




BMJ Open Factors influencing communication issues during hospital discharge for older adults in 11 high-income countries: a secondary analysis of the 2021 International Health Policy Survey

Preshit Nemdas Ambade ¹, Zach Hoffman ², Tyler Vest,³ Kaamya Mehra,⁴ Munira Gunja,⁵ Breagh H MacKinnon,⁶ Neil J MacKinnon ¹

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For numbered affiliations see end of article.

Correspondence to

Dr Preshit Nemdas Ambade; preshitambede@gmail.com

ABSTRACT

Objectives To determine the prevalence of hospital discharge communication problems with older adults, compare them across countries and determine factors associated with those problems.

Design Secondary analysis of cross-sectional survey data.

Setting 2021 Commonwealth Fund International Health Policy (IHP) Survey of Older Adults conducted across 11 high-income countries, including Australia, Canada, France, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the UK and the USA.

Participants 4501 respondents aged 60 and older in the USA and 65 and older in all other included countries who were hospitalised at least once in the past 2 years before the survey and answered discharge communication-related questions.

Primary outcome measure Our primary outcome measure is poor discharge communication (PDC), a composite variable of three IHP questions related to written information, doctor follow-up and medicines discussed.

Results Overall PDC rate was 19.2% (864/4501), although rates varied by nation. PDC was highest in Norway (31.5%) and lowest in the USA (7.5%). Gender, education, income and the presence of at least one chronic disease were not statistically associated with PDC.

Conclusions Given the high rate of PDC observed, hospital discharge teams and leadership should carefully examine communication during the hospital discharge process to ensure minimisation of care gaps, particularly regarding medication, since this was the most reported problem.

INTRODUCTION

A smooth transition from hospital discharge to another point of care is essential to ensure positive patient outcomes and safety. During this transition, patients rely on effective communication and collaboration among an interdisciplinary team of healthcare providers to receive supplemental information about their care, particularly regarding medications

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ The data consisted of a nationally representative sample from 11 high-income countries, providing an opportunity to derive comparable estimates.
- ⇒ Logistic regression was used to determine the simultaneous impact of sociodemographic and health-related factors on reporting poor discharge communication (PDC).
- ⇒ The study's major limitation is the potential biases in the data due to the recall period, self-reporting and inadequate data on cultural factors that could capture variations in country-specific differences in communication.
- ⇒ A few variables were inconsistent across countries in the data, limiting what could be included in the analysis.
- ⇒ As the survey is cross-sectional, the sequence of activities' completion and its potential impact on overall PDC are unknown.

or new providers they will be seeing following discharge.¹ Healthcare providers and liaisons such as nurses, physicians, pharmacists, social workers, the patient's personal support, as well as the patient, must be fully involved and knowledgeable about the necessary future care after leaving the hospital. Without this collaborative effort, patients are at risk of experiencing adverse outcomes such as reoccurring health issues or readmission into the hospital.² A 2021 meta-analysis found that interventions to improve communication at discharge were related to reduced readmission as well as improved treatment adherence and satisfaction.³ Other studies have found that improved discharge communication is associated with reduced length of hospital stay,⁴ reduced rate of readmission and length of readmission stay⁵ and reduced mortality.⁶ While many findings remain modest or

mixed,⁷ discharge communication is an important factor to study, given its potential to improve health outcomes.

A commonly used discharge communication method is the discharge summary, a document that provides essential information to the patient and healthcare providers about the discharged patient.⁸ While this practice offers valuable information during the transition of care, there is a possibility of inadequate communication among the hospital-based healthcare team and health professionals outside the hospital.

Older adults are more likely to experience communication issues following discharge from a hospital, including readmission, problems with medication and difficulties with comprehension and compliance.^{9–11} Many older adults struggle to manage their health and understand their healthcare needs, resulting in adverse outcomes and readmission to the hospital.⁹ Effective communication strategies between the hospital team and health professionals outside of the hospital can help older adults experience a more seamless transition of care with fewer unexpected medical issues.¹¹ Another critical consideration for older adults at discharge is their active participation in their care and willingness to be responsible for their healthcare.¹² Effective communication and an understanding of older patients' personal experiences, goals, as well as their medical needs are key to ensuring a positive transition of care with reduced readmissions and medical complications.

