ORIGINAL RESEARCH

Frequency of New or Worsening Symptoms in the Posthospitalization Period

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BACKGROUND: When patients are discharged from the hospital, they are assumed to be stable until follow-up as outpatients.
OBJECTIVE: To study the frequency of new or worsening symptoms within 2-5 days of hospital discharge.
DESIGN: Retrospective analysis of data from telephone calls to patients by centralized call center.
SETTING: Patients discharged by hospitalists employed by IPC—The Hospitalist Company.
PATIENTS: 15,767 patients surveyed between May 1, 2003, and October 31, 2003.
INTERVENTION: Patients discharged home were contacted by a central call center in the first several days after discharge.
MEASUREMENTS: Patient demographics, self-rated health status, prevalence of new or worsening symptoms, medication issues, home health services issues, and status of scheduled follow-up appointments.
RESULTS: Of the patients surveyed, 11.9% reported new or worsening symptoms since leaving the hospital. There were no differences by age. Women were more likely than men to be symptomatic. Patients with worse health status were more likely to have new or worse symptoms ($P < .0001$). Symptomatic patients were minimally more likely to have made a follow-up appointment (61.0% vs. 58.4%, $P < .05$) and were more likely to have medication issues (22.2% vs. 6.8%, $P < .0001$) and problems with receiving home health care services (5.8% vs. 3.6%, $P < .05$).
CONCLUSIONS: A significant percentage of patients had new or worsening symptoms in the first several days after discharge. These patients were only minimally more likely to have made follow-up appointments. A system to manage the postdischarge transition period is essential to improving posthospitalization outcomes. ***Journal of Hospital Medicine* 2007;2:58–68.** *© 2007 Society of Hospital Medicine.*

KEYWORDS: quality improvement, hospitalist medicine, transition of care, discharge management.

The Institute of Medicine reports "To Err is Human" and "Crossing the Quality Chasm" have drawn great attention to quality improvement and patient safety in the hospital setting.[1–3] With the growth of the hospitalist field over the past several years,[4] there has been increasing discussion about the importance of assuring quality of care, and some have argued that improving health care quality and reducing avoidable errors may be among the hospitalist's most important functions.[5] Most discussions about the quality of hospital care have concerned the inpatient stay itself. However, the growth of hospital medicine, with its inherent discontinuity between inpatient and outpatient physicians, has intensified interest in the transition period from hospital discharge until first outpatient appointment.

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At discharge, physicians may prescribe medications, order home health services, and arrange follow-up appointments. It is often assumed a patient will remain stable after discharge and will follow up at the outpatient physician's office. Previous research has shown there may be problems with these assumptions. A patient may not understand the postdischarge treatment plan as well as the physician thinks.[6] A recent study found that adverse events after discharge were common and often preventable.[7] A follow-up study confirmed that approximately 25% of patients had an adverse event after hospital discharge and that most adverse events caused symptoms but did not result in an emergency department visit, hospitalization, or death.[8] Another study also found the prevalence of medical errors following hospitalization was high because of the discontinuity of care from the inpatient to the outpatient setting.[9] These errors resulted in an increased rate of rehospitalization.

Telephone follow-up may be a useful method of bridging the gap in care between discharge and the first outpatient appointment.[10,11] In most previous studies it was 2 or 3 weeks after discharge before patients were contacted or their records studied. By this point, patients who had done poorly may already have been readmitted or sought care at alternative locations. In one small study, pharmacists found that 12 of 79 patients (15%) contacted by telephone within 2 days of discharge[12] had symptoms there were new or had worsened since discharge. The purpose of the present investigation was to extend these previous findings through a large multicenter study of how frequently patients had new or worsened symptoms within several days of discharge.

METHODS

Settings and Participants

IPC—The Hospitalist Company has hospitalist practices at more than 150 health care facilities in 10 health care markets. At the time of the study, IPC employed more than 300 internal medicine and family practice physicians and discharged approximately 11,000 adult patients per month. The study is a retrospective analysis of data collected from May 1, 2003, to October 31, 2003.

