mg LA tab
Dose 1 every 12 hours
Other info Wgt 82 pounds
Call back if Sx not controlled on continuous meds.

☐ See immediately
Office ☐ ED ☐ 911 ☐
☐ See today
☐ See tomorrow and protocol advice given
☐ Later appointment
☒ Home care and protocol advice given
☒ Parent agrees
☐ Refer call to MD

Brief documentation of a sick-child call includes the protocol used, the recommended disposition, the dosages of recommended drugs, and instructions for follow-up.

tions. A positive answer establishes a working diagnosis and a disposition category. This endpoint is important for avoiding unnecessary, time-consuming questions. Finally, the nurse provides home care advice for patients who don't need to be seen that day, both those who are waiting for an appointment the following day and those who don't need to be seen at all.

The documentation system

The most important reason for a written record of each telephone encounter is to protect your office from unfounded lawsuits based on false accusation. If a child has an adverse outcome, the documentation provides evidence of what really happened during the telephone encounter. This eliminates the need to defend the triage nurse's memory of the event against the caller's recollection.

Documentation can also help resolve complaints by parents who do not intend to sue. Even when a patient suffers no harm, the parent may lodge a complaint about how the case was managed. Many such complaints lead to improvements in office policies and procedures. In addition, documentation provides data for quality assurance reviews and helps identify nurses who need more training. When a second call comes in about changes in a child's symptoms, the telephone log provides needed background information, thereby helping maintain continuity of care.

Brief documentation. Brief documentation refers to documenting by pertinent positives. This is acceptable if one uses protocols. (If the triager does not use a protocol, pertinent negatives must also be recorded.) Listing the protocol with a checkmark can confirm that standard triage questions were asked and that standard advice and callback instructions were given. Figure 4 shows an example of brief documentation of an actual call.

Documentation must include the following elements, which are essential to risk management:

- The recommended disposition (since each protocol contains multiple dispositions). In most adverse outcomes the caller claims that the doctor's office did not recommend seeing the child immediately.
- The protocol or resource used, even if the call was taken by memory of that protocol
- Instructions for follow-up that include calling back if the child's condition worsens
- The dosage of any drugs that are recommended.

The main reason for brief documentation is that it improves nurse satisfaction and reduces burnout. Brief documentation allows the nurse triager to spend more time thinking and less time writing. It lets the triager take more calls per hour and prevents postponing documentation, which can lead to errors from faulty recall.

Continued on page 148

TABLE 4

Sample calls to record in the patient's chart

Chronic or complex disease
Patient is referred to ED
Patient is referred for consultation
Prescriptions
Caller is angry or uncooperative
Child is hospitalized

Selected documentation into the chart. Most calls only need to be recorded on a log sheet rather than in the chart (patients who receive an appointment or home care advice, for example). Such calls can be taken without pulling the chart, saving time. If the patient is given an appointment, it will be recorded automatically in the scheduling book and complete documentation of the illness will occur during the office visit. Children who don't need to be seen at all usually have a minor illness that only needs to be documented on the log sheet (these are very low-risk calls).

For selected calls, the nurse can pull the chart in advance (if the need is apparent) or transfer the log sheet note to the chart (by cutting and taping, not rewriting). These include calls about children with chronic or complex disease, children referred directly to the ED or a subspecialist's office, children needing new prescriptions, refills, or dosage changes, and angry or uncooperative callers (Table 4). If a child unexpectedly develops a serious illness or needs to be hospitalized within the next week, a copy of the original telephone encounter can be transferred to the chart so it can be easily produced in case it is ever needed.

Transferring all log notes to patients' charts or pulling all charts before making calls is time-consuming and costly and causes "chart clutter." It's unnecessary except for patients with chronic disease or calls following up on previous office visits. Since a physician usually takes these calls, the chart is needed for most physician callbacks.

Sample log sheets. The sample log sheets on pages 151, 152, and 155 can be copied without permission for use in office practice. They allow the triage nurse to record four, eight, or 12 calls per page. The four-call version can be reserved for calls that might need to be transferred to the chart.

The next steps

Once you have established triage protocols and documentation procedures, you are ready to get your call system up and running. The second article in this series will explain how to hire, train, and evaluate a triage nurse, set up a quality improvement system, limit medical liability, deal with capitation issues, and help parents adjust to the new nurse advice system. An accompanying article by Andrew J. Schuman, MD, will discuss after-hours calls. □

REFERENCES

1. Fosarelli PD, Schmitt BD: Telephone dissatisfaction in pediatric practice: Denver vs. Baltimore. *Pediatrics* 1987;80:28

2. Schmitt BD: Survey of 12 large pediatric group practices: How sick child calls are managed. January 1997 (unpublished data)

3. Schmitt BD: *Pediatric Telephone Protocols.* Littleton, CO, Decision Press, 1994 (revised 1998) (Office Version 1998 available from American Academy of Pediatrics Publications, 800-433-9016. After-Hours Version 1998 available from Decision Press, 5121 Pinyon Dr, Littleton, CO 80123)