To evaluate how older adults perceive their personal experiences during hospital discharge and whether they have faced communication issues, we conducted a secondary analysis of the 2021 Commonwealth Fund (CMWF) International Health Policy (IHP) Survey of Older Adults. Our objective was to determine the prevalence of hospital discharge communication problems in older adults in 11 high-income countries, compare them across these countries and examine the associated factors.

DATA AND METHODS

Data

We conducted a secondary analysis of the CMWF 2021 IHP Survey of Older Adults. The survey was conducted between March and June 2021 among adults aged 65 or older in Australia, Canada, France, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland and the UK and among adults aged 60 or older in the USA. The survey adopted a probability design to obtain a nationally representative household sample for each country. In Australia, Canada, France, Germany, the Netherlands, New Zealand, Norway, the UK and the USA, a random digit dial overlapping frame telephone design approach was used to estimate the sample and then complete the surveys by calling the selected landline and cell phone numbers. For Sweden and Switzerland, population registries were used to derive the household sample. If a household had more than one individual qualifying for the survey, then the individual present at home at the

time of the survey was selected for participation. A total of 18477 respondents responded on topics such as access to care, care coordination, experience with hospital care and emergency room (ER) use, chronic illness, material hardship and healthcare coverage. For our analysis, we focused on respondents who reported hospitalisation at least once in the past 2 years before the survey and answered all three questions related to discharge communication (more details are below). More information about the survey are available on the CMWF's website.¹³ Data is available on request from the CMWF.

Variables

We constructed our primary composite outcome variable, poor discharge communication (PDC), using answers to the following hospital discharge-related self-reported questions from the 2021 survey: (1) "When you left the hospital, did you receive written information on what to do when you returned home and what symptoms to watch for? (Written Information)" (2) "When you left the hospital, did the hospital make arrangements or make sure you had follow-up care with a doctor or other health care professional? (Doctor Follow-up)" and (3) "Before you left the hospital, did someone review with you all your prescribed medications, including those you were taking before your hospital stay? (Medicines Discussed)". These three questions were asked in the survey section that addressed experiences with hospital care and ER use. We counted the 'no' responses (range 0 to 3) and defined respondents as having PDC with at least two 'no' responses. Those who reported 'not sure/not applicable/declined to answer' to all three questions were excluded. The predictor variables included sociodemographic characteristics that are available across all countries. The age variable included categories 65–69 years, 70–74 years, and 75+ years. The gender variable included male, female, and other categories. Following Martin *et al*,¹⁴ a three-level education variable was created that included the categories 'primary and lower secondary,' 'upper secondary,' and 'postsecondary and tertiary'. Education was classified as 'unspecified' if it had not been reported. A binary household income variable (above or below the national median household income) was included in the analysis. We also included a dichotomous variable to capture if the respondent was suffering from at least one chronic disease at the time of the survey. The country indicator was included to control for national-level unobserved factors influencing the results.

Analytical approach

We first calculated descriptive statistics, followed by multi-variable logistic regression, to compare each country with respect to the USA (i.e., the country with the lowest PDC rates). Three separate multivariable logistic regressions for each PDC question were also conducted. ORs were calculated for the three questions related to discharge communication problems, as described above, in addition to the ORs for the composite variable, PDC. All

the analyses were performed using the dataset's survey weights to derive population-level estimates. All the analyses were performed using the R statistical package V.4.2.3 using the packages lme4 and ggplot2 and their dependencies.^{15–17}

Patient and public involvement

Patients or the public were not involved in the design, or conduct, or reporting, or dissemination plans of our research.

RESULTS

Our analytical sample included 4585 respondents who reported hospitalisation within 2 years before completing the CMWF IHP 2021 Survey of Older Adults. Of these, 38 respondents were excluded due to missing data on the survey weight variable, leading to a raw sample of 4547 and a weighted sample of 4518 respondents. For PDC-specific descriptive statistics, 12 additional respondents with 'not sure/not applicable/declined to answer' values on the composite outcome variable PDC were excluded (raw sample size=4535; weighted sample size=4501). Further, in multivariable logistic regression, the US respondents of 55–64 years (n=90) were excluded to maintain the cross-country comparability. The model-specific sample size varied as we performed analyses with complete cases and ignored 'not sure/not applicable/declined to answer' responses on any included variables to avoid complete separation.

