

Survey and Data on Nurse Telephone Triage Calls

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Summary:

We conducted research using a sample of 71,716 calls from our telephone triage call center, and found that having a nurse triage was able to decrease unnecessary emergency room visits by about 70%.

Article:

A nurse triage on call program is an important tool as hospitals continue to combat unnecessary patient admission. This research involves a sample of 71,716 calls from our telephone triage call center for the months of August, September, October and half of November 2011. Patients call a nurse line and speak to an answering service agent. The agent enters the patient demographic and reason for calling into the TriageLogic software and nurses call patients back. Patients are called back within 30 minutes. All nurses calling patients back are registered nurses.

Prior to triaging each patient, nurses randomly asked patients what they would do if they did not have access to a triage nurse. About half of the calls had an answer to the survey (35,559 calls). Out of these 35,559 patients surveyed: 11,135 patients said that they would have gone to the ER if they did not have access to a nurse triage. In addition, 1,819 patients would have gone to an urgent care center.

Table 1 describes the answers to the survey questions:

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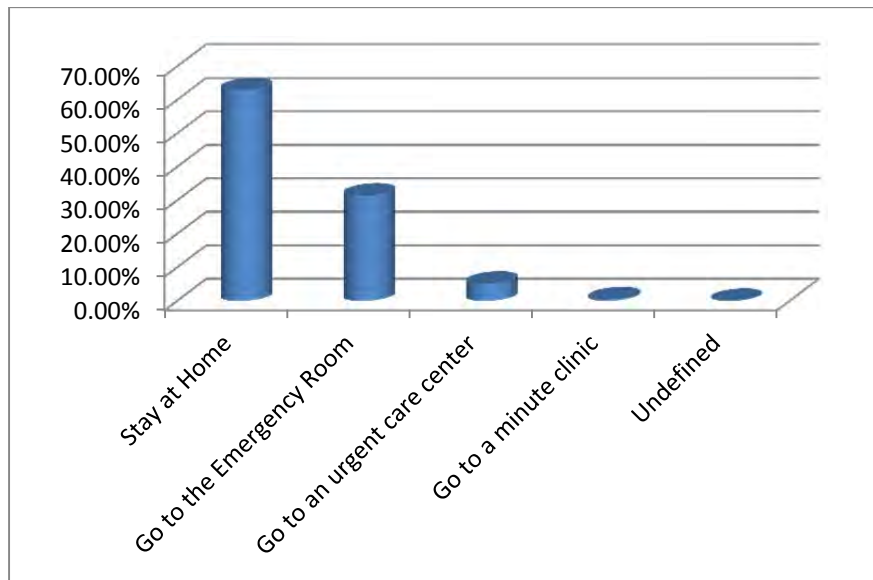
TABLE 1:

What would you do if you did not have access to a nurse triage?

What would do if no access to nurse on call	Number of Patients	%
Stay at Home	22,273	62.90%
Go to the Emergency Room	11,135	31.45%
Go to an urgent care center	1,819	5.14%
Go to a minute clinic	173	0.49%
Undefined	9	0.03%
TOTAL	35,409	100.00%

Note: these are patient answers from a survey asking them what they would do if they did not have access to a nurse triage

The following graph shows the frequency of calls from patients that answered to the survey. As the graph shows about 85% of the patients would either stay home or go to the emergency room if they did not have access to a nurse triage line.



Next, after answering the questions from the survey patients were triaged using standardized protocols from Dr. Bart Schmitt (for pediatric calls) and Dr. David Thompson (adult calls). Nurses documented the patient disposition and patient outcome into the TriageLogic Call Center Software. We followed these patients and compared the disposition of the patient (that is, what the patients were told to do) to what the patients expected to do prior to the being triaged.

