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Research Article

Multicentric Study to Validate Patient Reported Experience Measures Tool for Discharge Process in Indian Hospitals

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Abstract

Background: One of the tools to measure the patient experience is the Patient-Reported Experience Measures (PREMs). The PREM tools serve as an instrument to report on the extent to which a pre-defined process has occurred during a period of care.

Purpose: This multicentric study aimed to develop and validate a Patient-Reported Experience Measures (PREM) tool for assessing the discharge process in Indian hospitals.

Methods: Conducted across 15 hospitals from five geographical zones, the study employed a mixed-method approach, including expert consultations, pilot testing (n=225), and a large-scale field study (n=546). The tool consisted of 18 questions across six key domains: communication, clinical care, administrative process, financial awareness, patient rights, and safety.

Results: Content validity was confirmed with high I-CVI (0.976) and CVR (0.952) scores. Internal consistency was excellent (KR-20 = 0.9455). The validated tool captured critical insights such as communication gaps in insurance updates and post-discharge planning, while also revealing areas of strength like patient education and discharge summary delivery.

Conclusions: This context-specific, reliable, and valid PREM tool serves as an effective mechanism for quality improvement initiatives and enables hospitals to enhance discharge planning and patient satisfaction.

Keywords: PREMs; patient experience; patient satisfaction; healthcare quality; discharge process

Introduction

For Hospitals to ensure that the best of care is rendered to the patients, it is imperative to understand how their experiences have been. Enhancing the healthcare quality involves understanding the patient experiences and further integrating these insights into practice as appropriate. The crucial role of the patients in ensuring quality and safety of care was also reflected when the World Health Organization insisted on “Engaging patients for patient safety” as part of the Patient Safety Day, 2023 theme.1 This highlights the need for healthcare organizations and the Healthcare Workers to hear their patients and their families, with regards to the care rendered, and identify if the set expectations or desired outcomes are met with.2

One of the tools to measure the patient experience is the Patient-Reported Experience Measures (PREMs). PREMs are commonly in the form of questionnaires which gather information on a patient's experience while they are receiving care or availing services at the hospital. The

PREM tools serve as an instrument to report on the extent to which a pre-defined process has occurred during a period of care.3 PREMs Tool report the impact of the process of the care that is in place. While the routine satisfaction surveys are a practice in many hospitals, it includes the subjective view, while the PREMs tool with set questions would help in arriving at objective patient experiences. Patient-reported experience measurements have become recognized as reliable indicators of patient-centered care quality, and they are utilized for benchmarking and service improvement. (4-6)

The discharge of a patient from the hospital describes the point at which inpatient hospital care ends, with ongoing care transferred to other primary, community or domestic environments.7 The discharge process from hospitals represents a critical juncture in patient care, often determining the success of post-hospitalization recovery and overall patient satisfaction. This phase of transitional care involves co-ordination between multiple departments and members; hence the complexity is high. Owing to this involvement of multiple departments and people, the discharge process may pose a concern to patients including confusions about their treatment plans, medication instructions, and follow-up care. The efficiency, clarity, and thoroughness of this process can significantly influence patient outcomes, including delayed discharges, readmission rates, adherence to prescribed treatments, and overall health improvement. According to studies, inefficient discharge communication and coordination are connected with adverse outcomes such as medication errors, increased readmissions, and patient dissatisfaction. (8-10)

Hence, it is important that we understand, if the discharge process established by the healthcare organization ensures the expectations of the patients are met with. Using a PREM tool for measuring the discharge experience of a patient, helps us gather essential information including the following: Engagement of patients/families in the discharge planning, discharge process including the timelines, billing process briefing, post discharge care/medicines, when to obtain urgent care etc. By analysing the PREMs responses, the healthcare organizations can identify areas for improvement and also provide important feedback to key stakeholders on how their patients perceive the care rendered. Despite the growing importance of PREMs, there remains a lack of validated, culturally appropriate tools to assess discharge processes specifically in Indian hospital settings, highlighting a critical gap this study aims to address. (11)

This multicentric study attempted to develop and validate a PREM tool for discharge process in Indian Hospitals, to use it as a mechanism for improvement initiatives. The study was aimed at developing a validated PREM tool on discharge process, gathering information on patient's views of their experience of the discharge process and to help understand the areas for improvement pertaining to care delivery.

Methods

Overview of Study:

It was a multicentric study to validate the Patient Reported Experience Measures tool for discharge process in Indian Hospitals aiming to develop a validated PREM tool, gather information on patient's views of their experience of the discharge process and to help understand the areas for improvement pertaining to care delivery (12)(13).

The study was conducted between the period of October, 2023 to April, 2024. The study was approved by the Institutional Ethics Committee of a tertiary multispecialty hospital (Registration No. EC/NEW/INST/2020/527). The approval was given after submission of the relevant documents, including the details of the participating hospitals to the committee. The study details were presented before the ethics committee on the 29th of January, 2024 and the approval was given for the same on 6th February, 2024 Reference No.APH-C-S-002/01-24.

