

- 1 **Title** - Comfort Measures Orders and Hospital Transfers: Insights from the OPTIMISTIC Demonstration  
2 Project
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17 **Abstract**

18 **Context:** Nursing facility residents and their families may identify “comfort measures” as their  
19 overall goal of care, yet some hospital transfers still occur.

20 **Objectives:** Describe nursing facility residents with comfort measures and their hospital  
21 transfers.

22 **Methods:** Mixed methods, including root cause analyses of transfers by RNs and interviews  
23 with a subset of healthcare providers and family members involved in transfers. Participants  
24 were residents in 19 central Indiana facilities with comfort measures orders who experienced  
25 unplanned transfers to the hospital January 1, 2015 - June 30, 2016. Project demographic and  
26 clinical characteristics of the residents were obtained from the Minimum Data Set 3.0.  
27 Interviews were conducted with stakeholders involved in transfer decisions. Participants were  
28 prompted to reflect on reasons for the transfer and outcomes. Interviews were transcribed and  
29 coded using qualitative descriptive methods.

30 **Results:** Residents with comfort measures orders (n = 177) experienced 204 transfers. Most  
31 events were assessed as unavoidable (77%). Communication among staff, or between staff and  
32 the resident/family, primary care provider, or hospital was the most frequently noted area  
33 needing improvement (59.5%). In interviews, participants (n = 11) highlighted multiple issues,  
34 including judgments about whether decisions were “good” or “bad,” and factors that were  
35 important to decision-making, including communication, nursing facility capabilities, clinical  
36 situation, and goals of care.

37 **Conclusion:** Most transfers of residents with comfort measures orders were considered  
38 unavoidable. Nonetheless, we identified several opportunities for improving care processes,  
39 including communication and addressing acute changes in status.

40 **Key words** - comfort measures; hospital transfers; nursing home; advanced care planning

41 **Running title** - Comfort Measures Orders and Hospital Transfers

## 42 Introduction

43 Advance care planning (ACP) is the process of eliciting goals, values and preferences for  
44 medical treatments. It is widely recommended as a best practice for seriously ill patients<sup>1</sup> as  
45 research suggests that ACP can reduce family caregiver stress and anxiety, increase satisfaction  
46 with care, and help ensure the care provided is consistent with preferences.<sup>2-5</sup>

47 The Physician Orders for Life Sustaining Treatment (POLST) program ([www.polst.org](http://www.polst.org))<sup>6</sup>  
48 provides a structured approach to document preferences elicited during ACP as medical orders.  
49 Use of POLST is promoted by the Institute of Medicine<sup>1</sup> and the National Quality Forum.<sup>7</sup>  
50 POLST forms contain orders reflecting preferences, such as cardiopulmonary resuscitation,  
51 artificial nutrition, and medical interventions. The three overarching medical intervention  
52 options are “Full Intervention,” “Limited Additional Interventions” and “Comfort Measures.”  
53 Full Intervention is the default standard of care and indicates a preference to provide all  
54 medically indicated interventions. Limited Additional Interventions reflects a preference for  
55 interventions to stabilize the medical condition, but avoid more aggressive measures such as  
56 intubation and the intensive care unit. Comfort Measures orders direct providers to maximize  
57 comfort through symptom management and avoid transfer to the hospital setting unless  
58 comfort needs cannot be met. Although there are minor differences in the patient eligibility or  
59 precise language on POLST forms,<sup>8</sup> every state allows orders on POLST forms to be honored  
60 across settings of care.

61 While there have been other studies examining POLST use,<sup>9</sup> one large research study  
62 focused on the use of POLST in nursing facilities has demonstrated that residents who elect  
63 Comfort Measures are less likely to experience transfers to the hospital than residents with

64 Limited Additional Interventions or Full Treatment orders on POLST or code status orders  
65 alone.<sup>10</sup> In this same sample, the care provided was consistent with Comfort Measures orders  
66 74% of the time. Transfers of residents with Comfort Measures orders were primarily prompted  
67 by conditions that could not be safely managed in the nursing facility such as trauma related to  
68 a fall or uncontrolled pain.<sup>11</sup> However, this previous work was limited to what was documented  
69 in the medical record and data were only collected over a short period.