Data Acquisition

Physicians entered clinical and financial information on all hospitalized patients into a handheld personal digital assistant (PDA) utilizing functions of IPC-LINK® software. At the time of discharge, a physician completed a discharge summary on the PDA that was transmitted electronically to a centralized data center. Copies of the discharge summary were also faxed to the outpatient physician's office. Patients were first interviewed by call-center patient representatives, unlicensed staff with medical backgrounds. Call-center representatives made several attempts by telephone to reach all patients discharged home within several days of discharge. Using a scripted survey instrument (Appendix A), they asked patients or family members a series of questions about clinical status, new or worsening symptoms, problems with medications or prescribed home health care services, follow-up appointments with their outpatient physician, and satisfaction with the care received. Call-center nurses, licensed personnel with extensive medical/surgical and case management experience, contacted patients whose answers to questions on the scripted survey instrument (see last section of Appendix A) indicated a high risk of postdischarge problems, intervening as necessary to resolve the health care issues.

Health status was self rated on a 5-point Likert scale from excellent to poor in response to the health status question on the SF-12.[13,14] Patient age was calculated using birth date and admit date from the IPC-Link® discharge summary. With clinical data from the IPC-Link discharge summary, the 3M DRG Grouper® was used to assign each patient a DRG and severity of illness (SOI) score.[15] Reported symptoms were grouped in clinically meaningful categories by the lead author.

Statistical Analysis

Logistic regression analysis was performed to analyze the effects of sex, health insurance, inpatient severity of illness, and self-reported health status on the proportion of patients with symptoms. Sex, health status, and severity of illness were treated as ordered variables. Because insurance type is a nominal variable, HMO was used as the reference category, and the other categories were converted to indicator variables. Pearson chi-square testing was used for all other analyses. The large number of planned analyses necessitated adjustment of the *P* values computed for the tests to maintain the type I error rate at 0.05. Therefore, a step-down Bonferroni procedure was used.[16]

TABLE 1
Characteristics of Patients in Study

Characteristic	Patients in Study		Patients Not in Study		*P* Value*
	Number of Patients	Percentage of All Patients	Number of Patients	Percentage of All Patients	
All patients	15,767		32,101		
Mean age (years)	60.1		54.1		<.0001
Sex					
Female	8985	57.0%	17220	53.7%	<.0001
Male	6515	41.3%	14337	44.7%	<.0001
Unknown	267	1.7%	544	1.7%	.897
Insurance type					
HMO	6391	40.5%	12540	39.1%	<.001
Medicaid	1066	6.8%	2815	8.8%	<.0001
Medicare	6055	38.4%	9777	30.4%	<.0001
Commercial and other	1370	8.7%	3490	10.9%	<.0001
Self-pay	885	5.6%	3479	10.9%	<.0001
Severity of illness					
Minor	6740	42.7%	14679	45.7%	<.0001
Moderate	6854	43.5%	13197	41.1%	
Major	1688	10.7%	3091	9.6%	<.0001
Extreme	118	0.7%	219	0.7%	.571
Unknown	367	2.3%	915	2.9%	.001
Health status					
Excellent	343	2.2%	N/A†		
Very good	1392	8.8%	N/A†		
Good	5505	34.9%	N/A†		
Fair	5901	37.4%	N/A†		
Poor	1468	9.3%	N/A†		
Unknown	1158	7.3%	N/A†		

* *P* value obtained from Pearson chi-square testing of the difference in rates for each variable between patients in study versus patients not in study.

† Patients not in study were not able to complete the survey; therefore health status could not be determined.

Role of the Funding Source

Data collection, analysis, and interpretation were funded by IPC and performed by employees of IPC.

RESULTS

During the study period, 48,236 patients were discharged to their homes from an acute care hospital. The IPC call center successfully contacted 16,135 patients after discharge, of whom 368 patients (2.3%) were excluded because of incomplete answers, leaving 15,767 as the valid study population (effective response rate = 32.4%). Of these, 98.9% were contacted within the first 5 days. The primary reasons for nonresponse or noninclusion in the present analysis were no answer after 2 attempts (52%) and missing or incorrect phone numbers (16%). If there was an answering machine, a message was left for the patient to call back. Those who called back accounted for fewer than 1% of all the patients.

