# Telephone Nurse Triage Handbook

## - A Convenient Guide for Providers

# Telephone Nurse Triage Handbook

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## TriageLogic Group

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We are excited about the lives that will be saved as a result of nurse triage services becoming more available.  We hope that people will be inspired by this e-book to educate their communities and implement nurse triage systems.

*Charu*

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# Introduction: What is Nurse Triage?

# Introduction:

When people have health concerns, particularly when practices are closed, they may seek care from an emergency room (ER) because they are not sure about the severity of their own or their loved one's symptoms. Telephone nurse triage is a system in which trained nurses use standardized protocols to evaluate symptoms over the phone and determine the appropriate course of action. Triage nurses must be well trained in order to assess patients without actual physical contact. They also must have excellent listening skills in order to determine provide empathy while collecting the crucial medical information needed. They use their knowledge of symptoms and disease processes, along with evidence based and physician written protocols, to achieve an accurate understanding of the patient's concerns and to provide the best care plan based on the patient's symptoms.

It is important to note that telephone triage nurses do not diagnose patients. They use the information given by the patient and established clinical guidelines to determine the appropriate level of care. The telephone triage nurse can direct patients to the ER if necessary, call the physician on call, provide home care advice, or book an appointment for the patient with the doctor. In many cases, nurses are able to prevent an ER visit by giving home care instructions. In other cases, nurses direct patients to the emergency room and prevent unnecessary health complications caused by not seeking care right away.  This saves time, reduces inconvenience, lowers anxiety for patients, and saves on ER costs and prevents unnecessary health complications.

Some modern nurse triage systems allow a summary of the patient's Electronic Medical Record (EMR) to be retrieved during the call. The systems can also include medication orders or other specific instructions from the patient's physician. To ensure follow-up care, the patient's physician often receives information about all calls made and instructions that were given. Some modern triage systems also allow physicians to submit customized orders to reflect their preferences.

Telephone nurse triage systems are proven to reduce costs while providing a high standard of care to patients day and night. Recent technology and communication tools are allowing for better integration of information between the physician and the triage nurse and are creating easier methods for patients to access and communicate with nurses.

**This book provides an introduction to telephone nurse triage, discusses how to implement successful telephone nurse centers, and shows data on the benefits of telephone nurse triage. It is designed to help offices, large health centers and hospitals interested in investing in a telephone nurse triage system.**

# Chapter 1: How Has Nurse Triage Evolved?

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## 1.1 The History of Nurse Triage

Etymologically, the term triage is derivative of the French word trier, meaning "to sort." Therefore, nurse triage is a method of sorting patients. More specifically, nurse triage is a system by which medical patients' treatments are prioritized by the severity of their medical conditions.

Nurse triage emerged in the early 1800's as a system for attending to wounded soldiers. French surgeon Baron Dominique-Jean Larrey is attributed with developing the practice of triage. As Napoleon waged his many wars, Larrey noticed that the system for treating injured soldiers was inefficient. Soldiers were attended to in the order they were brought in: first come, first served. Unfortunately, this resulted in the loss of many lives. Larrey hypothesized that if soldiers were prioritized according to the severity of their condition, lives could be saved. Larrey wrote, "Those who are dangerously wounded should receive the first attention…they who are injured in a less degree may wait until their brethren-in-arms are operated on and dressed, otherwise the latter would not survive."

Since Larrey's realization, people began utilizing nurse triage in different venues outside the military medical field. Nurse triage began to appear in emergency sectors of hospitals in the U.S. by the early 1900s. But it was only in the latter half of the twentieth-century that nurse triage was nationally adopted. Nurse triage revolutionized how medical service providers cared for their patients and increased efficiency.

In addition, the methods for nurse triage evolved in three stages as technology advanced: (1) the telephone, (2) the computer (3) and the Internet. The first nurse triage call center was established in the late 1960's. Dr. Barton Schmitt and Dr. David Thompson also wrote protocols to be used by nurses to evaluate patients and ensure high quality of care.[1] This allowed for a more efficient system of providing faster medical assistance. Then, the mid 1980's brought about the availability of computerized guidelines and documentation.

More recently, the development of better software and communication systems has allowed some telephone triage nurses to work remotely, offering several advantages as well as some new challenges. Advantages include being able to adapt more easily to call volume changes and cut down on space and nurse transportation times. Some of the new challenges include **remote monitoring of nurses**. Attending to patients has never been more efficient, and more lives are being saved because of nurse triage.

# 1.2 Technological Advances in Nurse Triage and Telephone Medicine

The standardization of protocols as well as improved training and experience of triage nurses has created a system that ensures high quality care, standardized outcome, and cost-effective use of resources. Here are some highlights of improvements in recent years that have significantly changed telephone medicine.

1. Providers with smart phones are now able to use secure text messaging to comply with HIPAA requirements when they receive patient data from the call center. In some cases, such as the **TriageLogic Call Center Solution**$^{TM}$ used by triage nurses, the technology allows providers to receive text messages and patient data on their smartphones without having to use an app. It works universally across all smartphones and requires no set up from the end of the user**. Secure chat without an app** is also part of this technology.

2. Patients are able to request a nurse call directly from their smart phones without speaking to an answering service. Services like **My 24/7 Healthcare**$^{TM}$ (a product of **MyNurseTriage**) allow patients to bypass the answering service and directly

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[1] *For information on protocols, see: **https://triagelogic.com/triage-protocols/** and http://www.stcc-triage.com/*

[2] *For information on protocols, see: **https://triagelogic.com/triage-protocols/** and **http://www.stcc-***

request a nurse call from their smartphone. Providing alternate ways to contact a nurse increases access, expands usage, and improves patient satisfaction.

3. Call centers are now able to incorporate triage protocols into their own Electronic Medical Records (EMRs). Triage platforms were traditionally freestanding EMR-like systems that needed to be installed, configured, and maintained by the call center. As call centers have evolved, they now have their own in-house EMR or electronic platform. Adding on triage capability should not require adding and integrating an entirely new system. Through prebuilt APIs (Application Program Interfaces) and web services, costs can be decreased and efficiency increased by eliminating the need to maintain another entire platform.

