Using IVR to Improve Post-Discharge Patient Care

By Gary Hannah
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Recent studies have shown that twenty percent of patients experienced adverse events following hospital discharge. Most commonly, these events are related to adverse drug effects, therapeutic errors, and nosocomial infections, those that are a result of treatment in hospital and secondary to the initial condition. One third of these events led to at least temporary disability, and three percent led to death. Other recent studies have estimated that between 44,000 to 98,000 deaths per year in the United States were related to hospital-related errors, many of which were preventable. In an era where regulations are holding healthcare facilities liable if these events are not adequately mitigated, hospitals are wondering how they can conduct effective post-discharge follow-up with patients when budgets and human resources are already stretched thin.

The good news is that one-third of these events can be prevented with proper post-discharge patient follow-up, and speech technology solutions can assist hospitals in providing consistent quality of care and patient assessment.

Best practices show that follow-up is important and if it is done often, it is the hospital nursing staff that is tasked with the responsibility of following up by telephone with patients who have been discharged. It can take as many as five calls to reach a patient, meaning nurses are spending inordinate amounts of unproductive time. This makes an already costly endeavor even more expensive and adds even more to a nurse's already overloaded workday. Manual collection of data is not only time consuming, but it also often results in inaccurate data stored in disparate systems. This ineffective system relies on the independent analysis of data to recognize trends and determine the need for and specifics of any required medical intervention.

However, the fact remains that the proper follow-up process is imperative to ensuring top-quality patient care. What alternative is there to having RNs making these calls, and how can hospitals ensure that their nursing staff's time is put to best use?

An interactive voice response (IVR) system, previously only associated with telemarketing or customer-service automated systems, can automate the post-discharge patient follow-up by using customized rules and call scripts to gather important data from the patient, ensuring that scarce nursing resources are used only where personal follow-up is required. Natural voice recognition speech technology has advanced to the point where the systems can determine with great accuracy the confidence levels of responses based on various terms and the positive or negative connotations of the particular words. Business rules can determine the course of action for the call, whether the patient is transferred to a live attendant at a medical call center, a notification is sent to a nursing station and pertinent callbacks can be conducted by a medical professional, or data is merely collected for statistical trends and patient satisfaction analysis.

A recent study showed that the incorporation of an IVR reduced nurse workload by eighty-eight percent and enabled nurses to focus their follow-up efforts on just those patients who truly required their attention. Surprisingly, the same study showed high patient acceptance rates for the new system, with two-thirds of patients expressing a preference for the automated system. With the automated system, patients felt that they could be more honest as there was no immediate judgment bias associated with their responses.

An IVR can fit seamlessly into any health facility's IT and phone systems, providing details on patient calls to help mitigate adverse events, as well as reduce liability. One-quarter of post-discharge emergency department visits, re-admissions, and deaths are due to adverse events. If these secondary care requirements are reduced, hospitals will enjoy tremendous cost savings and be able to allocate resources only to those in need.

In addition to post-discharge patient monitoring, the IVR can assist in a wide range of healthcare situations. Patients and nurses alike can respond to telephone surveys to indicate satisfaction levels, an important performance indicator for healthcare facility executives and an integral business variable in pay-for-performance situations. In pandemic scenarios, large groups can be monitored and statistics gathered to help predict outbreak models and treatment strategies. Ongoing monitoring of patients with chronic conditions like diabetes, reminder systems for elderly patients to take the proper amount of medication at the proper time, and outpatient monitoring for addiction management programs and rehabilitation can all be conducted using an IVR.

When choosing a solution, ensure that the IT footprint is minimal, that the vendor offers technical support, and that adherence to all privacy and compliance regulations relevant to the facility and healthcare jurisdiction are strictly enforced. Depending on the needs of the facility, the infrastructure setup, and IT resources, a hosted solution might be a better fit. A range of options exist with a range of pricing and setup, and IT resources, a hosted solution might be a better fit.

of prices and a healthy, due diligence process will help to find the right solution for every environment and telephone triage model.

As healthcare facilities move to an electronic health model, adopting technology solutions for everything from the identification of patients to point-of-care bedside diagnostic tools, the institution of an IVR to conduct patient follow-up makes good sense from both cost and patient-care perspectives. IVR does not replace the need for medical professionals and medical call centers; however, IVR improves processes and enables the most effective use of hospital and personnel resources.

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