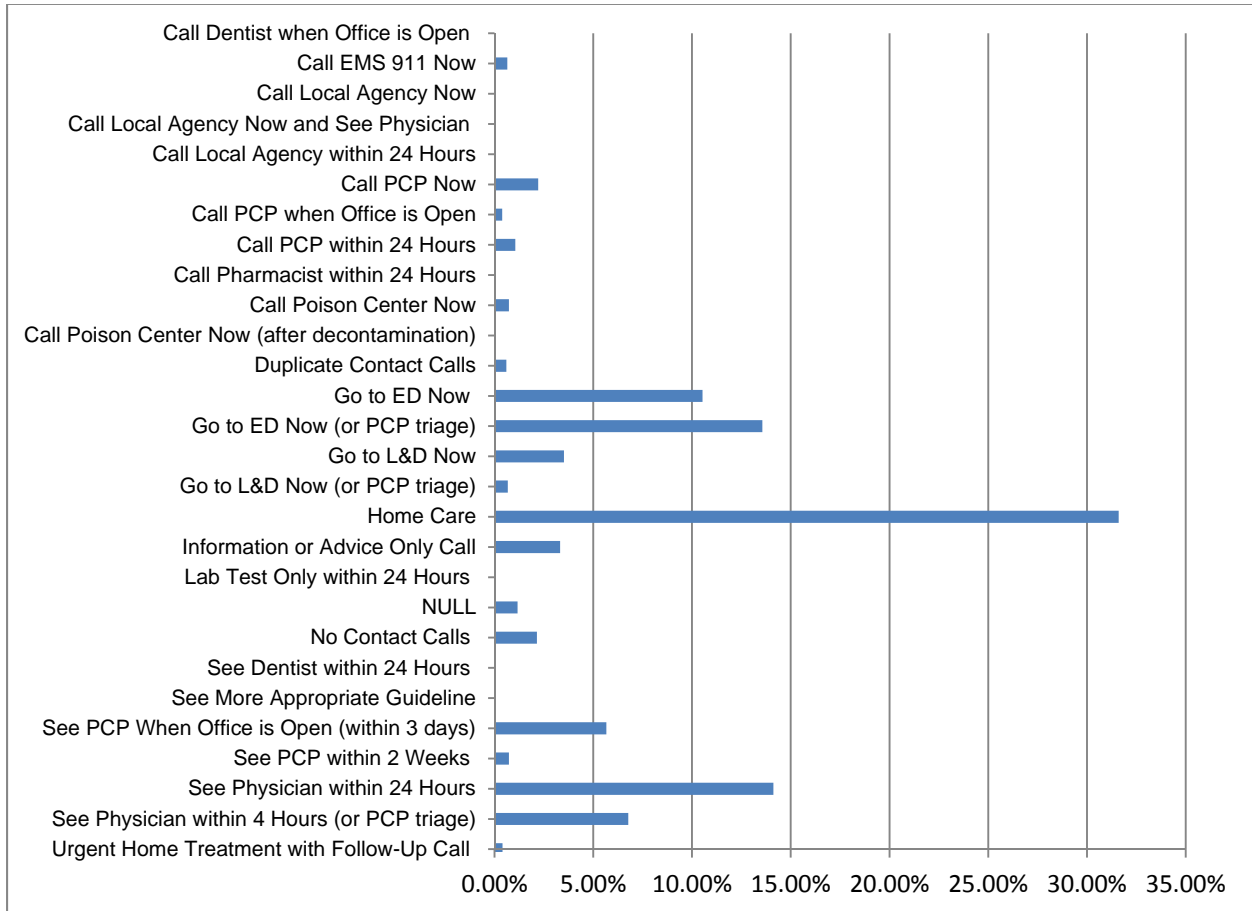
Below, we consider what the 11,135 patients planning to go to the Emergency room where actually told to do. Table 2 describes the disposition results from patients that answered that they would “go to the emergency room.” :

TABLE 2:

What were the 11,135 patients that said that they would “go to the Emergency room” told to do by the Triage nurses?