4. Answering services can now securely enter calls directly into the clinical call center triage queue without sending a fax. As long as the call center's triage platform is web-based and the answering service has web-capable software, the technology is available for any answering service to securely enter calls into the triage queue for nurses. This is accomplished via APIs as well.

5. Triage notes from the call center can be sent directly back to the provider's EMR system. Triage nurses document calls and create a record of the encounters. Records can be directly sent back to the providers' EMR systems to ensure continuity of care. This option makes it possible to integrate triage data with EMR systems and other non-clinical platforms, making it easy for providers to follow up on patients.

# Chapter 2: How Does Telephone Nurse Triage Work?

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Unexpected illnesses can arise at any time. This can be particularly challenging when an illness strikes at night or on a holiday when most clinics are closed. Many patients find it difficult to decide whether or not their symptoms warrant immediate medical attention. Triage nurses help patients by assessing the severity of their condition using symptom-based protocols and determining the next appropriate action.

**How does nurse triage work? There are 5 key steps to the nurse triage process:**

**Step 1:** Initial Patient Call Request: Traditionally, patients call the doctor's office to request a nurse call, and an office operator or an answering service collects the patient's information and relays it to a triage nurse. More recently, new triage programs enable patients to send a secure text message directly to the nurses and request a phone call, thus bypassing an operator or answering service.

**Step 2:** The Nurse Asks the Caller Questions:  The caller explains his/her medical history and symptoms to the nurse. It is important for the nurse to evaluate which symptoms are more critical and which protocols should be used based on the symptoms. [2]

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[2] *For information on protocols, see: https://triagelogic.com/triage-protocols/ and http://www.stcc-triage.com/ - also Discussed further*

**Step 3:** <u>Nurse Reviews Symptoms and Determines Patient Disposition</u>:  Upon review, the nurse selects the applicable protocol and assesses the caller's symptoms to determine the appropriate level of care.

**Step 4:** <u>Documentation</u>: The nurse proceeds to document the call. This is normally done on the software itself, and most systems are designed to document the disposition and the steps taken by the nurse during the call.

**Step 5:** <u>Information is Relayed</u>:  The caller's information is sent to a physician via fax, a web portal, or directly to the EMR.

**Picture 2.1 below shows the steps described above:**



## How Does Nurse Triage Work?

**1** Patient calls, operator collects information and relays to nurse

**2** Nurse calls, reviews medical history and symptoms with caller

**3** Nurse selects appropriate protocol, uses checklist to assess the appropriate level of care

**4** Nurse documents call

**5** Information relayed to physician via fax or directly to EMR

**Result: Patients receive consistent, high quality care**

# Chapter 3: Telephone Nurses and Their Common Challenges

# CHAPTER 3: Telephone Nurses and Their Common Challenges

Telephone nurse triage often appeals to multifaceted, fast paced, and self-motivated nurses. While nurse triage is a rewarding career, certain environmental conditions make being a triage nurse challenging. These include no direct contact with patients or co-workers and long hours sitting at a desk, on the phone, or by a computer.

## 3.1 Who are Triage Nurses?

Triage nurses come from a wide variety of backgrounds, from ER and high-risk areas to home health and office nurses. Triage nurses have the added challenge of evaluating patients without being able to use touch and direct contact, and most triage nurse centers require clinical experience prior to becoming a nurse. Some triage nurses choose to go into the field as a second job or a change of specialty, while others may have physical disabilities that keep them from a traditional bedside position or have family that they need to care for closely.

**Tips for managers to train and educate nurses for telephone medicine:[3]**

1. Continue to Expand Knowledge of Nursing and Telemedicine

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[3] *For more information and training material for triage nurses, see the free materials in Trigelogic's Nurse Triage Learning Center at:* **http://triagelogic.com/learning-center/**

Continuing education is essential in a field such as healthcare and technology, as new innovations are being made each and every day. Focused study will help a nurse take better care of patients.

## 2. Ensure Nurses Separate Out Home and Work Issues

Some nurse triage centers allow nurses to work remotely. Personal life issues can be distracting and stressful when trying to work with patients. Mistakes happen most when nurses are not focused on the present moment. In order to provide top-level advice and care, teletriage nurses need to maintain a work-life balance, even when working from home.

## 3. Make them Part of a Team

A successful triage nurse is a team player who is willing to step in during difficult times and make an effort to cover for a colleague who is sick or if there is a sudden surge in phone calls. Managers need to foster team work among nurses to ensure they are engaged and willing to step in during difficult times.

## 4. Are Prepared and Confident

Every shift on the phone is different. An old adage says, "Plan for the worst, hope for the best". Some shifts will be tougher than others. Preparation of mind is important to patient care and lowered nurse stress levels. Nurses need to be professional, follow protocols, and be firm and clear with instructions. Triage Nurses also need to be able to remain calm and engage patients personally to help ensure patients feel loved and cared for.

Some call centers have nurses working remotely. Working remotely brings challenges, such as nurses feeling isolated or unappreciated. Connecting with other remote team members is essential to maintaining a coherent and connected triage team. Options to keep remote triage nurses connected include social networking sites, such as Facebook, Skype or other messaging applications can also help because they can be used to communicate with coworkers in real time. These applications allow nurses to ask for advice on difficult calls or simply to chat with one another during downtime.

Finally, Triage nurses are bound by the same HIPAA rules as an office or hospital nurse. Many nurses going into telephone triage must realize that it is just as risky as working in a hospital setting. If working remotely, triage nurses are required to work in a separate room, away from distractions, and be fully engaged in the calls.

# Chapter 4: Triage Protocols

# CHAPTER 4: Protocols and How They Are Used

## 4.1 How Protocols Work

Triage protocols used by telephone triage nurses are developed and tested by physicians and other health care professionals who have extensive experience in dealing with a variety of diseases and conditions. The protocols provide nurses with a series of questions to help ascertain the patient's condition based on symptom sets. Usually, the protocols begin with the most acute symptoms, in order to determine the severity of the situation and whether or not the patient needs emergency care.