A comparison of participants versus nonparticipants is shown in Table 1. The mean age of surveyed patients was 60.1 years, and 57% were female. The most common categories of insurance coverage were Medicare and HMO. The inpatient severity of illness of most patients was minor to moderate. Self-reported health status was normally distributed, with the greatest percentage of patients rating their health as fair or good. On average, nonparticipants were younger than participants, more likely to be male, had a different pattern of health insurance, and a slightly lower severity of illness. The top 10 DRGs were the same for the respondents and nonrespondents, and the order of these 10 diagnoses was very similar.

Of the 15,767 patients contacted, 11.9% (N = 1876) reported symptoms that were new or had worsened since leaving the hospital. Sixty-four percent of these patients had new symptoms, and 36% had worsening symptoms. These two groups were

TABLE 2
Characteristics of Patients with New or Worsening Symptoms

Characteristic	Number of Patients with New or Worsening Symptoms	Percentage of All Patients with New or Worsening Symptoms	*P* Value for Difference or Trend*
All Patients	1876	11.9%	
Sex			<.0001
Female	1170	13.0%	
Male	672	10.3%	
Insurance Type			
HMO	722	11.3%	.89
Medicare	748	12.4%	.21
Commercial and other	165	12.0%	.53
Medicaid	128	12.0%	.27
Self-pay	113	12.8%	
Severity of illness			.17
Minor	748	11.1%	
Moderate	814	11.9%	
Major	247	14.6%	
Extreme	19	16.1%	
Health Status			<.0001
Excellent	22	6.4%	
Very good	85	6.1%	
Good	429	7.8%	
Fair	725	12.3%	
Poor	384	26.2%	

* See Materials and Methods section for explanation of methodology.

combined for analysis in this study because for both groups, identification and action are important. Of the patients with new or worse symptoms, 37% required no assistance from the nurse because they had already notified a doctor and/or were doing something about it. The other 63% either had not notified their doctor or had concerns about their signs and symptoms. The most common action taken by the nurse was patient education regarding the symptoms. Of those requiring nurse intervention in addition to education, the most common intervention was to contact the patient's primary care provider or specialist about the patient's symptoms, followed by contacting the hospitalist. In 72% of nurse interventions, the patient's primary care physician or a specialist was contacted about the new or worsened symptoms. Other interventions included contacting the physician's office to obtain a prescription for a medication for the symptom, to get an appointment for the patient, or to reschedule an appointment to be earlier. A referral to an emergency room or urgent care center was given to 4% of patients.

Mean age of the patients with new or worsened symptoms was 60.5 years. The age distribution of symptomatic and asymptomatic patients was not significantly different, whether comparing by mean, median, or decades. Table 2 illustrates factors associated with the increased rate of new or worsened symptoms. Women were more likely than men to report symptoms (13.0% vs. 10.3%, $P < .0001$). As health status worsened, the percentage of patients with new or worsened symptoms increased ($P < .0001$), as it did with increased inpatient SOI ($P < .0001$). There was no correlation between self-rated health status and SOI score based on DRG score, suggesting they measured different parameters. Table 3 lists the percentages of patients reporting new or worsened symptoms for the most common DRGs. The only significant distinction was that patients discharged with a DRG of chest pain were less likely to report symptoms than were all patients.

The symptoms the patients reported are categorized in Table 4 without distinction as to whether they are primary or secondary. Gastrointestinal symptoms were the most common category of symptoms, followed by general symptoms, cardiovascular symptoms, and pain. The most common symptoms reported were fatigue/weakness, nausea/vomiting, and edema.

The call center assessed whether the patient had difficulty making a follow-up appointment and

TABLE 3
Prevalence of New Symptoms for the Top 10 DRGs*

DRG	Description	Number of Patients	Percentage of Patients	Patients with New or Worsening Symptoms	Rate of New or Worsening Symptoms	*P* value†
Total patients in Study		15,767		1876	11.9%	
143	Chest pain	1306	8.3%	128	9.8%	0.027
182	Digest disorders with complications	801	5.1%	92	11.5%	0.767
183	Digest disorders without complications	632	4.0%	78	12.3%	0.783
127	Heart failure and shock	544	3.5%	55	10.1%	0.230
89	Pneumonia with complications	426	2.7%	39	9.2%	0.098
88	COPD	380	2.4%	44	11.6%	0.913
278	Cellulitis	323	2.0%	32	9.9%	0.313
174	GI hemorrhage with complications	320	2.0%	40	12.5%	0.809
15	CVA	302	1.9%	25	8.3%	0.066
175	GI hemorrhage without complications	287	1.8%	34	11.8%	0.948

* Results for patients in study only.