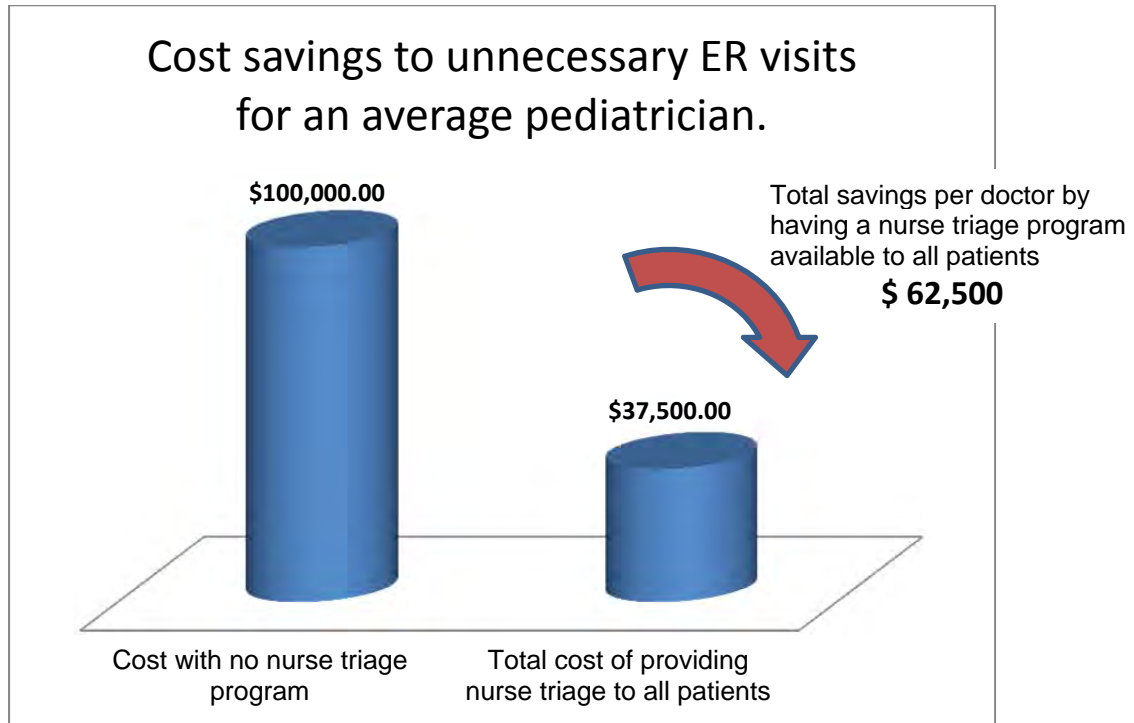
Patients who answered the survey with “go to the Emergency room”		
What did nurse tell patient to do?	Number of patients	%
Call Dentist when Office is Open	4	0.04%
Call EMS 911 Now	72	0.65%
Call Local Agency Now	1	0.01%
Call Local Agency Now and See Physician		
Call Local Agency within 24 Hours	2	0.02%
Call PCP Now	246	2.21%
Call PCP when Office is Open	43	0.39%
Call PCP within 24 Hours	117	1.05%
Call Pharmacist within 24 Hours		
Call Poison Center Now	81	0.73%
Call Poison Center Now (after decontamination)		
Duplicate Contact Calls	67	0.60%
Go to ED Now	1,173	10.53%
Go to ED Now (or PCP triage)	1,510	13.56%
Go to L&D Now	392	3.52%
Go to L&D Now (or PCP triage)	75	0.67%
Home Care	3,519	31.60%
Information or Advice Only Call	370	3.32%
Lab Test Only within 24 Hours		
NULL	130	1.17%
No Contact Calls	239	2.15%
See Dentist within 24 Hours	8	0.07%
See More Appropriate Guideline	3	0.03%
See PCP When Office is Open (within 3 days)	631	5.67%
See PCP within 2 Weeks	81	0.73%
See Physician within 24 Hours	1,572	14.12%
See Physician within 4 Hours (or PCP triage)	754	6.77%
Urgent Home Treatment with Follow-Up Call	45	0.40%
TO TAL	11,135.00	100.00%

Note: the highlighted fields indicate cases where patients were told to seek emergency care. Note that only 3,222 patients were told to seek emergency care (72+1,173+1,510+392+75=3,222)



As the table and the chart demonstrate, only a fraction of the patients planning to go to the emergency room were actually told that they needed immediate care. Out of the 11,135 patients expecting to go to the emergency room, nurses only told 3,222 patients to seek immediate care. 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 that expected to go to the ER were told to go to the ER.**

To calculate the cost savings to our economy, we consider an example of how much the patients of an average full time pediatrician would save in unnecessary emergency room visits in a typical year. The cost of a telephone triage is \$15/call.



The average busy pediatric doctor gets about 500 calls a year. About 30% of the surveyed patients said that they would go to the ER if they did not have access to a nurse triage. So let's say that about 100 of the patients of one pediatrician would go to the ER if there was no nurse triage on call program and let's assume that cost of an emergency room visit is \$1,000 on average,

100 patients think that they need to go to the ER at the cost of \$1,000 per patient.
 Cost with no nurse triage program: \$100,000

Cost with a nurse triage program only to patients considering going to the emergency room:
 $100 * 15 = \$1,500$ (cost of taking the calls)
 Plus 30% of the patients go to ER, so:
 $30 * (\$1,000) = \$30,000$
Total cost of providing nurse triage to patients wanting to go to ER: \$31,500

Cost of providing a nurse triage to all patients:
 $500 * 15 = \$7,500$
 Plus 30% of the patients go to ER, so:
 $30 * (\$1,000) = \$30,000$
Total cost of providing nurse triage to all patients: \$37,500

Total savings per doctor by having a nurse triage program available to all patients: $\$100,000 - \$37,500 = \$62,500$ per pediatrician.



To conclude, many patients seeking emergency healthcare during after-hours can resolve their health concerns by speaking to a nurse over the phone. This study shows that a nurse triage on call program is an important tool to help decrease emergency room visits and unnecessarily medical visits. Out of the patients expecting to go to the ER, a nurse triage line was able to prevent about 70% of the callers from going to an emergency room. We show an average saving of over \$60,000 per pediatrician by offering a nurse triage on-call program. The nurse triage on-call program is able to save healthcare resources and improve overall care by making a nurse on call available to all patients regardless of whether or not they're seeking emergency care. In addition to preventing unnecessary emergency room visits, a nurse triage on call program can ensure that patients go to emergency rooms if their condition required immediate care. A nurse triage on call program saves health care costs and ensures that all patients receive the appropriate level of care.

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