## 4.2 Schmitt-Thompson Protocols

Reliable and updated guidelines are the backbone for nurses to act as an extension of the physician and to provide the same standard of high quality care, regardless of which nurse takes the call. The pioneers behind triage protocols are **Bart Schmitt, MD** and **David Thompson, MD. Schmitt-Thompson Clinical Content (STCC)** is the main source for telephone triage protocols and symptom decision support in North America, and their symptom-based protocols are used by 90% of all nurse triage centers. Doctors and nurses review the triage content annually and suggest changes and additions to keep protocols up to date. Schmitt and Thompson update these guidelines regularly based on feedback received from end-users.

**Why Schmitt-Thompson protocols?**

The protocols are symptom- based so they are comprehensive in the sense that no matter what specialty and primary care doctor is involved, these protocols will cover over 99% of symptoms when the office is closed. As a result, the triage nurse will always have a guideline that will apply to the patient's situation. Triage protocols are specific for the time of day and whether or not the doctors' offices are open. After-hours protocols are used on nights and weekends when doctors' offices are closed. Office protocols are shorter and simpler to be used by office nurses to handle patient calls during the day.[4]

**Barton D. Schmitt, MD, FAAP** is Professor of Pediatrics at the University of Colorado



Dr. David Thompson, MD      Dr. Barton Schmitt, MD

School of Medicine, and Director of the Sleep Disorder Clinic and Encopresis-Enuresis clinic at The Children's Hospital of Denver. He has written more than 100 articles as well as the book Pediatric Telephone Protocols.

**David Thompson, MD** is board certified in emergency medicine and internal medicine, and is on the emergency department clinical faculty at Northwestern Memorial Hospital, Chicago. He is the author of Adult Telephone Triage Protocols.

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[4] *See also: What are protocols and how to use them- Short Video:*
*https://triagelogic.com/medical-protocols-use/*

# Chapter 5: Setting Up a Nurse Triage Service in the Organization

# CHAPTER 5: Setting Up a Nurse Triage Service for an Organization

## 5.1 Setting Up a Nurse Triage Line

Every patient encounter starts with a phone call. Therefore having an effective and efficient nurse advice team is imperative. The benefits of nurse triage include: better patient access, coordinated care, and cost savings. For example, studies show that as many as 70% of emergency care visits can be avoided with access to nurse triage.[5] A nurse advice line is a solution that can dramatically reduce medical costs by making sure that patients get the care that they need at the right time.

### Setting up Nurse Triage:

The evolution of new technology has made several cost-effective options available for setting up a nurse advice line, including:

    (a) Do it yourself in-house (and hire your own nurses)

    (b) Outsource to a nurse triage center

    (c) Use a combination of in-house and outsourcing

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[5] *More on nurse triage benefits in Chapter 7*

## 5.2 Do it Yourself (In-House): Start Your Own Call Center



Starting your own call center involves setting up the call center infrastructure. The requirements include: hiring an experienced call center manager, purchasing triage software for night-time protocols, and hiring clinical and non-clinical staff to answer the phones and handle patient phone calls. Having your own nurse triage system also gives your staff the flexibility to perform multiple tasks in addition to triage such as physician referrals, scheduling, disease management, class registration and surveys.

Larger organizations with high call volumes (35,000 or more triage calls a year) and some existing call center capabilities are more likely to succeed with this approach. These companies are the right fit because they already have the foundation of a call center infrastructure and simply need to add to it. The high call volume also allows the center to use nurses' time efficiently.

## 5.3 Outsource to a Nurse Triage Center

In this option, the organization outsources the nurse advice function to an outside vendor. The vendor provides access to a call center infrastructure, allowing patients to access a nurse when they have clinical questions and concerns.

The advantage of outsourcing is low upfront start-up cost and an expert partner. The organization **does not need to train its own nursing staff** and there is no need for human resources and IT staff. Since the outside vendor is already taking calls, start up is quick and there is an immediate return on investment. In addition, vendors may have more experience and expertise in the niche area of nurse advice, resulting in better care for your patients.

The disadvantages are also clear. First, you have less direct control over the nurses. Second, some nurse triage vendors cannot integrate with EMRs. For the best outcome, you need to be very careful about interviewing and ensuring that you are comfortable with your vendor. Find out if the vendor provides the options for doctors to customize patient care by being able to give custom orders. In addition, compare vendor quality and experience such as whether or not the vendor has a medical director, years of experience in the field, etc. Still, assuming you have done your homework in interviewing and discussing costs, outsourcing a nurse advice line can be a good option for many doctor and hospital groups.

# 5.4 Use a Combination of In-house and Outsourced Services

This is a model in which an organization uses its own nurses during high call volumes and an outsourced triage vendor during low call volumes. A combined model can prove to be a way to improve services and decrease costs. Most triage centers lose money when the call volume is very low because nurses are sitting idle waiting for phone calls. By outsourcing during those low volume times, the call center can continue to use it's own staff to triage calls. This combination can be accomplished seamlessly with call center technology, integration engines, and communication platforms available today.

This model requires finding the right partner with the technology and service-level knowledge to implement a combined model. Look for a triage vendor that provides both software and nurse triage services. Interview and discuss your software and services with your partner before making a commitment.

# 5.5 Evaluating Your Call Center Telephone Triage Platform

In the new and continually evolving environment of nurse triage, how do you assess whether your call center is using the most appropriate technology and thus

maximizing its potential? Before you start evaluating your existing software or new platforms, the first step is to make a list of what functions your call center currently performs and what functions you would like to offer in the future.

With your management team, discuss a 5-year plan for the call center, considering your organization's vision and needs. Make sure to get input on your plan from your staff members at every level, including non-clinical operators, nurses, and IT staff. You may get valuable insight about your strengths, weaknesses and the direction to move forward.

**Develop the following lists:**

**Click here for a printable version of this checklist!**

1. **A SERVICES list:**

- Services currently offered
- Services to keep
- Services to add
- Services to discontinue

2. **A FEATURES list:** For every service that you offer, use the input of the staff members who use each service to make a list of features.

