



Impact of post-discharge calls on patient outcomes and healthcare utilization: A real-world hospital-based study

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Abstract

Background: Post-discharge calls (PDCs) are increasingly implemented to improve continuity of care, patient engagement, and early identification of post-discharge complications. However, real-world evidence demonstrating their effectiveness across multiple departments remains limited.

Objective: To evaluate the impact of post-discharge calls on patient outcomes, healthcare utilization, and mortality among patients who reported complaints within 30 days of hospital discharge in 2024 (From January to December).

Methods: This observational study analyzed data from patients across three units and fifteen departments of a tertiary care multispeciality hospital. Patients who raised complaints within 30 days of discharge were followed through PDC by care managers who are trained nurses with a standard questions reviewed by nursing heads and approved by the consultants. Outcomes assessed included hospital visits, emergency readmissions, complaint resolution mode, elective readmissions, and mortality during the follow-up period.

Results: Among 11,000 patients, a total of 215 (1.95%) patients reported post-discharge complaints within 1 month of discharge. Of these, 161 (74.9%) required hospital visits, while 22 (10.2%) were resolved telephonically. Common reasons for emergency readmission included breathing difficulty (28.4%), fever (21.9%), and pain (14.0%). PDCs facilitated planned elective readmissions, most commonly for CABG (n=170), and chemotherapy (n=149), blood transfusion (n=140). Overall mortality was observed in 48 patients predominantly among elderly patients and those with chronic illness.

Conclusion: Post-discharge calls play a significant role in early detection of complications, facilitating timely elective readmissions, and optimizing post-hospital

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care. PDCs represent an effective care coordination strategy, particularly for patients with chronic and complex conditions.

Keywords: Post-discharge calls; Patient engagement; Readmission; Care coordination; Telephonic intervention

1. Introduction

The increasing burden of chronic diseases, aging populations, and shorter hospital stays have intensified the need for effective post-discharge care. Fragmentation of care during the transition from hospital to home often results in medication errors, missed follow-ups, unidentified symptoms, and avoidable unplanned readmissions. These gaps in continuity of care highlight the importance of structured interventions to support patients after discharge.

Telephonic interventions, particularly post-discharge calls (PDCs), have emerged as a practical and cost-effective tool to bridge this gap by enabling early symptom identifications of symptoms, reinforcing medication adherence, providing patient education, and ensuring timely escalation to healthcare providers. Through improved care coordination and patient engagement, PDC contribute to better clinical outcomes and reduced unplanned readmission rates [\[1\]](#).

This study aims to assess the effectiveness of PDCs in identifying post-discharge complaints, reducing unplanned healthcare utilization, facilitating elective readmissions, and understanding mortality patterns among discharged patients.

2. Objectives

2.1. Primary Objective

- To evaluate the role of post-discharge calls in identifying and addressing post-discharge complaints.

2.2. Secondary Objectives

- To assess healthcare utilization following PDCs (hospital visits, referrals, telephonic resolution).
- To analyze common causes of emergency readmission.
- To evaluate the role of PDCs in facilitating planned elective readmissions.
- To assess mortality patterns and associated factors.

3. Methods

- **Study Design:** A hospital-based observational study
- **Study Setting:** The study was conducted across three units involving fifteen clinical departments of a tertiary care multispecialty hospital.
- **Study Population:** Patients who raised complaints within 30 days of discharge from the hospital followed through PDC by care managers who are trained nurses

with a standard question reviewed by nursing heads and approved by consultants.

3.1. Inclusion Criteria

- Adult patients (≥ 18 years).
- Patients reporting complaints within 30 days' post discharge.
- Patients contacted through post-discharge calls.

3.2. Exclusion Criteria

- Incomplete patient records.
- Patients lost to follow-up.

3.3. Intervention: Post-Discharge Calls

Structured post-discharge calls included:

- Systematic symptom assessment
- Medication reconciliation
- Guidance regarding follow-up care plans
- Identification of need for hospital visit or referral
- Telephonic resolutions where clinically appropriate

4. Outcome Measures

- Mode of complaint resolution
- Causes of emergency readmission
- Types of elective readmissions facilitated
- Mortality during the follow-ups period

5. Results

Patient Complaints and Healthcare Utilization

A total of 215 patients reported complaints within 30 days of discharge.

Mode of Resolve	Number of Patients	Percentage
Hospital visits	161	74.9%
Referral to hospital doctor	17	7.9%
Consultation with local doctor	15	7.0%
Telephonic resolution	22	10.2%

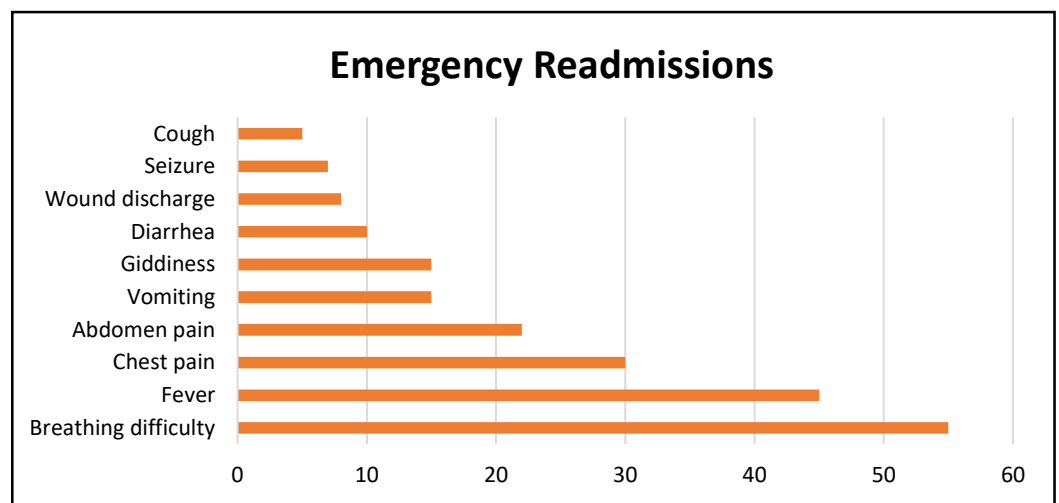
This indicates that approximately one in ten complaints which are likely due to anxiety were successfully resolved with the help of consultant’s advice through PDCs without requiring a hospital visit [\[2\]](#).