70 The Optimizing Patient Transfers, Impacting Medical Quality and Improving Symptoms:  
71 Transforming Institutional Care (OPTIMISTIC) project is a large, ongoing clinical demonstration  
72 project in Indiana<sup>12,13</sup> which includes structured ACP with nursing facility residents as a key part  
73 of a multi-component intervention. OPTIMISTIC project RNs and NPs are trained to facilitate  
74 ACP discussions with long-stay nursing facility residents and their surrogate decision-makers  
75 using the Respecting Choices Advanced Steps model.<sup>13-15</sup> Treatment preferences are recorded  
76 on the Indiana version of POLST called the Physician Orders for Scope of Treatment (POST) form  
77 when appropriate and desired by the resident or the legally designated surrogate decision-  
78 maker for residents who lack decisional capacity.<sup>16</sup> Reducing hospitalization rates is the  
79 primary outcome of the demonstration project and thus these transfers are closely tracked.  
80 RNs complete root cause analyses of every hospital transfer event.<sup>13,17,18</sup>

81 The overall goal of this analysis is to present a fuller, descriptive picture of long stay  
82 nursing facility residents who transfer to the hospital in the setting of having clearly elected  
83 comfort-focused care. Using the rich data available from the OPTIMISTIC project, we present  
84 descriptive analyses of hospital transfer events of long stay nursing facility residents with  
85 comfort measures orders. To complement these quantitative analyses, we also present insights

86 from interviews conducted with surrogate decision-makers of residents who had elected  
87 comfort measures but who transferred to the hospital, as well as providers who were involved  
88 in these transfer decisions.

## 89 **Methods**

### 90 Setting

91 The OPTIMISTIC demonstration project was approved by the appropriate Institutional  
92 Review Board. Indiana was one of seven sites participating in this national Centers for Medicare  
93 and Medicaid Services funded clinical demonstration project.<sup>19,20</sup> Data were collected between  
94 January 1, 2015 and June 30, 2016 in 19 nursing facilities, located in urban and suburban areas  
95 of central Indiana (out of approximately 500 nursing facilities in the state). These sites  
96 represent a mix of for-profit, not-for-profit, and county-owned facilities. In OPTIMISTIC, a  
97 project nurse (RN) is assigned to each nursing facility to implement the OPTIMISTIC clinical  
98 model, supported by project nurse practitioners (NPs) who cover multiple facilities.<sup>13,21,22</sup> The  
99 project RNs are embedded full-time (Monday through Friday, 8 AM-5 PM) in the facility to  
100 respond to acute changes in condition of residents, facilitate advance care planning with  
101 residents and families, and support the nursing staff of the facility through education and  
102 mentoring. The project NPs provide clinical support through evaluations of residents experiencing  
103 acute changes in condition and provide transitional care visits for residents who have returned  
104 from the hospital. The OPTIMISTIC project RNs and NPs are responsible for documenting clinical  
105 encounters and root cause analyses of transfer events in a database for monitoring and  
106 evaluation of the intervention.

## 107 Participants

108           During the 18 month data collection window, 2391 long stay residents were enrolled.  
109 Residents were eligible for OPTIMISTIC if they were long stay (defined by greater than 100 days  
110 in the facility) and did not have Medicare managed care coverage. Per CMS guidelines, eligible  
111 residents were passively enrolled with the opportunity to opt-out. Less than 1% of eligible  
112 residents opted out. Participants in this analysis were residents enrolled in OPTIMISTIC who  
113 had a signed POST form that included orders for “Comfort Measures” at the time of an acute  
114 hospital transfer.