- Features that are helpful and should continue
- Features to add that would make the process better
- A wish list of features to add in the future

As you consider this list, keep in mind the flexibility and capability of your vendor in terms of understanding your needs and adding functionality as you and the technology evolves.

3. **An IT list:**

- What is the current uptime of our system and what would be ideal?
- What is an appropriate disaster plan for your system?
- How much IT support does the vendor provide?
- How much IT support is required for your organization?
- Would you benefit from a hosted solution or an on-premise solution?

4. **A SUPPORT list:** Your platform is only as strong as the team that builds and supports it. Consider the following:

- The IT expertise of the vendor

- The kind of call center expertise of the vendor
- The medical resources provided by the vendor

5. **A FINANCE list:**

- What does your current budget look like?
- How can you increase revenue or justify spending?
- What is the cost to replace or upgrade your platform?
- What is the cost to maintain the new platform including both vendor and internal costs?

With all this information, you will be in a good position to evaluate software and platform possibilities for your call center.

## Here are some key questions to help ensure a new or existing platform is a good fit:

1. Does the platform have all the modules/functionality you need now and in the next five years?
2. Does the platform have additional features that are available to add on?
3. Has the vendor continued to develop new functionality to keep up with technology trends?
4. Does it integrate well with other EMR or web-based systems?
5. Does it allow for a hosted or on premise solution?
6. Does the vendor have a team of physicians, nurses and IT experts in the call center space to support you?
7. Does the vendor provide reliable, 24/7 urgent support?
8. Does the platform allow your call center to communicate effectively with the providers (secure text)?
9. What is the TRUE cost of your system – vendor fees, internal IT cost, efficiency cost (areas where you could save time by automating tasks or increasing efficiency)?

## To summarize, there are four main aspects to keep in mind:

1. Your organization's vision and needs at all levels

2. The features you already have and those you want

3. The customizability of the new or existing software

4. The IT requirements to support your nurse triage platform

These will put you in an excellent position to evaluate and make decisions on expanding or customizing your existing platform or venturing into incorporating new software into your system.



**Your call center platform is only as strong as the team that builds and supports it.**

- Cost Effective
- 100% Up Time
- Fully Customizable
- Expert Advice
- Reports
- Secure Text
- Efficiency

**We provide triage software and expert guidance for your call center.**

- Intuitive software that experienced nurses can learn in 8 hrs or less
- Built-in disaster recovery and 100% up time
- Smart phone app to increase patient accessibilty
- Physicians, nurses and IT experts train and support your staff

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# Chapter 6: Improving Patient Care and Satisfaction- Patient Triage in Doctor's Offices

# CHAPTER 6: Improve Telephone Triage and Communication with the Right Technology

## 6.1 Secure Texting: Communicating Patient Information with Triage Nurses Securely

HIPAA regulations have long prohibited nurses and doctors from sharing patient information through text messages due to their non-secure nature. At the same time, doctors and health care agents need easy access to patients and their information to communicate outside of the office. While technology evolves, patients and providers expect quick and efficient interaction with each other. Some companies provide ways for nurses to communicate with doctors securely. However most of these secure texting software require an application to be downloaded on the doctor's smart phone and need to be updated regularly.

Doctors who do not want to use an application have a few options. For example, a secure texting module by **TriageLogic's Call Center Solution™** allows secure communication by text without a phone app.[6] This messaging system allows triage nurses to send HIPAA compliant texts to on-call providers through a secure, encrypted system providing the security necessary to protect patient confidentiality. These messages by the nurses are sent directly to the doctors' phones without the need for a special application download. Once a text is received, doctors are able to decrypt the message and read it in its entirety. The patient's contact information is also included, allowing doctors to contact the patient directly without having to separately dial patient phone numbers or contact the nurse triage.

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[6] *See release http://triagelogic.com/secure-texting/*

## Advantages of this Text System

We surveyed nurses and physicians trying the secure text system to learn how to utilize it and the benefits it provides.

Healthcare providers that use secure medical text messaging from TriageLogic's text system report several benefits. The most prominent advantage is increased efficiency. Nurses are able to quickly and efficiently provide doctors with pertinent information while complying with security requirements. Doctors are able to refer to the information on their cell phone (where it remains for 4 days), making it easier to review each call with a patient's primary provider.

Secondly, physicians also find that secure texts can help remove the need for redundant communication, leading to quicker response times and a better patient experience. If a doctor has all the information he or she needs, there is no need for a lengthy call back to the nurse. Doctors who receive a text in the middle of the night are able to read and reference the information as needed, rather than trying to remember a voice call when woken up out of sleep.

Nurses using secure medical text messaging also express their excitement about the tracking features incorporated into TriageLogic's text system. The sending nurse receives an indication that lets her know the doctor has read the text. With this form of closure, nurses do not need to then verify with the patient that they received a call from the doctor, in short, saving them time and ensuring patient care.

Finally, both doctors and nurses are pleased with the level of security that this kind of system can provide. Healthcare professionals are able to exchange information clearly, efficiently, and within the boundaries set forth by HIPAA, leading to more effective communication and a better experience for the patient. Healthcare professionals with overburdened smart phones like the fact that there is no special app or software necessary to use this system. Users who prefer email can also securely access the information through this medium. At no point does personal information enter public cell phone networks, nor can any other outside individual decrypt the text, ensuring the system remains compliant with HIPAA regulations.

A majority of providers use smart phones. In addition to saving time for the provider and making the process more efficient, the secure texting module is convenient and can be used as a stand-alone module with any call center software.

# 6.2 Integration of Call Information with Electronic Health Records

A secure, HlPAA-compliant, real time, two-way communication between the call center software and multiple client systems enables practices to have a completely paperless nurse triage service. This makes the information available to providers in real time and allows call centers to better document health savings because of a fully integrated system that provides the ability to aggregate data and prove outcomes to payers.

Another key benefit of this integration is that it provides triage nurses with a review of each patient's medical summary in a standardized format. According to Dr. **Ravi K. Raheja, MD, Medical Director of TriageLogic Group**, "Medical providers understand that being able to see patients' histories has huge implications in triaging chronically ill patients and patients recently discharged from hospitals. This technology allows our provider clients to get notes sent directly to their EHR system."