† Obtained from Pearson chi-square testing for rate of new/worsening symptoms for each DRG versus the mean.

whether an appointment was scheduled within 2 weeks of discharge. Patients with new or worsening symptoms were only minimally more likely to have scheduled follow-up (61.0% vs. 58.4% for patients not reporting new or worsening symptoms, $P < .05$). Symptomatic patients had a higher prevalence of medication issues, defined as not picking up their prescriptions or not understanding how to take their medication (22.2% vs. 6.8% for asymptomatic patients; $P < .0001$). Likewise, the prevalence of symptomatic patients having problems receiving scheduled home health care services was 5.8%, compared with a prevalence of 3.6% for asymptomatic patients ($P < .0001$).

DISCUSSION

Enhancing the quality of care provided by hospitalists means not only improving care during hospitalization but also assuring patient stability between discharge and outpatient follow-up. As part of efforts to improve transition management, the call center at IPC attempted to contact all patients discharged home within several days of discharge. Of 15,767 patients surveyed between May 1, 2003, and October 31, 2003, 11.9% (N = 1876) had new or worsening symptoms since leaving the hospital only 2 or 3 days earlier. We had hypothesized that older patients might be more symptomatic than younger ones, but found no difference in the prevalence of new or worsening symptoms based on age. Women were more likely to be symptomatic than men.

We defined appropriate postdischarge follow-up as having an appointment with an outpatient physician within 2 weeks. A previous study of psychiatric patients documented that keeping a follow-up appointment significantly reduces the risk of rehospitalization.[17] Similar data do not exist for medical patients. Our data demonstrated that symptomatic patients were only minimally more likely to have made a follow-up appointment with their outpatient physician within the first 2 weeks than were those patients who were not symptomatic. As part of patient education at discharge, clinicians routinely counsel patients to call their outpatient physician should they experience new or worsening symptoms once at home. Inpatient physicians may assume this recommendation provides a safety net for the patients should they develop problems after discharge. However, our finding that almost 40% of patients with new or worsening symptoms within 2-3 days of discharge had not made a follow-up appointment with their physician suggests many patients fall through this safety net. Although there was a slight statistically significant difference between the groups, this difference was not clinically significant. One potential limitation of our data is that we did not examine whether there was a correlation between the day of the week that a patient was discharged and inability to make a follow-up appointment.

As part of the survey script (see Appendix), we inquired whether patients were able to pick up their prescriptions and whether they understood how to take their medication. A high percentage

TABLE 4
Major Symptoms Reported By Patients Post-Discharge*

Category	Specific Symptom	Number	% Of Total
Gastrointestinal		771	24.1%
	Nausea/vomiting	245	7.7%
	Abdominal pain	162	5.1%
	Diarrhea	146	4.6%
	Eating problems	107	3.3%
	Constipation	71	2.2%
General		527	16.5%
	Fatigue or weakness	360	11.3%
	Dizziness	167	5.2%
Cardiovascular		388	12.1%
	Edema	219	6.8%
	Chest pain	101	3.2%
Pain		382	11.9%
	Back and neck	118	3.7%
	Lower exttremity (including hip)	115	3.6%
	Generalized	76	2.4%
Psychological		209	6.5%
	Sleeping problems	125	3.9%
	Change in mental status/psychiatric symptoms	84	2.6%
Pulmonary		382	11.9%
	Dyspnea	134	4.2%
Neurological		199	6.2%
	Headache	118	3.7%
Infectious		192	6.0%
	Fever	82	2.6%
Dermatological		65	2.0%
Urological		62	1.9%
ENT		50	1.6%
Diabetic (problems with blood sugar)		45	1.4%
Postoperative wound problems		39	1.2%
Problems with intravenous sites		17	0.5%
Medication Reaction†		14	0.4%
Bleeding (other than above locations)		14	0.4%
Gynecological		9	0.3%
Others		89	2.8%

* Only symptoms with greater than 2% prevalence are listed, although symptoms with lower prevalence are included in the category subtotals. Therefore, category subtotals may be greater than the sum of the symptoms listed.