Table 1 shows the characteristics of the respondents in our analytical sample (please review online supplemental table 1 for the full version of the table for PDC and online supplemental table 2 for the countrywise distribution of individual problems). The 'all hospitalised' column shows data for a weighted sample of 4518 respondents. The PDC column shows a subsection of a weighted sample of 4501 who reported the PDC (ie, 864 respondents). Respondents with poor discharge problems were relatively older, more likely to be women, had higher levels of education and income and had a chronic disease. Table 1 also compares the respondents who reported hospitalisation within 2 years before completing the survey to those who met our criterion for the composite variable, PDC, in all countries.

Discharge communication problems and PDC

Overall, 46.0% of those hospitalised in the last 2 years reported at least one discharge communication problem. Germany (66.4%) had the highest percentage of respondents reporting at least one discharge communication problem, followed by Norway (60.5%), France (55.2%) and Sweden (54.8%). Conversely, the USA (27.7%), New Zealand (34.5%) and Canada (39.6%) had the lowest percentages of respondents reporting at least one problem among the 11 nations (please review the online supplemental table 2). Of the three discharge communication problems identified in this analysis, the most

Table 1 Respondents by characteristics and with poor discharge communication (PDC) (weighted data)

Characteristic	All hospitalised N=4501 N (%)*	PDC N=864 N (%)*†
Country		
Australia	163 (3.6)	19 (2.2)
Canada	853 (19.0)	153 (17.7)
France	474 (10.5)	122 (14.1)
Germany	274 (6.1)	81 (9.4)
Netherlands	135 (3.0)	23 (2.7)
New Zealand	127 (2.8)	16 (1.9)
Norway	149 (3.3)	47 (5.4)
Sweden	710 (15.8)	184 (21.3)
Switzerland	710 (15.8)	129 (14.9)
UK	376 (8.4)	50 (5.8)
USA	530 (11.8)	40 (4.6)
Age group (years)		
55–64	143 (3.2)	8 (0.9)
65–69	1034 (23.0)	173 (20.0)
70–74	1026 (22.8)	186 (21.5)
75+	2298 (51.0)	497 (57.5)
Sex		
Female	2323 (51.6)	462 (53.5)
Male	2176 (48.3)	401 (46.4)
Something else/other/ refused	2 (0.0)	1 (0.1)
Education		
Postsecondary and tertiary	1434 (31.9)	241 (27.9)
Primary and lower secondary	1047 (23.3)	214 (24.8)
Upper secondary	1840 (40.9)	375 (43.4)
Unspecified/missing	180 (4.0)	34 (3.9)
Income is 50%–60% of median household income at national level		
No	1545 (34.3)	314 (36.3)
Yes	2956 (65.7)	550 (63.7)
Has a chronic disease		
No	487 (10.8)	89 (10.3)
Yes	4014 (89.2)	775 (89.7)

*Each column represents weighted sample for each level of the variables, along with column wise percentage in parentheses.

†PDC was defined as having at least two problems out of the following three problems: lack of written information, lack of physician follow-up, medicines not discussed. A weighted sample of 4501 respondents are considered for the calculations.

reported was *medicines not being discussed at the time of discharge*, representing 27.4% of all individuals.

While nearly half of respondents reported a communication problem at discharge, 19.2% of those hospitalised in the last 2 years met our criterion for the composite variable, PDC. As can be seen in figure 1, Norway (31.5%) had the highest percentage of respondents reporting