**Figure 9.1 – Sample integration of Electronic Health Records (EHR) with the call center software**
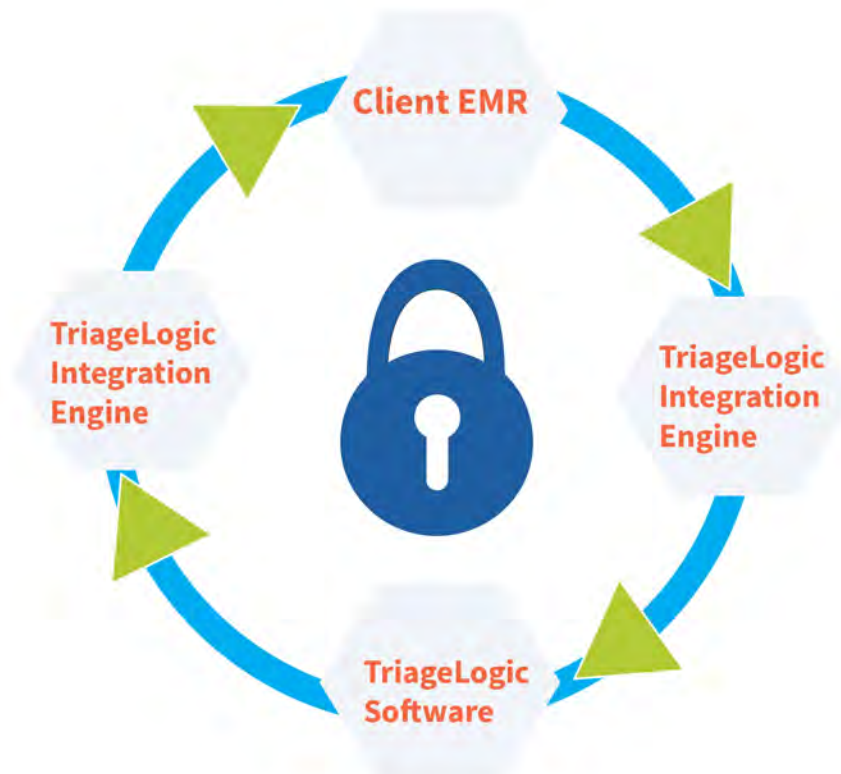
Some call-center integration modules such as TriageLogic's integration module can also be expanded to connect labs, radiology, urgent care and hospitals to create a full Health Information Exchange (HIE) in the community. This coordinates and integrates care, which is one of the requirements for a practice to become a medical home.

# 6.3 Patient Access to Nurses: Applications and Websites

Typically, when a patient needs to speak to a nurse after-hours, the patient speaks to an answering service representative, who then relays the information to the nurse-on-call service. Patient satisfaction can be improved by making telephone nurses available through a smart phone or a website where patients can request a phone call by sending a message about their symptoms. All of the information about the patient such as age, gender, and doctor information would be prefilled during the initial registration. For example, see TriageLogic recent announcement of its patient app and website called **My 24/7 Healthcare™** (a product **MyNurseTriage** for providers).

### How My 24/7 Healthcare™ Works

The individual begins by downloading the app for free. Users authorized by a practice register themselves. Once registered, a patient can request a call from a registered nurse at any time by entering their symptom on the website or the app. A nurse returns the patient's call in less than 30 minutes and proceeds as usual. By eliminating the need for an initial phone call, having a smart phone application or a website where patients can request a phone call access to a nurse becomes easier and more appealing to patients.

Nurse triage improves patient care at a fraction of the cost of emergency room visits. "From our experience, close to 70% of patients who considered going to the ER did not need to go after speaking to one of our nurses," says Ravi K. Raheja, MD, Medical Director of TriageLogic. "Having an app that allows patients to quickly request a phone call makes it even easier for patients to use the service, increasing patient satisfaction while also decreasing cost." On the flip side, nurses also prevent delay in care "Our research has shown that 7% of all people who think they have an uncomplicated symptom actually need urgent medical attention".

# 6.4 Daytime Protocols in Office

Practices need to consider two types of patient calls and what is involved with each: daytime calls and after hours calls. Many physician practices have nurse staff in the office available to take patient phone calls during the day. While office nurses may have necessary medical training, they still need protocol guidelines to ensure standardized proper patient care regardless of which nurse takes the call, and documentation just like in the case of nighttime calls. These protocols are available in book form (such as **Dr. Schmitt and Dr. Thompson's books)** or in electronic format (such as **MyTriageChecklist<sup>TM</sup>**).

Day calls have fewer guidelines because offices are open and nurses can ask patients to come in if needed. As a result, daytime protocols are shorter and simpler to document. Night calls are more extensive because doctor's offices are closed and patients that require immediate care have fewer low-cost options. These calls require more extensive protocols and documentation, so they take longer and the protocols are more in-depth.

## Why have protocols at all times?

Daytime protocols for doctor's offices act as a checklist for the nurses to use when handling patient phone calls during office hours.[7] Making some investments in setting up protocols for office nurses can save time and money. First, they ensure that nurses ask the right questions and not miss anything when handling patient calls. Second, they decrease liability because the call and the protocols used are documented.

Offices need to make a decision on whether they want to use telephone triage books or electronic protocols. Books require the least amount of upfront cost and are updated every two years. At the same time, books are cumbersome and difficult to use. Nurses also need to adapt to new books every time a new version is released. In most cases, nurses end up leaving the books in the shelves instead of using them because of the time it takes to follow guidelines with books.

Electronic protocols for daytime office use are available from vendors such as **TriageLogic, LLC**. Electronic guidelines are easy to teach and use and can be integrated

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[7] *See the YouTube video* **"MyTriageChecklist"** *explaining how a telephone triage software in the office works*

with EHRs. Another advantage of the electronic format is that the vendor is responsible for **updating the questions** and as a result, they can save a lot of valuable nursing time in following the protocols and in documenting the information. The savings on nursing time and ease of adoption will usually offset additional costs of purchasing electronic guidelines.