† Patients complaining of reactions to their medications. Medication issues described in the text refer to problems obtaining or understanding how to take medications (see Appendix).

of patients in our study reported having one of these medication issues in the first several days following hospital discharge, providing an opportunity for early intervention and prevention of medical error. Forster and others have demonstrated that adverse events and medical errors are common in the postdischarge period, affecting 23%-49% of patients.[7–9] Errors in the transition from inpatient to outpatient care increased the 3-month rate of rehospitalization.[9] New or worsening symptoms represented the most common adverse event.[8] Noting that many of these postdischarge complications could be preventable if detected early, Forster suggested system changes such as earlier follow-up with the outpatient physician or a postdischarge telephone call to check on the patient's status.[7,18] Future studies are planned to further analyze our data on medication issues and to determine if these problems are more prevalent for certain medications or diagnoses.

Comprehensive discharge planning remains an essential step in the discharge process. This may involve prescribing medications, arranging home

health care services, and arranging outpatient follow-up. The traditional hospital discharge process does not adequately ensure that patients understand their discharge plan and are able to comply with it. Calkins et al. compared physicians' perceptions of patients' understanding of medication side effects and activity restrictions with patients' actual understanding.[6] They found that, compared with what was reported by patients, physicians overestimated the time spent discussing discharge plans and how well patients understood medication side effects and activity restrictions.

An important method for reducing patient problems is to contact patients by telephone after discharge in order to identify any health care issues. Previous research has confirmed that follow-up telephone calls improve health outcomes and decrease resource utilization of patients, mainly those discharged from the emergency department.[10,11,19–23] A study of telephone follow-up after ambulatory care visits did not find significant benefits of this procedure.[24] In one of the few studies of telephone calls after hospitalization, pharmacists contacted patients 2 days after discharge and were able to detect and resolve medication-related problems in 19% of patients and learned of new or worsening symptoms in 15%. Patient satisfaction was improved, and the intervention resulted in a lower rate of repeat visits to the emergency room within 30 days of discharge.[12] Another study of telephone follow-up following hospital discharge compared proactively calling all patients with providing a phone number that patients can call if they have questions. The study demonstrated that very few patients called the number provided, but of those patients called by the nursing service, more than 90% had questions about self-care and recovery.[25] These findings demonstrate the value of proactively contacting patients in the first several days after discharge, when problems can be detected and interventions initiated earlier.

One potential concern with this study was the low response rate. This was a retrospective analysis of an existing discharge management call-center system, not a prospective study. We were not able to reach 52% of the patients discharged after 2 attempts by telephone. To have our call center make additional attempts to reach each patient by telephone would require a significant increase in the size of the call center, because at the time of the study, the staff was handling more than 370 patients discharged home a day. The telephone number of 16% of patients was missing or incorrect. We have since developed internal quality improvement mechanisms to decrease this percentage. After subtracting the patients we were unable to reach and those whose phone number was missing or incorrect, we were able to contact 32.4% of all the patients discharged home.

Several reasons explain the response rate found by many prospective research studies. In most studies of telephone follow-up, patients must be able to consent to participate in order to be considered eligible inclusion. This raises the response rate because patients who do not consent to participate, have language barriers, or have no telephone are excluded from the study. In our study none of these types of patients were excluded. There are 2 additional differences between our study and many published studies that involve telephone surveys. Ours was not a prospective research study, and we contacted many more patients than did other studies. For example, a study by Forster et al. involved only 581 patients, and the research staff was diligent in its efforts to reach the patients,[7] making up to 20 attempts for each patient. They reported a response rate of 69%. If they had included patients who were non-English speakers or had no phone in their study, the response rate would have been 59%. Shesser et al. were able to reach 144 of 297 patients in their study of emergency room follow-up, for a 48.4% response rate.[25] The response rate in a study of telephone consultation with asthma patients was quite similar to ours. They enrolled 932 eligible patients, of whom they were able to reach 278, for a response rate of 30%.