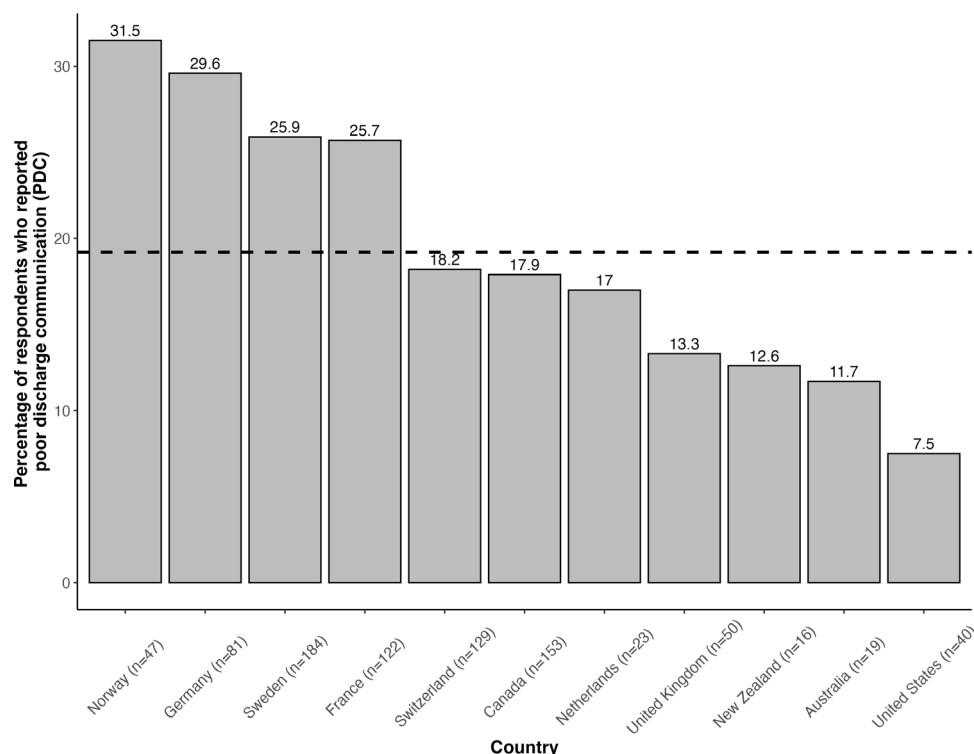


Figure 1 Rate of poor discharge communication (PDC) in 11 nations, International Health Policy 2021 data. Note: The horizontal line represents the overall rate of PDC across all countries (19.2%).

PDC, followed by Germany (29.6%), Sweden (25.9%) and France (25.7%). Conversely, the USA (7.5%), Australia (11.7%) and New Zealand (12.6%) had the lowest percentages of respondents reporting PDC among the 11 nations.

Factors associated with discharge communication problems and PDC

Results from the multivariable logistic regression models for each of the three individual discharge communication problems and the composite PDC variable are presented in table 2. For the most part, for each of the three discharge communication problems, the problems were more likely to be reported by non-US older adults. Respondents from all ten countries outside the USA were more likely to report the discharge communication problem related to the lack of provision of written information at discharge (OR range 2.8 to 11.0) vis-à-vis the US older adults. Similarly, adults ≥ 75 years were more likely to report a lack of written information (OR: 1.4, 95% CI: 1.2 to 1.7). Respondents with at least one chronic disease were less likely to report a lack of written information than those who did not have one (OR: 0.8, 95% CI: 0.6 to 1.0). Like the gap in written information received, the non-US respondents were more likely to report a gap in postdischarge follow-up arrangements than the US respondents. However, the results were only significant for Canada, France, Germany, the Netherlands, Norway and Sweden (OR range 1.5 to 2.3). No other covariates showed a statistically significant association with lack of physician follow-up. Respondents from Canada, France,

Germany, Norway, Sweden, Switzerland and the UK were more likely to report a gap in prescription reviews than their US counterparts (OR range 1.5 to 3.2). Male respondents had lower odds of reporting this gap than the female respondents (OR: 0.9, 95% CI: 0.7 to 1.0).

PDC was more likely to be reported by those 75 years of age or greater (OR: 1.2, 95% CI: 1.0 to 1.5) and, as compared with the USA, more likely to be reported by respondents from Canada (OR: 2.4, 95% CI: 1.7 to 3.7), France (OR: 3.9, 95% CI: 2.6 to 6.1), Germany (OR: 5.0, 95% CI: 3.2 to 8.0), the Netherlands (OR: 2.1, 95% CI: 1.1 to 3.8), Norway (OR: 5.1, 95% CI: 3.1 to 8.6), Sweden (OR: 3.8, 95% CI: 2.6 to 5.8), Switzerland (OR: 2.6, 95% CI: 1.7 to 3.9) and the UK (OR: 1.6, 95% CI: 1.0 to 2.6).

DISCUSSION

Across the 11 high-income nations included in the study, nearly half of all respondents reported at least one discharge communication problem, and nearly one-fifth experienced PDC. US respondents were the least likely to report experiencing at least one problem or PDC, and respondents aged 75 and older were likelier than younger respondents to experience PDC.