## What questions do you ask daytime protocol vendors?



1.   1. Is the software using the daytime gold standard protocols (Schmitt-Thompson Protocols)?

2.   What are the hardware and IT staffing requirements for the practice?

3.   Can the triage information be copied or integrate securely with the office's EHR?

4.   How easy is it to learn the software? What is the training time to learn the software?

5.   Who trains your office nurses? What happens if you have a new nurse? Do you need to pay extra to train in new nurses that join later?

# Chapter 7: Research and Benefits of Nurse Triage

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## 7.1 How does Telephone Nurse Triage Improve Health Care?

Studies document that an average emergency room visit is close to $1,100.[8] Many of the people who go to the emergency room could have been treated at home. By having someone available to evaluate if a patient's symptoms are serious or not, nurse triage nurses can help decrease the number of people who unnecessarily visit the ER.

**What are some of the typical reasons why patients call a triage nurse line and what are the usual outcomes?**

Patients often call because they have a medical symptom and they need a professional to help guide them and provide assurance.

**The most common reasons for phone calls include:**

- Fever 3 Months or Older
- Medication Questions
- Colds

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[8] *National Center for Health Statistics. Health, United States, 2012: With Special Feature on Emergency Care. Hyattsville, MD. 2013. <http://www.cdc.gov/nchs/data/hus/hus12. pdf*

- Vomiting without Diarrhea
- Cough
- Constipation
- Diarrhea
- Head Injury
- Rash or Redness, Widespread
- Immunization Reactions

While many of these symptoms do not require immediate care, about one third of the cases require a visit to the doctor within 24 to 48 hours (including cases for prescription refills), and a few of the calls require immediate care. Chart 1 below shows the breakdown of the dispositions determined by the nurses for the patient callers.

**Chart 1: Outcome Disposition by Triage Nurses for Patient Callers**
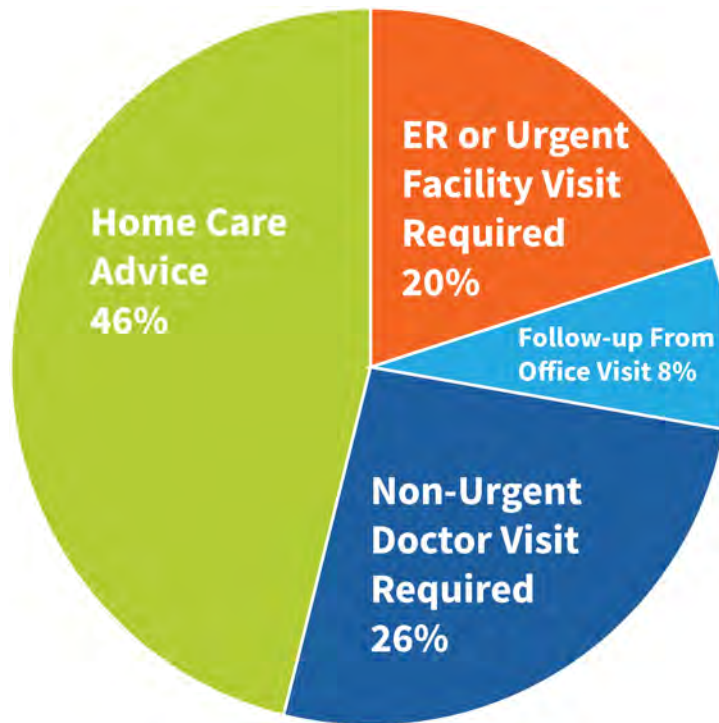


*Source: about 176,000 calls from TriageLogic's nurse triage call center from January- September 2015*

## 7.2 How Effective are Patients in Evaluating Their Own Symptoms?

A study done by **TriageLogic** demonstrates how effective nurse triage can be in reducing unnecessary trips to the emergency room (ER). We asked patients what they would do if they did not have access to a nurse triage line. Out of the 35,409 patients who answered our study, 11,135 (31.45%)  of them said that they would go to the ER if they did not have access to nurse triage. Another 22,273 (63%) said that they would have stayed home. The remainder would have gone to a local urgent care center. We then compared the survey results against what our triage nurses told the patients to do.

We found that out of the 11,135 patients who said they would have gone to the ER, only 3,222 of them were actually told to go to the ER. All other patients were able to get home care or see their physicians the next day.  That is, only about 30% (3,222/11,135) of the callers who expected to go to the ER were told to go to the ER. This means that access to nurse triage decreased unnecessary emergency room visits by over 70%. See the related chart 2 below.

**Chart 2: Patients who said that they would go to the ER,
Vs. Nurse Assessment of the level of care needed**



*ER or Urgent Facility Visit Required 28%*

*Does Not Need Urgent Follow-up 72%*
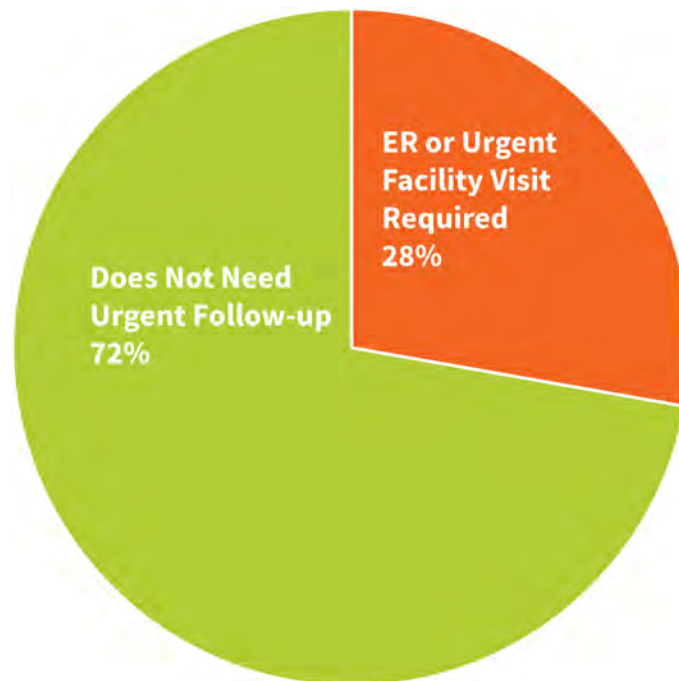
*\*11,135 Patients Expected to go to the ER and 3,222 were actually sent to the ER
Conclusion: People overestimate their condition*

## Saving Patient Lives

Not only can nurse triage reduce unnecessary ER visits and lower costs, it can also help people who do actually need to go to the emergency room. Many patients do not want to pay for the cost of an ER visit, or they don't think that they are seriously ill. Without access to a nurse triage program, they would stay at home and try to treat themselves. However, some of these patients might be at risk with a very serious illness.