## 115 Quantitative Data Collection Procedures

116           Information about the transfer events was abstracted from root cause analysis forms  
117 completed by OPTIMISTIC project RNs following each hospital transfer. The root cause analysis  
118 forms were adapted from tools developed by INTERACT.<sup>23,24</sup> Data elements on these forms  
119 include the date and time of the transfer, clinical signs and symptoms leading to the transfer,  
120 evaluation of potential avoidability of the transfer (avoidable/potentially avoidable versus  
121 unavoidable/potentially unavoidable), and opportunities for quality improvement.<sup>13,17,18</sup> The  
122 OPTIMISTIC project RNs, who are not employees of the nursing facilities, are asked to make a  
123 determination of avoidability based on clinical judgment and on whether the transfer would be  
124 avoidable if ideal nursing facility resources were available. The RNs also recorded whether the  
125 resident had a POST form and the orders contained on the POST, including orders for comfort  
126 measures. All data were managed using REDCap electronic data capture tools hosted  
127 internally.<sup>25</sup>

128 Additional data describing resident characteristics were drawn from the mandated  
129 Minimum Data Set 3.0 (MDS) assessment instrument,<sup>26-28</sup> collected on all nursing facility  
130 residents in Medicare and Medicaid-certified facilities. All MDS data were collected from the  
131 closest comprehensive assessment prior to the date of transfer.

### 132 Quantitative Data Analysis

133 Residents' demographic characteristics and hospital transfer event data were analyzed  
134 using descriptive statistics. For residents with multiple transfers and comfort measures orders,  
135 the first hospital transfer was included in the analysis. Comparisons of residents with  
136 potentially avoidable transfers vs. those whose transfers were found to be unavoidable were  
137 analyzed using Fisher's exact test. Data were analyzed using SAS software, Version 9.4 of the  
138 SAS System for Microsoft.<sup>29</sup>

### 139 Qualitative data collection procedures

140 Participants in the qualitative interviews were family members or health care providers  
141 involved in the decision to transfer. A total of eleven interviews, five family members and six  
142 clinicians involved in transfer decisions, were completed. The clinicians included four interviews  
143 with physicians, one with an OPTIMISTIC RN, and one with an OPTIMISTIC nurse practitioner  
144 (NP).

145 The project manager reviewed the project database on a weekly basis to identify  
146 transfers that occurred for a resident with documented comfort measures orders. The project  
147 manager provided the list to the first author for review and to identify potential cases for  
148 recruitment. Study staff contacted the OPTIMISTIC project RN in the nursing facility to identify



149 if a family member was involved in the decision to transfer and which healthcare providers  
150 were involved in the decision to transfer. Potential decision makers included healthcare  
151 providers, the resident, surrogate decision makers including family, OPTIMISTIC RN, or  
152 OPTIMISTIC NP.

153 Study staff called the potential participants to review the study information sheet and  
154 conducted individual interviews with those who provided verbal consent. Interviews were  
155 conducted by phone and audio-recorded; the audio-recordings were transcribed verbatim and  
156 checked for accuracy by the staff member who had conducted the interview.

157 Questions posed to the clinical providers included: “Are there any additional resources  
158 that would have allowed the resident to receive appropriate care in the facility?” and “How  
159 confident were you in the decision to transfer the resident, and that it was consistent with  
160 established care goals?” Questions asked of surrogate decision-makers included: “Could you tell  
161 me in your own words what ‘comfort measures’ means to you?” and “The POST form says your  
162 loved one should go to the hospital to be comfortable, if they can't be comfortable in the  
163 facility. Do you feel that the trip to the hospital achieved that goal, and if so, how so?”

#### 164 Qualitative Analysis.

165 Research team members read all interview transcripts and discussed potential themes  
166 in the data.<sup>30</sup> One of the authors created an initial coding list of themes after reviewing the  
167 transcripts using NVivo qualitative software. All interview transcriptions were coded by at least  
168 two members of the study team. Discrepancies were resolved and major themes affirmed  
169 through team discussion and consensus.