Study Population:

This study was conducted in 15 hospitals across India. Purposive sampling method was used for selection of hospitals for the study. Three Hospitals from each of these zones: North, South, East, West and Central India were chosen for the study. The hospitals included Small (< 100 beds), medium (100-300 beds) and large hospitals (> 300 beds) across India. Participants were aged 18 years and above, those who were admitted and got discharged from the hospital post elective procedures and medical management. The patients who are leaving against medical advice, discharged from Intensive care units, emergency admissions or those who are being transferred out to another hospital were excluded from the study14.

Study Procedure:

Phase 1: **Core Group Formation and Study Design**:

The first step of the study involved the formation of the Core Group for the Discharge PREM study. The team of ten included Medical Administrators, Quality Professionals, Administrative Heads from different hospitals across India and were involved in the development of the study proposal and other related aspects. This team had discussed in the last week of October, 2023 on the various literature reviews and study proposal was submitted. The team was engaged in two focus group discussions, one on the 5th of November, 2023 to draft the Standard Operating Procedure related to Discharge Process. Eleven steps related to the discharge process were listed as part of the study domain.

Questionnaire Development:

On the 17th November, 2023 the second group discussion was held virtually, and the teams had drafted a set of questionnaires using the 11 steps identified as part of the first level discussion. The questionnaire developed in English had 19 questions listed, which covered the aspects related to discharge planning, involvement of patients/families in the discharge process, patient education on obtaining urgent care, discharge care/medicine to be taken and post discharge follow-up. The questionnaire was developed, to be answered by patients or their attendants based on their experience.

This questionnaire was then sent to 30 experts (including 5 Clinicians, 5 Nurses, 5 Administrators and 5 Patients, 5 patient attendants and 5 Discharge co-ordinators) for their feedback related to understandability and relevance of each question. Each item of the questionnaire was to be responded with a 'yes' or a 'no' and comments / suggestions were also invited to improve the tool. Following this, another focus group discussion was held with the core team members to update the questionnaire based on the expert opinion. The questionnaire post inputs from the 30 experts had 18 items listed.

Phase 2: **Pilot Study**:

A pilot study was conducted in 15 selected hospitals, involving 150 samples. This was the upper limit for sample size based on general recommendations15. The questionnaire was found to require no additional modifications.

Phase 3: **Field Study**:

A total of 15 hospitals were chosen for the study in order to ensure a national level, with three hospitals from each of India's five geographical regions (east, west, north, south, and central). To perform the survey, the questionnaire was distributed to the participating hospitals. As a requirement, each institution was asked to recruit a minimum of fifty patients (samples). Participants gave their informed consent. The hospitals' small workgroups kept an eye on the data gathering.

Statistical Analysis:

Face validity was assessed through expert opinion as described in the methodology. To establish the relevance of each item, content validity was quantitatively examined using three indices: the item-level content validity

index (I- CVI), the scale-level content validity index (S-CVI), and the content validity ratio. The I-CVI shows the proportion of experts who rated an item as relevant, with values near 1 suggesting higher agreement. The S-CVI was determined using two methods: S-CVI/UA, which represents the proportion of items universally agreed upon as relevant by all experts, and S-CVI/Ave, which is the average of I-CVI values across all items. The CVR was calculated using the number of experts who considered an item essential, adjusted for the total number of experts, to provide a measure of consensus on the importance of each item (16-18).

In this study, 37 experts evaluated the findings. Most items received perfect or near-perfect agreement, with I-CVI values nearing one and CVR values exceeding the minimal acceptable level, showing substantial expert agreement on item relevance and essentiality. The total scale had great content validity, with a high average I-CVI (S-CVI/Ave = 0.976), but the universal agreement (S-CVI/UA) was slightly lower than the optimal threshold of 0.765. Items with lower I-CVI and CVR values were indicated as requiring further review or amendment to improve clarity and relevance. This thorough and methodical approach to content validity assessment ensured that the questionnaire items were relevant and indicative of the discharge process safety construct18. (Table 1)

Item	Expert Agreement	I-CVI [a]	CVR [c]	UA [d]
Q1	37	1	1	1
Q2	37	1	1	1
Q3	37	1	1	1
Q4	37	1	1	1
Q5	37	1	1	1
Q6	37	1	1	1
Q7	36	0.97	0.95	0
Q8	37	1	1	1
Q9	37	1	1	1
Q10	37	1	1	1
Q11	37	1	1	1
Q12	37	1	1	1
Q13	27	0.73	0.46	0
Q14	37	1	1	1
Q15	36	0.97	0.95	0
Q16	34	0.92	0.84	0
Q17	37	1	1	1
S-CVI/Avg[b] (mean I-CVI value) = 0.976				
S-CVI/UA = 0.765				

Table 1: The relevance ratings on the item Scale by 37 experts – Discharge Process Safety study

a) Item-level content validity index

b) Scale-level content validity index, average I-CVI value calculation method

c) Content Validity Ratio Universal agreement

Results

Phase 1: The final PREM tool for Discharge process was developed with 18 questions (Table 2) based on the Standard Operating Procedure (SOP) that covered six domains of patient communication, financial awareness, patient rights, patient safety, clinical careand administrative process. The mean Content Validity Index (CVI) value was 0.97, indicating higher content validity, and the Content Validity Ratio (CVR) was 0.952, indicating that the questions were considered essential by the expert group (16-18) (Table 1).