It is, perhaps, surprising that respondents in the USA were the least likely to report PDC; the USA typically rates very poorly in healthcare as compared with other high-income countries.¹⁸ One possible explanation for this outcome among older adults is that, in the USA, Medicare mandates that patients receive hospital

Table 2 ORs for discharge communication problems and poor discharge communication (PDC) in 11 nations

Characteristic	Discharge communication problems OR (95% CI)			PDC OR (95% CI)
	Lack of written information	Lack of physician follow-up	Medicines not discussed	
Country				
USA	–	–	–	–
Australia	4.6 (2.6 to 8.2)	0.9 (0.5 to 1.5)	1.2 (0.8 to 2.0)	1.5 (0.8 to 2.7)
Canada	3.7 (2.4 to 6.0)	1.5 (1.1 to 2.1)	1.5 (1.1 to 2.0)	2.4 (1.7 to 3.7)
France	7.1 (4.5 to 12)	2.6 (1.8 to 3.7)	1.9 (1.4 to 2.8)	3.9 (2.6 to 6.2)
Germany	8.2 (5.0 to 14)	2.9 (2.0 to 4.3)	3.2 (2.2 to 4.7)	5.0 (3.2 to 8.0)
Netherlands	6.5 (3.7 to 12)	1.9 (1.2 to 3.1)	0.7 (0.4 to 1.3)	2.1 (1.1 to 3.8)
New Zealand	3.1 (1.6 to 5.9)	1.1 (0.6 to 1.9)	1.2 (0.7 to 2.0)	1.6 (0.8 to 3.1)
Norway	11.0 (6.4 to 19)	2.3 (1.5 to 3.7)	2.7 (1.7 to 4.2)	5.1 (3.1 to 8.6)
Sweden	7.9 (5.1 to 13)	1.7 (1.2 to 2.4)	2.3 (1.7 to 3.2)	3.8 (2.6 to 5.8)
Switzerland	6.7 (4.3 to 11)	0.8 (0.6 to 1.2)	1.7 (1.3 to 2.4)	2.6 (1.7 to 3.9)
UK	2.8 (1.7 to 4.8)	0.8 (0.5 to 1.2)	2.0 (1.4 to 2.9)	1.6 (1.0 to 2.6)
Age group (years)				
65–69	–	–	–	–
70–74	1.0 (0.8 to 1.3)	0.9 (0.7 to 1.2)	1.1 (0.9 to 1.3)	1.0 (0.8 to 1.3)
75+	1.4 (1.2 to 1.7)	1.1 (0.9 to 1.3)	1.2 (1.0 to 1.5)	1.2 (1.0 to 1.5)
Sex				
Female	–	–	–	–
Male	1.0 (0.8 to 1.1)	0.9 (0.8 to 1.1)	0.9 (0.7 to 1.0)	0.9 (0.8 to 1.1)
Education				
Post-secondary and tertiary	–	–	–	–
Primary and lower secondary	1.0 (0.8 to 1.2)	0.9 (0.8 to 1.2)	1.1 (0.9 to 1.3)	1.0 (0.8 to 1.2)
Upper secondary	1.0 (0.8 to 1.2)	0.9 (0.8 to 1.1)	1.0 (0.9 to 1.2)	1.1 (0.9 to 1.3)
Income is 50%–60% of median household income at national level				
No	–	–	–	–
Yes	0.9 (0.8 to 1.1)	1.0 (0.8 to 1.2)	1.0 (0.9 to 1.2)	1.0 (0.8 to 1.2)
Having chronic disease				
No	–	–	–	–
Yes	0.8 (0.6 to 1.0)	1.1 (0.8 to 1.4)	1.2 (1.0 to 1.5)	1.2 (0.9 to 1.5)

*PDC was defined as having at least two problems out of the following three problems for which results are presented in separate columns: did not receive written information on what to do when returned home and what symptoms to watch for; hospital did not make any arrangements to have a follow-up with a doctor or other healthcare professional; no one reviewed prescribed medications.

discharge planning and communication, including where the patient will go, how needs will be met, postdischarge planning, information on medications, arranging of referrals, what to do if problems occur and scheduling a follow-up visit.¹⁹ The Joint Commission, a US-based hospital accreditation body, details standards for access to and continuity of care, including requirements to educate and instruct the patient and family about ongoing care and complete a discharge summary for all patients, including the summary in medical records.²⁰ Close to 4000 hospitals in the USA are accredited by the Joint Commission,²¹ which may also promote better

discharge communication in the USA. Such mandates and accreditation requirements in other countries, at least for older and more vulnerable populations, may help reduce PDC and related problems.