170 **Results**171 Participants

172 There were 901 nursing facility residents enrolled in OPTIMISTIC who experienced an  
173 unplanned transfer to the hospital between January 1, 2015, and June 30, 2016. These  
174 residents were largely white (82.5%) and female (71.8%), with a mean age of 83.2 years. A  
175 majority of residents (78%) had a diagnosis of dementia. **(Table 1)**

176 Comfort measures Transfers

177 Of the 901 long-stay residents with an unplanned transfer, 20% (177/901) had comfort  
178 measures orders indicated on a POST form at the time of the transfer. The mean number of  
179 transfers for residents with comfort measures orders was 1.4 (SD=0.7) per resident. Most  
180 transfers were triggered or requested by nursing facility staff (49.7%) or the resident's primary  
181 care provider (20.3%). In 11% of transfers, the family or resident requested the transfer. About  
182 14% of the transfers involved a 911 call. The most common clinical issues leading to transfer to  
183 the hospital were falls, trauma, or fracture (32.8%), cognitive or behavioral changes (21.3%),  
184 and respiratory symptoms (7.5%). **(Table 2)**

185 OPTIMISTIC RNs who conducted root cause analyses determined that 136 (77%) of the  
186 transfers were unavoidable. They also identified opportunities for improvement in clinical  
187 evaluation, clinical management or communication from a drop down list of categories.  
188 Communication among nursing facility staff, or between staff and the resident/family, primary  
189 care provider, or hospital was the most frequently noted area noted as needing improvement  
190 (59.5%). The next most common category for improvement was inadequate or inconsistent

191 monitoring and lack of access to diagnostic procedures, treatments, and ancillary services  
192 (36.5%), followed by pre-transfer assessments that were incomplete, inadequate, or not  
193 provided (29.2%). (**Table 2**)

#### 194 Qualitative Findings

195 When prompted to reflect on the reasons for the transfer event and the outcome for  
196 the resident, participants identified multiple issues, including their own judgment now about  
197 whether the transfer was a “good” or “bad” decision. They also discussed factors that were  
198 important to decision-making regarding hospital transfers including communication among  
199 stakeholders, capabilities of the nursing facility to provide needed assessment and care, clinical  
200 situation such as symptoms, and clarity of goals of care. There were similarities in themes  
201 identified by family members and clinical providers, as well as some differences based on their  
202 perspectives.

203 Themes highlighted by family members include: 1) ambivalence about which care  
204 setting can best achieve comfort; 2) recognition of the limits of what can be done in the nursing  
205 facility; and 3) the roles of multiple stakeholders involved in the decision.

206 When family members reflected back on the transfer experience and outcomes, some  
207 reported feeling ambivalent, recognizing that they would likely face similar decisions in the  
208 future: *“He’s just at the point that it’s just miserable for him, so keeping him comfortable now is  
209 the goal, but you can only go so far, so is he comfortable at the hospital? Would he be  
210 comfortable at the nursing facility? Wow. I honestly don’t know.”* Family members’ decisions to  
211 advocate for a transfer were motivated in part because of a belief that the hospital offered

212 resources (e.g., diagnostic tools), and expertise (e.g., specialist physicians), that were needed  
213 but not available in the nursing facility. As one family member remembered, *"I said mom, our  
214 options are you stay here and you suffer, or we get you checked out and find out what is really  
215 going on, and she said well then, what do you think? I said I'd like to know what's going on, and  
216 then she reiterated, I don't want anybody cutting on me, but let's find out what's going on, so  
217 that was the decision process."*

218 Participants in both groups also highlighted that family members may disagree about  
219 what to do in urgent situations, causing conflict. In addition, recommendations from the facility  
220 staff left family members feeling that that was no choice but to transfer the resident. As one  
221 family respondent described *"they called me and they said that he was in pain, and that they've  
222 done pretty much what they feel they could do, and they felt that maybe going to the hospital,  
223 they might be able to find out a little bit more"* and *"They called me, and said he needed to go."*

224 Clinicians described similar factors contributing to transfers, with new themes including:  
225 1) dependence on communication from the nursing facility and other stakeholders to make  
226 decisions; 2) inadequate knowledge of existing orders, i.e. comfort measures; and 3) the role of  
227 family preferences in driving the decision to transfer.