It is possible that the rate of symptoms and the other variables we measured relative to this would have been different if we had been able to reach 100% of patients. There were some demographic differences between the patients we were able to reach and those we were not (Table 1). The nonresponders were slightly younger and slightly more likely to be female. Nonresponders were more likely to have Medicaid or commercial insurance or be self-pay and were less likely to have Medicare. In addition, nonresponders had less severe illness. Although this scenario is highly unlikely, if none of the nonresponders had new or worsening symptoms, the rate of symptoms would only have been 3.86%. Conversely, it is possible but also very unlikely that a greater percentage of the nonre-

sponders had new or worsening symptoms. Given the demographics of our study participants, we would expect a potentially slightly lower rate of signs and symptoms.

The present study had several other limitations. First, all patients surveyed were cared for by IPC-employed physicians. It is possible that reported rates of symptoms and other postdischarge issues are not generalizable to other hospitalist practices. However, the present data were collected at more than 100 health care facilities in 10 health care markets, and the patients were cared for by more than 200 physicians. Therefore, it is unlikely these results would have been significantly influenced by a particular physician's or institution's practice patterns.

Second, because of the large number of facilities involved and that we could only track readmissions to facilities where our own hospitalists practice, we were not able to report 30- or 90-day readmission rates or emergency room visit rates. In a prospective study, these would be important variables to track in order to assess the clinical relevance of the symptoms. We could track this data for some institutions, but for most of them, the quality of data was not sufficient to be meaningful or to make conclusions.

An additional limitation is that the call center did not differentiate between clinically "minor" and "major" symptoms. The inclusion of symptoms perhaps considered minor might have elevated the reported symptom frequency. However, the definitions of minor and major symptoms are very subjective, and a clinician's definitions might differ from those of a patient who is at home and uncomfortable. For example, nausea or loss of appetite related to new medications may be considered minor clinically but could be devastating to the patient experiencing them, leading the patient to stop taking the medication. Conversely, symptoms that may be considered nonsignificant by the patient may be interpreted as indicating clinically significant disease by a physician. Therefore, we would argue that, regardless of the "severity" of the symptom, follow-up with a clinician is important.

Another limitation is based on our definition of an adequate follow-up appointment as one scheduled within 2 weeks of discharge. It might be argued that if a patient's new symptoms were considered minor clinically, then a follow-up interval greater than 2 weeks might be considered adequate. However, as already noted, a patient's criteria for considering a symptom minor and not requiring follow-up may differ from a clinician's criteria. Also, the standardized discharge process requires that the hospitalist identify a physician for outpatient follow-up and specify the period when the patient is to see the physician. Because of the inherent variability in having a many hospitalists practicing in many hospitals, not all patients had a scheduled appointment at discharge. We were not able to determine whether patients had an appointment date and time for follow-up before discharge or had only received instructions to call the office for an appointment.

The Institute of Medicine, in its report "Crossing the Quality Chasm," identified the coordination of care across services and sites of care as one of the health care system's redesign imperatives.[2] Hospitalists are in a unique position to address transition care issues. Managing the transition from inpatient to outpatient care is vitally important, and hospitalists should play an essential role in designing a transition management system for discharged patients. Although individual efforts by hospitalists are essential to assuring postdischarge contact with patients, there is increasing agreement that system solutions are needed to improve the quality of care in the transition period following hospitalization. Improving a health care process involves more than working harder; it involves working differently.[3] It is therefore imperative that hospitalist programs develop effective systems to manage the transition period until safe arrival by the patient in the outpatient physician's office.

In summary, 11.9% of patients contacted by a telephone call center within several days of discharge had new or worsening symptoms since discharge. There was no difference by age in the prevalence of symptoms. Patients who rated their health status as fair to poor were more likely to be symptomatic. Symptomatic patients were also more likely to have difficulty obtaining or understanding how to take their medications and receiving home health services. Patients who felt poorly were only minimally more likely to have made an appointment for follow-up with their outpatient physician. It is hoped that by identifying patients who are doing poorly after discharge and intervening as necessary, we can improve the health outcome of our patients, as well as reduce the number of emergency room visits

and readmission rates. Although actions by individual physicians are important, a system to manage the postdischarge transition period is essential for improving posthospitalization outcomes.