It is possible that the correlation between PDC and older adults is related to the overall health of this population. Older adults often have poorer health.²² Both ageing²³ and chronic disease²⁴ have been linked with polypharmacy. Given this greater need for care, it is possible that higher rates of PDC are observed simply because there are more opportunities for mistakes to be made (eg, not discussing all medications with the patient).

We report that the US respondents being less likely to report PDC involving postdischarge follow-up compared to other countries. However, it is possible that within the USA, for the most part, for each of the three discharge communication problems, the problems were more likely to be reported by older adults. This is supported by previous research indicating poor follow-up rates in the USA among older adults. A study of Medicare recipients found that fewer than half received follow-up care within a week of discharge, and that rehospitalisation rates were significantly higher among those without follow-up.²⁵ Discharge planning around follow-up procedures should be an important target for policymakers to help ensure the well-being of patients and reduce readmission.

Higher postdischarge prescription communication gaps are reported for certain countries than the USA despite having programmes in place. For example, Arzneimitteltherapiesicherheit in Apotheken (ATHINA) is a project in Germany in which community pharmacists are trained to document and review their patient's medication. The pharmacist will obtain a list of a patient's medications, send it to other pharmacists for review and then conduct a follow-up discussion with the patient.²⁶ Research has found the project to be effective at reducing the number of drug-related problems through pharmacy-conducted medication reviews.²⁶ Countries such as Australia²⁷ and Sweden²⁸ also have organised and structured methods of reviewing medications that have been found effective. The programmes in these countries need to be revamped to meet the ageing population's needs. Particularly, these countries may benefit from structured programmes of medication review, particularly if integrated into accessible medical records.

Assuming PDC was common among older adults across the 11 nations, as our results suggest, providers and policymakers should focus on improving the communication and collaboration between patients and their medical teams at the time of hospital discharge. Previous work has found that using interventions to improve discharge communication was associated with reduced readmission rates, as well as better adherence to treatment and higher patient satisfaction.³ Since we found the most commonly reported problem involved medications not being discussed with the patient at the time of discharge, this should be a focal point of such interventions. A study in Switzerland found that over 3 years, nearly a quarter of patients experienced one or more drug-related problems with their prescriptions, most of which were problems related to hospital stay or discharge.²⁹ Findings from the study indicated that better communication between pharmacists, prescribers and patients could help improve recognition of drug problems. The authors noted, however, that pharmacists in many European countries often do not have access to needed patient information. They recommended that patient discharge information be made available to the pharmacists to better monitor patient prescription and dosing of medications. Policymakers should work to ensure that all relevant patient

information is made available to each member of a patient's care team.

Another possible intervention to improve communication at discharge is by providing patients with information sheets. One study examined the effectiveness of providing patients with such an information sheet about the care team and discharge information. Patients and their families were more likely to be able to identify their clinicians and have correct information regarding discharge date, and clinicians reported that the sheet facilitated communication regarding discharge.³⁰ Widespread use of such templates may help reduce instances of PDC. Previous work has shown that following a template for discharge planning can lead to higher quality discharge planning.³¹ However, one study found that the use of such discharge templates or letters was as low as 23%, and after improving ease of access and use, the average utilisation rate was only 57%.³² Thus, the development of templates, as well as mandating their use and providing resources to facilitate easy implementation, could be important targets for policymakers.

It is not only important to ensure inter-team communication and planning, but such communication and planning needs to be of a high quality and performed by trained healthcare professionals. Higher quality discharge planning and communication can lead to improved health outcomes. A study in Australia found that better discharge planning was related to a reduction in unplanned hospital readmission among older adults with mild cognitive impairment.³³ Another study involving type II diabetes mellitus patients found that better communication from the patient's viewpoint was associated with more positive outcomes and better self-care.³⁴ In a study conducted in Taiwan, proper discharge planning was shown to reduce the risk of death within 1 year of discharge from the hospital among high-risk patients.³⁵ Improving the quality of discharge communication can help reduce instances of unplanned readmission, problems with medication management and patient mortality, as well as improve patient well-being and self-care. As such, hospital administration should focus on providing resources and training to staff so that they can provide the highest quality discharge communication and planning.

PDC can lead to multiple serious problems for patient health and the healthcare system. Policies that standardise and require discharge practices and improve access to medical information for providers may help reduce PDC. Our study shows which countries are experiencing PDC, as well as the ways in which PDC is manifesting in these countries. This information is highly valuable to policymakers, clinicians and hospital administration, allowing them to develop effective programmes targeting areas of greatest concern.