228 Physicians and NPs described relying on the facility nurse's clinical assessment and  
229 information about current orders, such as preferences for medical treatment, when they were  
230 not there in person and did not have direct access to the medical record. In the words of one  
231 provider *"...if a nurse calls and wants the patient sent out and I don't necessarily know their  
232 code status and if they don't feel comfortable handling that patient, I will generally do it."*  
233 Another added, *"I don't have (electronic medical record) access to all those people when I'm*

234 *talking to the nurses in the evening, and if I'm not told that the person is comfort measures or*  
235 *doesn't want to go to the hospital, typically I'm not going to remember that." One primary care*  
236 *provider described how discordant views among multiple stakeholders coupled with lack of*  
237 *familiarity with the resident's condition and preferences influenced the decision to transfer:*  
238 *"Everybody was on different pages. I think the daughter really wasn't wanting him to be sent*  
239 *out at that point but I think she was confused. I think the nurse was motivated to have him sent*  
240 *out and the physician (on call) was just unaware of all of the other information." Some*  
241 *providers highlighted their reliance on family members to drive these decisions: "it's a lot of*  
242 *time related to the family, and if the family was as insistent as this daughter was, I probably*  
243 *would do the same thing again."*

#### 244 **Discussion**

245       These analyses provide insight on hospital transfer events and decision-making that  
246 occurred in the setting of established, durable medical orders to focus on comfort measures.  
247 When "comfort measures" is the documented preference for care, the expectation is that  
248 hospitalization will be avoided if possible. Hospitalizations may still occur for these residents  
249 and would be considered consistent with care preferences if the intent of hospital transfer is to  
250 achieve comfort. In this mixed methods study, we found that the most common reasons for  
251 transferring to the hospital are falls, trauma or suspected fracture and that most transfers of  
252 residents with orders with comfort measures were considered unavoidable. Our qualitative  
253 analysis highlighted that the decisions surrounding transfers of residents with comfort care  
254 orders are complex and involve multiple stakeholders. In addition, family preferences at the  
255 time that transfer is being considered drive decisions to transfer a patient out of the facility,

256 although there is ambivalence about which care setting best achieves comfort. Nurses  
257 identified opportunities to improve or reduce transfers, including enhancing communication  
258 among key stakeholders and promptly addressing acute changes in status.

259 There have been a limited number of studies examining whether treatments provided to  
260 nursing facility residents with comfort measures orders are consistent with their goals. One  
261 study utilized a standardized chart review process and found that treatments, including hospital  
262 transfers, were consistent with preferences 74% of the time. Similar to our findings, trauma  
263 related to falls was the most common reason for transfer of residents with comfort measures in  
264 this study<sup>11</sup>. While we did not explicitly measure whether transfer events were consistent with  
265 resident goals of care, RNs embedded in the facilities and conducting root cause analyses felt  
266 most transfers could not be avoided. Further, our findings are similar to with other work  
267 describing rates of avoidability determined by RN raters doing root causes analyses.<sup>31</sup>

268 Several earlier qualitative studies have examined stakeholder perspectives on  
269 transitions of nursing facility residents to the hospital. Inadequate communication among  
270 families, residents, and providers<sup>32-34</sup> as well as between nursing facility-based providers  
271 nursing facility and ED clinicians<sup>35-38</sup> have been cited as contributing to unnecessary nursing  
272 facility transfers.<sup>32,36,38</sup> Our findings support those of earlier studies in that RNs noted that poor  
273 communication was involved in nearly 60% of transfers. The interviews underscored specific  
274 challenges with communication that contributed to decisions to transfer residents to the  
275 hospital. These issues included communication among family members who have conflicting  
276 perspectives as to the resident's needs and preferences. Other factors that may have  
277 contributed to hospital transfers included insufficient information about the resident's acute