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APPENDIX A
Survey Questions

Main Question	Answer	Trigger Question	Answer	Trigger Question	Answer	Trigger Question
Who am I speaking with? • Patient • Caregiver • Family member • Other (specify) _____						
In general, would you say your health is: • Excellent • Good • Poor • Very good • Fair						
Since you got home from the hospital, have you had any symptoms? • Yes • No • Not applicable	**If Yes** ***What type of symptoms are you having?*** • Abdominal pain • Bleeding • Change in mental status • Chest pain • Constipation • Cough • Diarrhea	• Discomfort (specify where) _____ • Dizziness • Edema (specify where) _____ • Fatigue or weakness fever headache • Nausea/vomiting • Other (specify) _____ • Pain (specify where) _____	• Palpitations • Problem with urination • Problems with blood sugar • Problems with eating • Short of breath or difficulty breathing • Sleeping problems • Swollen or puffy legs			
	Did you have these symptoms in the hospital? • Yes • No • Not applicable	**If Yes** ***Are these symptoms worse now?*** • Yes • No • Not applicable	**If Yes** ***Have you spoken with your doctor/VN about them?*** • Yes • No • applicable			
		If No ***Have you spoken with your doctor/VN about them?*** • Yes • No • Not applicable				
Did you pick up your medication?	**If No** ***Which medications did you not pick up?*** • List of medications from discharge note ***Will you be able to pick up your medications today?*** • Yes • No • Not applicable **If Yes** ***Do you understand which medications you are supposed to take now?*** • Yes • No • Not applicable					
How long have you been on warfarin therapy? (question only for patients with the discharging med of warfarin) • Since this hospitalization • Less than a year • For many years • Don't remember • Other (specify) _____						

(*continued*)

APPENDIX A
(*continued*)

How long have you been taking insulin? (question only for patients with insulin as a discharge medication)
- Since this hospitalization
- Less than a year
- For many years
- Don't remember
- Other (specify) _____

Did the home health services arrive? (question only for patients who had home health ordered)

Visiting Nurse
- Visiting nurse was here on _____
- Visiting nurse is scheduled to visit on _____
- Visiting nurse has *not* made contact

Social Worker
- Social worker was here on _____
- Social worker is scheduled to visit on _____
- Social worker has *not* made contact

Physical therapy
- Physical therapist was here on _____
- Physical therapist is scheduled to visit on _____
- Physical therapist has *not* made contact
- Outpatient physical therapist
- Patient did not meet criteria for home physical therapy

Have you already made an appointment with your physician?
- List of follow-up doctors from discharge note
- No

Occupational therapy
- Occupational therapist was here on _____
- Occupational therapist is scheduled to visit on _____
- Occupational therapist has not made contact

Oxygen
- Oxygen has arrived
- Oxygen is scheduled to arrive
- Oxygen has *not* arrived
- Patient previously on oxygen

DME
- DME has arrived
- DME is scheduled to arrive
- DME has *not* arrived

If No ***Do you know whom to follow up with?***
- Yes
- No
- Not applicable

Do you need help making the appointment?
- Yes
- No
- Not applicable

Speech Therapy
- Speech therapist was here on
- Speech therapist is scheduled to visit on
- Speech therapist has NOT made contact

Other
- No home health was ordered
- Patient declined home health services
- Agency has made contact but no visit was scheduled

Reason for IPC Nurse Follow-Up

Signs and Symptoms
- Patient has concerns regarding signs, symptoms, or diagnosis
- Patient experiencing unexpected/worsening symptoms

Warfarin
- Patient on warfarin since this hospitalization or < 1 year

Insulin
- Patient on insulin since this hospitalization or < 1 year

Medications
- Patient has medication issues or questions
- Patient did not fill prescription or pick up medications
- Patient does not understand how to take medications

Home Health
- Patient needs assistance with home health

F/U Appointment
- Patient needs assistance with F/U appointment
- Outpatient appointment is at least 14 days from today

Other
- Other Issues identified (specify)

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