6. Causes of Emergency Readmission

The most common reasons for emergency readmission were:

Symptom	Patient Count	Percentage
Breathing difficulty	55	25.9%
Fever	45	21.2%
Chest pain	30	14.2%
Abdomen pain	22	10.4%
Vomiting	15	7.1%
Giddiness	15	7.1%
Diarrhea	10	4.6%
Wound discharge	8	3.8%
Seizure	7	3.3%
Cough	5	2.4%

Breathing difficulty and fever together accounted for over 50% of emergency readmissions remains. Prevalent cause for readmission reflects the significance of heart failure treatment and highlights the importance of early symptom surveillance through PDCs [\[3\]](#).



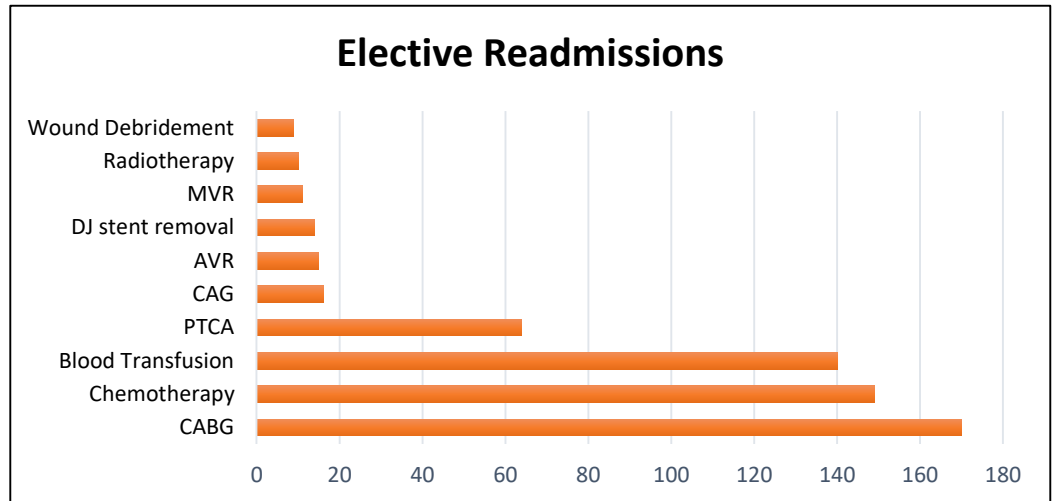
7. Elective Readmissions Facilitated by PDCs

PDCs enabled proactive identification and scheduling of elective readmissions.

Procedure	Patient Count
CABG	170
Chemotherapy	149
Blood Transfusion	140
PTCA	64
CAG	16
AVR	15

DJ stent removal	14
MVR	11
Radiotherapy	10
Wound Debridement	9

These findings suggest that PDCs contributed to planned, timely care rather than emergency presentations. Other procedures: Including Stent removal, ATG injection, and cranioplasty. Tubes removal like RT, CBD, DT and Decannulation. Therapies like Chemo, Radio and Physio have also been continuously monitored [14](#).



8. Mortality Analysis

A total of 48 deaths

Deaths at home	33 patients
Deaths in study hospital	11 patients
Deaths in outside hospitals	4 patients

9. Causes of Death

- Cardiac arrest – 13 patients
- Breathing difficulty – 9 patients
- Refractory to treatment – 4 patients
- Other causes included advanced disease-related complications

Most deaths occurred in patients with long-standing chronic illnesses, particularly: Coronary artery disease (CAD), Chronic liver disease (CLD), Cancer [15](#).

10. Discussion

This real-world study demonstrates the critical role of post-discharge calls in identifying patient complaints, guiding appropriate healthcare utilization, and facilitating elective readmissions. The high proportion of hospital visits underscores the vulnerability of patients during the post-discharge period, especially those with complex and chronic conditions.

Significantly, PDC follow-ups successfully resolved over 10% of complaints telephonically, reducing unnecessary hospital visits. Early identification of symptoms such as breathing difficulty and fever through PDCs may allow timely intervention and prevent further clinical deterioration [\[6\]](#).

The proactive scheduling of elective procedures highlights the role of PDCs in structured care coordination. Instead of emergency readmissions, patients were guided toward planned interventions, potentially improving outcomes and optimizing hospital resources.

Mortality analysis revealed that deaths predominantly occurred among elderly patients with chronic diseases, aligning with existing literature. While PDC follow-ups may not prevent all the adverse outcomes in high-risk populations, they provide a valuable mechanism for monitoring and timely escalation of care [\[7\]](#).

Limitations

- Observational study design limits causal inference.
- Lack of a formal control group without PDCs.

11. Conclusion

Post-discharge calls represent a valuable, low-cost intervention for improving continuity of care, identifying post-discharge complications, facilitating elective readmissions, and optimizing healthcare utilization. Integrating structured PDC follow-up programs into routine hospital discharge processes may significantly enhance patient outcomes, particularly among elderly and chronically ill populations.

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Conflicts of Interest

The authors declare that there are no conflicts of interest related to this study.

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