278 clinical changes and treatment preferences available to providers, who often were not on-site  
279 and were unfamiliar with residents. Knowledge of the patient and quality communication  
280 among multiple stakeholders is essential to high quality transfers.<sup>39,40</sup> Structured  
281 communication tools for nurses and direct access to medical records have the potential to  
282 enhance the quality of medical decision-making of providers who are evaluating a change in  
283 condition via phone.<sup>13,34,38,41</sup> Further, on-site availability of medical providers and rapid  
284 recognition of changes in status allows staff and providers to address issues before symptoms  
285 escalate or to initiate treatment early in acute illness.<sup>42-45</sup>

286 Even in the context of residents and families who have participated in structured ACP,  
287 issues with family dynamics arise during acute medical events. Documentation of treatment  
288 preferences can help guide decision-making, but some conflict may be unavoidable in stressful  
289 situations that involve multiple stakeholders.<sup>46</sup> As other studies have demonstrated providers  
290 often defer to surrogate decision-makers and identify surrogate preference as the most  
291 significant influence in the decision to transfer.<sup>47,48</sup> Our findings support other work that has  
292 described documentation of treatment preferences as important groundwork, but identified  
293 that how nurses and physicians respond to acute events and talk with family members drives  
294 decision-making.<sup>48</sup> Family members in our study indicated that their decisions to transfer  
295 often followed recommendations they received from nursing facility staff.

296 Limitations to these analyses include a lack of specific detail as to how comfort  
297 measures orders were communicated and considered during all transfers. Nursing facility  
298 residents participating in the OPTIMISTIC demonstration project have access to quality ACP  
299 facilitation through the trained OPTIMISTIC RNs; thus results may not be generalizable to

300 transfers that occur in other facilities. All nursing facilities included were participating in a  
301 multi-component intervention designed to reduce avoidable hospital transfers and thus may  
302 have a heightened focus on hospitalizations compared to other facilities. Further, we did not  
303 have access to Medicare claims data and reasons for hospitalizations were abstracted from the  
304 medical record by project clinical staff. Interviews were conducted with a small sample of  
305 providers and family members involved in transfers.

### 306 **Conclusions and Implications**

307 In this mixed methods study of long stay nursing facility residents who transferred to  
308 the hospital despite the presence of comfort measures orders, most transfers were deemed  
309 unavoidable by RN experts using a standardized root cause analysis tool. Significant  
310 opportunities exist, however, to support residents, family decision-makers, nursing staff and  
311 medical providers in communicating better to honor residents' preferences for comfort  
312 measures in the setting of an acute change in status.

313 **Conflicts of Interest** – KU is CEO and Founder of Care Revolution, Inc., a program to train nurses  
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Table 1: Characteristics of long stay residents with comfort measures orders and unplanned hospital transfers (January 1, 2015 to June 30, 2016)

Characteristic	N=177 <sup>†</sup>
<b>Length of stay at transfer (days), mean ± SD</b>	793.7 ± 627.7
<b>Transfers per resident, mean ± SD</b>	1.4 ± 0.7
<b>Age at transfer, mean ± SD</b>	83.2 ± 9.0
<b>Female, %</b>	127 (71.8%)
<b>Race, % (n=177)</b>	
<b>Non-Hispanic white</b>	146 (82.5%)
<b>African American*</b>	28 (15.8%)
<b>Hispanic*</b>	3 (1.7%)
<b>Diagnosis, %<sup>a 12,15</sup> (n=177)</b>	
<b>Hypertension</b>	147 (83.1%)
<b>Alzheimer's or other dementia</b>	138 (78.0%)
<b>Depression</b>	108 (61.0%)
<b>Chronic obstructive pulmonary disease</b>	57 (32.2%)
<b>Diabetes mellitus</b>	57 (32.2%)
<b>Heart failure</b>	48 (27.1%)
<b>Cancer</b>	14 (7.9%)
<b>Cerebrovascular accident, transient ischemic attack, stroke</b>	12 (6.8%)
<b>Life expectancy &lt;6 months, %<sup>a 15</sup> (n=177)</b>	7 (4.0%)
<b>Activities of daily living self-performance, mean ± SD<sup>a,b</sup> (n=172)</b>	19.4 ± 3.2

<sup>†</sup> Comfort measures status as determined by OPTIMISTIC RN at the time of transfer

SD= standard deviation

\* Not mutually exclusive

<sup>a</sup> From the most recently available Minimum Data Set (MDS) assessment prior to transfer for each resident. <sup>b</sup> Bed mobility, transfer, locomotion on unit, dressing, eating, toilet use, and personal hygiene. potential scores range from 0 (independent) to 28 (total dependence) <sup>44</sup>.