## Saving Lives, a Case Study

Let's take a look at a real nurse triage case to see how triage can help save lives. On a weekday morning, Nurse Linda received a call from the mother of an 8-week old baby who had been fussy for several days, was not eating well, and had a fever of 100.7. At this point the Schmitt-Thompson pediatric protocols prompted Linda to ask if the baby had recently received any immunizations. The mother replied, "No." Since the child was so young and now was experiencing a fever, Nurse Linda followed the protocols, called the baby's pediatrician, and instructed the mother to take her baby to the ER. The mother was genuinely surprised when she was told to go to the ER, because she was unaware of the severity of her child's condition. The final diagnosis turned out to be meningitis.

This case study demonstrates that it is important to remember that the benefits of nurse triage extend beyond just saving money. Cases like the one above are much more common than people might expect. In a recent study, we found that over 7% of people who did not think their condition was serious were told to seek emergency care. In addition, 1% of those patients were told to call 911 right away. This means that a large number of patients are at risk for serious health issues as a result of not receiving timely medical attention. Implementing nurse triage can help improve health outcomes for many people like the 8-week old baby. See Chart 3 below indicating the post triage dispositions (that is, what the nurse told the patient to do) of the patients who thought that they did not need emergency care.

**Chart 3: Nurse Triage Assessment for patients who
did not suspect a serious symptom**
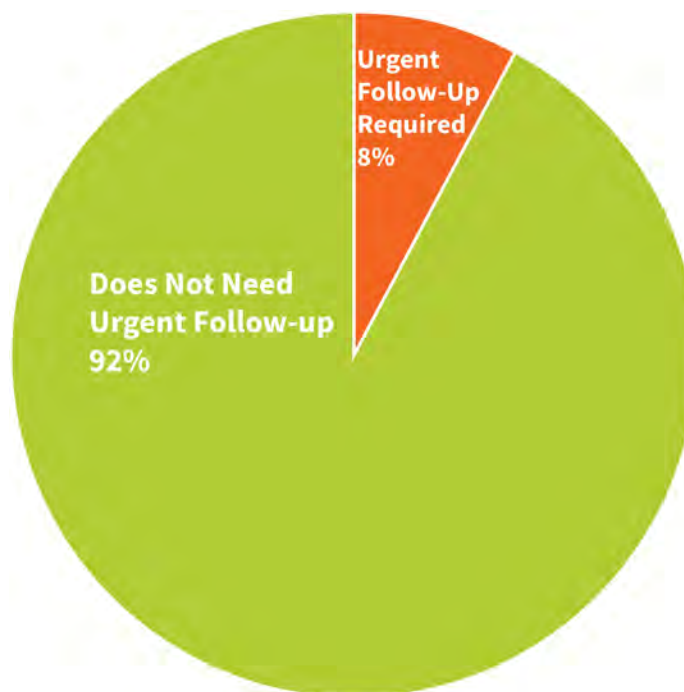


*22,273 patients surveyed expected to receive home care. Triage nurses told
1,781 of those patients to seek urgent care.
Conclusion: Almost 10% of patients downplay their symptoms.*

## 7.3 Emergency Care Usage Based on Insurance Type

Another important issue is how patient access to health care and their social/economic conditions affect their likelihood of seeking emergency care. The responses change significantly if we separate patient responses based on whether they have private or government sponsored insurance. The results indicate significantly larger emergency care utilization by government and uninsured patients. In comparison to privately insured patients, about 12% more patients in government insurance planned to either go to the emergency room or seek urgent care. Charts 3.1 and 3.2 shows the breakdown of patient responses based on their type of health insurance.

**Chart 3.1: What would a Government Insured Person do with no access to nurse triage?**



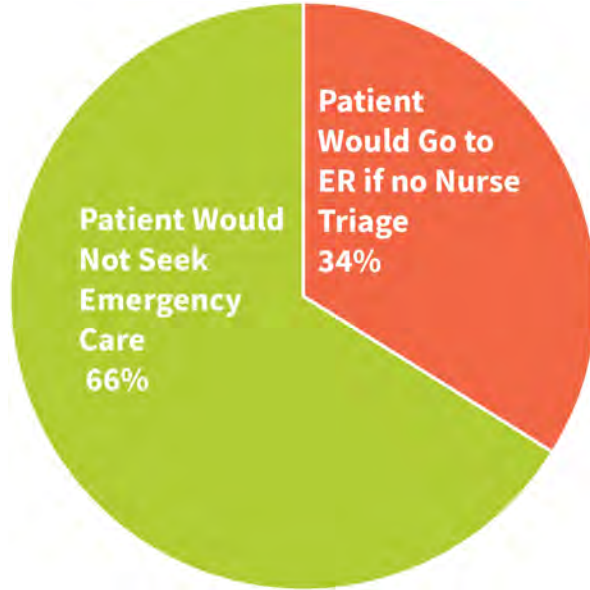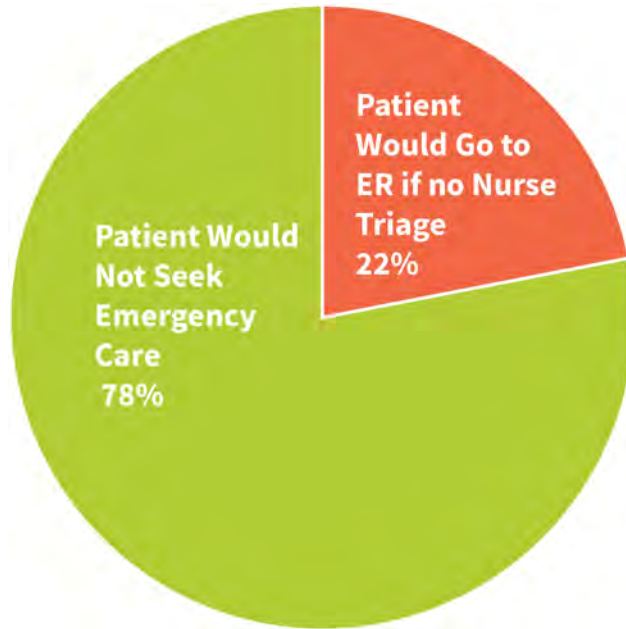Patient Would Not Seek Emergency Care 66%