4. Brown JL: *Telephone Medicine.* Philadelphia, JB Lippincott Co, 1994

5. Schmitt BD: Survey of 100 practicing pediatricians: Where to see potential emergencies. September 1996 (unpublished data)

SUGGESTED READING

Bergman DA: Quality improvement: Buzz words or boon? *Pediatr in Rev* 1993;13:208

Isaacman DJ, Verdile VP, Kohen FP: Pediatric telephone advice in the emergency department: Results of a mock scenario. *Pediatrics* 1992;89:35

Katz HP, Wick W: Malpractice, meningitis, and the telephone. *Pediatr Ann* 1991;20:85

Poole SR, Schmitt BD, et al: After-hours telephone coverage: The application of an area-wide telephone triage and advice system for pediatric practices. *Pediatrics* 1993;92:1

Yanovski SZ, Yanovski JA, Malley JD, et al: Telephone triage by primary care physicians. *Pediatrics* 1992;89:701

The author is grateful to Drs. Vince DiMaria and Nick Tschetter for their careful reviews of this manuscript. He would also like to thank the following large pediatric group practices in metropolitan Denver, which completed the surveys and provided the data that made this article possible:

Academy Park Pediatrics
Arapahoe Park Pediatrics
Aurora Pediatrics & Associates
Arvada Pediatrics
Centennial Valley Pediatrics
Cherry Creek Pediatrics
Children's Medical Center
Creekside Pediatrics
Greenwood Pediatrics
Littleton Pediatrics Medical Center
Mountain Land Pediatrics
Pediatrics at DTC

The sample log sheets on the following pages for recording four, eight, or 12 calls per page can be copied without permission for use in office practice. Calls that might need to be transferred to the patient's chart can be logged on the four-call sheet.

TELEPHONE LOG SHEET

Date Times Call received Callback Call finished Nurse	Patient's name Age, sex Phone number Chronic disease	Symptoms with severity and duration List protocol used List reason for seeing patient or if home care disposition mark "all triage questions negative"	Disposition by protocol	Comments Special advice Drug and dosage Follow-up call
		Protocol ______ ☐ Symptoms: Reason to see ______ OR ☐ all triage questions negative	☐ See immediately: Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD	
		Protocol ______ ☐ Symptoms: Reason to see ______ OR ☐ all triage questions negative	☐ See immediately: Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD	
		Protocol ______ ☐ Symptoms: Reason to see ______ OR ☐ all triage questions negative	☐ See immediately: Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD	
		Protocol ______ ☐ Symptoms: Reason to see ______ OR ☐ all triage questions negative	☐ See immediately: Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD	

TELEPHONE LOG SHEET

Date Time Patient Age Sex M ☐ F ☐ Phone Nurse	Symptoms: Protocol used ______ ☐ Chronic disease ______ Drug ______ Dose ______ Other info:	☐ See immediately Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD	Date Time Patient Age Sex M ☐ F ☐ Phone Nurse	Symptoms: Protocol used ______ ☐ Chronic disease ______ Drug ______ Dose ______ Other info:	☐ See immediately Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD
Date Time Patient Age Sex M ☐ F ☐ Phone Nurse	Symptoms: Protocol used ______ ☐ Chronic disease ______ Drug ______ Dose ______ Other info:	☐ See immediately Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD	Date Time Patient Age Sex M ☐ F ☐ Phone Nurse	Symptoms: Protocol used ______ ☐ Chronic disease ______ Drug ______ Dose ______ Other info:	☐ See immediately Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD
Date Time Patient Age Sex M ☐ F ☐ Phone Nurse	Symptoms: Protocol used ______ ☐ Chronic disease ______ Drug ______ Dose ______ Other info:	☐ See immediately Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD	Date Time Patient Age Sex M ☐ F ☐ Phone Nurse	Symptoms: Protocol used ______ ☐ Chronic disease ______ Drug ______ Dose ______ Other info:	☐ See immediately Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD
Date Time Patient Age Sex M ☐ F ☐ Phone Nurse	Symptoms: Protocol used ______ ☐ Chronic disease ______ Drug ______ Dose ______ Other info:	☐ See immediately Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD	Date Time Patient Age Sex M ☐ F ☐ Phone Nurse	Symptoms: Protocol used ______ ☐ Chronic disease ______ Drug ______ Dose ______ Other info:	☐ See immediately Office ☐ ED ☐ 911 ☐ ☐ See today ☐ See tomorrow and protocol advice given ☐ Later appointment ☐ Home care and protocol advice given ☐ Parent agrees ☐ Refer call to MD

TELEPHONE LOG SHEET

Triage Nurse _____ Date _____

Time Phone number	Patient's name Age	Symptom or problem Chronic disease	Protocol used	Disposition	Advice per protocol Drug dose