Table 2: Characteristics of acute hospital transfers for long stay residents with comfort measures orders (January 1, 2015 to June 30, 2016); first transfer per resident only

Characteristic	N=177 <sup>†</sup>
<b>Was transfer avoidable per OPTIMISTIC RN?<sup>d</sup> (n=174)</b>	
<b>Not avoidable (Definitely not avoidable, Probably not avoidable)</b>	134 (77.0%)
<b>Potentially avoidable (Probably avoidable, Definitely avoidable)</b>	40 (23.0%)
<b>Primary symptom leading to transfer<sup>e</sup> (n=175)</b>	
<b>Fall/Trauma/fracture</b>	57 (32.8%)
<b>Cognitive/Behavioral/Psychiatric</b>	37 (21.3%)
<b>Respiratory</b>	13 (7.5%)
<b>Other</b>	10 (5.8%)
<b>GI symptom</b>	9 (5.2%)
<b>Cardiovascular</b>	9 (5.2%)
<b>Non-Cognitive Neuro (including CVA, TIA)</b>	8 (4.6%)
<b>Pain</b>	8 (4.6%)
<b>Change in appetite/Malaise</b>	8 (4.6%)
<b>Infection/Immune System</b>	6 (3.5%)
<b>Heme/bleeding (non GI)</b>	4 (2.3%)
<b>Abnormal labs</b>	3 (1.7%)
<b>Urinary symptoms</b>	2 (1.2%)
<b>Time of transfer</b>	
<b>Weekday (during OPTIMISTIC coverage; 8 a.m. – 5 p.m.)</b>	68 (39.1%)
<b>Weekday evening (5 p.m. – 12 a.m.)</b>	36 (20.3%)
<b>Weekday night (12 a.m. – 8 a.m.)</b>	20 (11.3%)
<b>Weekend</b>	53 (29.9%)
<b>Who triggered/requested transfer?</b>	
<b>NF staff</b>	88 (49.7%)
<b>Facility medical provider (MD/NP/PA decision)</b>	56 (31.6%)
<b>Family or resident preference</b>	20 (11.3%)
<b>Other</b>	8 (4.5%)
<b>OPTIMISTIC RN or NP</b>	3 (1.7%)
<b>Unspecified MD/NP/PA decision</b>	2 (1.1%)
<b>Who ordered the transfer?</b>	
<b>- Medical provider</b>	147 (83.1%)
○ <i>Resident's PCP</i>	77 (43.5%)
○ <i>Resident's primary care NP</i>	31 (7.5%)
○ <i>On-call physician</i>	14 (7.9%)
○ <i>On-call physician NP</i>	9 (5.1%)
○ <i>OPTIMISTIC NP</i>	3 (1.7%)
○ <i>Unspecified medical provider</i>	1 (7.3%)
<b>- Emergency/911</b>	25 (14.1%)
<b>- Other</b>	5 (2.8%)
<b>Was there a medical evaluation? (n=175)</b>	
<b>Yes</b>	115 (65.7%)

<b>Evaluation type prior to transfer<sup>f</sup></b>	
<b>Telephone evaluation only</b>	71 (40.1%)
<b>NP or PA visit</b>	27 (15.3%)
<b>MD visit</b>	14 (7.9%)
<b>OPTIMISTIC NP visit</b>	6 (3.4%)
<b>Other</b>	3 (1.7%)

<sup>d</sup> As assessed by OPTIMISTIC RN during root cause analysis

<sup>e</sup> See Table 3 for detailed information on symptom categories

<sup>f</sup> Responses included one or more of these options, so numbers add up to more than 100%.