Strengths and limitations

The strength of our study is it provides international estimates from high-income countries. These countries are

ageing and providing quality care for their greying populations is a relevant topic in health policy. Our analysis has several limitations. Our outcomes are derived from self-reported information, and hence, our estimates might be subject to bias. Readers should be aware of recall bias since participants were asked about their hospitalisation experiences in the past 2 years. Additionally, while not a factor that could be directly explored within the dataset, patient culture is likely to play a role in discharge communication within and across countries. A patient's culture can include features such as nationality, gender, language, socioeconomic status and others.³⁶ Prior work has highlighted the importance of cultural understanding by healthcare providers at the time of discharge.^{37 38} Poor cultural competency by providers can result in issues such as hospital readmission³⁹ or treatment non-adherence.⁴⁰ A patient's culture can impact many aspects of treatment, from difficulties communicating health information due to language barriers to patients not wanting to receive information regarding a poor prognosis.³⁹ While there appears to be a dearth of studies looking at the impact of cultural competency on patient discharge outside of the USA, and some studies show only a limited impact on outcomes,⁴¹ it remains a crucial consideration for healthcare providers.^{40 42} Another consideration is the possibility that culture may impact the perception of discharge communication. Participants may be perceiving, and thus reporting differences based on perception of what may otherwise be similar discharge communication processes across countries. However, due to inadequate data, we could not confirm this assertion. Our results should be interpreted with this bias in mind, and more nuanced studies are recommended to research reasons behind differences in the PDC.

Moreover, the CMWF 2021 IHP Survey was conducted in countries with higher white populations, and race information was collected only in the UK and the USA. Hence, we could not estimate the effect of race or ethnicity on PDC and its components across all countries. The survey collected data from the 60 years and older population, excluding the younger population. Further, we focused only on respondents 65 years and older to maintain consistency across the countries. It is possible that younger populations from these countries might have different distributions of PDC and its components. The survey's data was collected during the COVID-19 pandemic, which largely affected older adults in the countries under consideration.^{43–46} These recent encounters might have influenced a few participants' responses. Responses to the pandemic varied across countries, with some, such as Australia, taking rapid and decisive actions that were supported mainly by the public and others, such as the USA, having an inconsistent response which lowered the population's trust in health officials.⁴⁷ Additionally, in early 2021, most countries reported health service disruption, reducing care access and quality.⁴⁸ Limited healthcare staff contributed substantially to these disruptions. These differences and challenges may have

impacted findings both between countries and between COVID-19 and non-COVID-19 hospitalisations. However, due to the nature of the survey questions, we could not differentiate PDC experiences of COVID-19 and non-COVID-19 hospitalisations. At last, our analysis considered the issues in discharge communication. However, due to survey limitations, we do not know if these communication activities were sequentially completed and if that affected overall PDC.

CONCLUSION

In our analysis of hospital discharge communication problems in 11 high-income nations, close to half of all respondents reported at least one discharge communication problem, and nearly one-fifth experienced PDC, although there is a wide variation between nations. Our results suggest that hospital discharge teams and leadership should carefully examine all communication during the hospital discharge process to ensure that care gaps are minimised.

Author affiliations

¹College of Medicine, Central Michigan University, Mount Pleasant, Michigan, USA

²School of Public Health, Augusta University, Augusta, Georgia, USA

³Department of Pharmacy, The University of Vermont Health Network Inc, Colchester, Vermont, USA

⁴College of Science and Mathematics, Augusta University, Augusta, Georgia, USA

⁵Commonwealth Fund, New York, New York, USA

⁶College of Pharmacy, University of Georgia, Athens, Georgia, USA

X Preshit Nemdas Ambade @PreshitAmbade

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Contributors NJM served as PI for the study. NJM and PNA developed and designed the study. MG provided access to the IHP dataset. PNA conducted data analysis and interpretation. NJM, PNA, ZH and KM wrote and revised the manuscript. MG, TV and BHM provided review of the original manuscript and assisted in revisions. NJM acted as guarantor.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval Augusta University's institutional review board exempted this study from full review since it was based on secondary deidentified data (application no. 2071045-1).

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ORCID iDs

Preshit Nemdas Ambade <http://orcid.org/0000-0002-6919-7206>

Zach Hoffman <http://orcid.org/0000-0002-4895-5055>

Neil J MacKinnon <http://orcid.org/0000-0001-8111-6651>

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