Patient Would Go to ER if no Nurse Triage 34%

**Chart 3.2: What Would a Privately Insured Person do if no access to nurse triage?**



Patient Would Not Seek Emergency Care 78%

Patient Would Go to ER if no Nurse Triage 22%

While a greater percentage of patients with government insurance would seek emergency care if no nurse triage was present, these patients did not have more severe symptoms than privately insured patients. The tables below show that out of the patients who have gone to the ER, the private insurance group is more likely to have a triage would disposition that ER care is needed. Government insurance plans could significantly benefit from a Nurse Triage program to evaluate their symptoms, educate them, and send them to appropriate level of care.

**What was the nurse disposition assessment for the patients seeking ER care?**

**Disposition of 34% of government insurance patients who expected to go to the ER:**

| | |
|---|---|
| **Sent to the ER** | **24%** |
| **NOT sent to ER** | **76%** |

**Disposition of the 22% private insurance patients who expected to go to the ER:**

| | |
|---|---|
| **Sent to the ER** | **33%** |
| **NOT sent to the ER** | **67%** |

# 7.4 Healthcare Cost Savings with Nurse Triage

**Based on Survey conducted and reported above:**

- 31% of overall population surveyed said that they would seek ER care if they had no access to a triage nurse
- Nurses were able to prevent 72% of those callers from unnecessary ER visits

# Cost Analysis

**If 100 people call a nurse triage line:**

**31 would seek ER without a nurse triage**

**9 would seek ER with a Nurse Triage (29% of 31)**

**22 Less people visited the ER**

**Overall savings from preventing 22 ER visits through nurse triage are $22,000 per month. (assuming an average ER visit costs $1,000)**

**If cost of nurse triage is $16 per call: Monthly return of $20,400 per month ($22,000- $1,600)**

*References*

*1. Overall population*
*https://www.triagelogic.com//wp-content/uploads/files/Benefit_of_Nurse_Triage_Gov_Insurance-Nov26-2012_0.pdf*

*2. Comparing private versus government insurance:*
*https://www.triagelogic.com/private-vs-govt-insurance/*

# Conclusion

# Conclusion

Since 300 AD, nurses have cared for patients around the world. Throughout public and private schools, medical clinics, doctors' offices and hospitals, nurses excel at being the first stop in care. By utilizing protocols written by doctors, nurses have been safely evaluating patient symptoms and determining the appropriate course of action for years.

Over 40% of the patients that call nurse triage are treated with home care advice, thus avoiding unnecessary doctor and emergency room visits. Providers are able to streamline their workflow and improve their efficiency, while patients are able to speak to a medical person who can evaluate their symptoms, answer their concerns, and give continuity of care. Telephone nurse triage saves health care dollars while improving patient care.

"I trust these nurses with my patients." Dr. Huitink (Goodlettsville Pediatrics and user of Nurse Triage on Call™)

# About the Author

**Charu G. Raheja, PhD** is the CEO and Chair of the Triage Logic Group. Founded in 2005, TriageLogic is a healthcare company that is a national leader in telemedicine. Nurse Triage on Call™ is our URAC accredited health call center with over 200 nurses supporting 5,000 doctors and hospitals. **TriageLogic** provides software platforms for large call centers, as well as MyTriageChecklist™ for office nurses to use when triaging patients calls during the day. At the end of 2014, TriageLogic expanded its product offering to include My 24/7 Healthcare for patients (**MyNurseTriage** for providers), which allows patients to access a nurse or a doctor directly via a smartphone app or the website.

Charu started her career in academics and earned a PhD in Finance from New York University in 2001. As a professor at Vanderbilt University and Wake Forest University, she taught corporate finance, corporate governance and asset evaluation in MBA and Executive MBA program. She is the recipient of several teaching awards. Her research has been published and cited in top Finance Journals as well as public press such as the Wall Street Journal and Harvard Business Review. She serves on the board of the Community Health Charities and she is an active member of Women Business Leaders in Healthcare. She is originally from Brazil and is married to Board Certified Pediatrician, Ravi K. Raheja, MD. They live in Jacksonville, FL with their two daughters.

# Contributors

**Ravi K. Raheja** is a board certified Pediatrician and the Medical Director of the TriageLogic Group. Ravi received a Doctor of Medicine from the University of Medicine and Dentistry of New Jersey- Robert Wood Johnson Medical School in 1997. He served as a practicing Pediatrician in Brooklyn, NY and Nashville, TN for over 10 years and volunteers his medical expertise and time to help those in need. He is directly involved in the development of triage software and uses his expertise

in medicine to create efficient products that continue to lead the field of telemedicine.

**Marci Lawing, RN, BSN**, graduated from Chamberlain College of Nursing with a 4.0 GPA. Throughout her nursing career, Marci has experienced working in multiple specialties such as: Surgery, Disease Management, Care Management, and Occupational Health. She found her niche in tele-triage and is currently serving as a nurse manager for TriageLogic's nurse triage call center. Marci quickly developed a passion for telephone nurse triage, appreciating the ability to change the dynamics of traditional healthcare.

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- Nurse Managers have over 50 years of experience
- We are a URAC Accredited Call Center.

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- Used by major hospitals and health plans
- Available for call centers nationwide

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