Q. No.	Questions
1.	Did the doctor explain about the tentative date of discharge prior / at the time of admission?
2.	Were you updated on your health condition by a healthcare professional prior to discharge?
3.	Were you and / or your family involved in the discharge decision?
4.	Did the staff explain about the time required for completing the discharge formalities (including process for discharge)?
5.	Were the unused medicines returned before your discharge?
6.	In case of insurance processing, was the approval or query status updated to you periodically?
7.	Did the staff explain the details of the amount payable which are not covered as part of the insurance?
8.	Were you explained on the final bill details on the day of discharge?
9.	Were post discharge medicines arranged?
10.	Were the discharge summary and investigation reports handed over to you?

11.	Were you informed on when the pending reports could be collected post discharge?
12.	Were you explained on the post discharge care to be taken: a) medicines; b) exercises; c) diet; d) dressing; e) Special Instructions (If any)
13.	Were the above post discharge care aspects explained in a language that you understand?
14.	Did you receive information on the next follow-up date?
15.	Has the booking been done for your next follow- up?
16.	Were you informed on when and how to obtain urgent care?
17.	Was the safe transport to home after discharge offered to you?
18.	Were you satisfied with the overall discharge process?

Table 2: Tool Questions

Phase 2: The sample size for the pilot and the main studies were 225 and 546 (771), respectively. The survey was completed by patients in 121 cases (53.8%) and bystanders in 104 cases (46.2%) for pilot study. Kuder-Richardson Formula 20 (KR-20) internal consistency value for the PREM tool was 0.94, which was interpreted as excellent and indicated high reliability and a stronger relationship between test items19 (Table 3). The demographic details of the sample in the study are summarized in Table 4. The survey was completed by patients in 288 cases (52.7%) and bystanders in 256 cases (46.9%), with two respondents (0.4%) failing to indicate their category. The average age of participants was 46.8 years (Supplemental Table-1). The reliability of the evaluation tools used in the pilot study was excellent, with a KR-20 value of 0.9455 and the same tools used in the main study, which included 546 larger sample sizes in the same criteria of inclusion (20)(21).

	Internal consistency	Interpretation
Total no of questions 18	0.9455	Excellent

Table 3: Kuder-Richardson coefficient of reliability (KR-20)

Variables	**n (%)**
Age (years); Mean (SD)	47.1 (19.73)
SEX	
Missing	1 (0.4)
Male	100 (44.4)
Female	124 (55.1)

Table 4: Demographic characteristics of the sample [n=225] for Pilot Study

Q. No.	**Questions**	**n (%)**
1	**Did the doctor explain about the tentative date of discharge prior / at the time of admission?**	
	NA	1 (0.4)
	No	19 (8.4)
	Yes	205 (91.1)
2	**Were you updated on your health condition by a healthcare professional prior to discharge?**	
	No	8 (3.6)
	Yes	217 (96.4)
3	**Were you and / or your family involved in the discharge decision?**	
	No	23 (10.2)
	Yes	202 (89.8)
4	**Did the staff explain about the time required for completing the discharge formalities (including process for discharge)?**	
	No	28 (12.4)
	Yes	197 (87.6)
5	**Were the unused medicines returned before your discharge?**	
	NA	9 (4.0)
	No	28 (12.4)
	Yes	188 (83.6)
6	**In case of insurance processing, was the approval or query status updated to you periodically?**	

	NA	103 (45.8)
	No	23 (10.2)
	Yes	99 (44.0)
7	**Did the staff explain the details of the amount payable which are not covered as part of the insurance?**	
	NA	18 (8.0)
	No	106 (47.1)
	Yes	99 (44.0)
8	**Were you explained on the final bill details on the day of discharge?**	
	NA	1 (0.4)
	No	27 (12.0)
	Yes	197 (87.6)
9	**Were post discharge medicines arranged?**	
	No	43 (19.1)
	Yes	182 (80.9)
10	**Were the discharge summary and investigation reports handed over to you?**	
	No	13 (5.8)
	Yes	212 (94.2)
11	**Were you informed on when the pending reports could be collected post discharge?**	
	NA	113 (50.2)
	No	11 (4.9)
	Yes	101 (44.9)
12	**Were you explained on the post discharge care to be taken: a) medicines; b) exercises; c) diet; d) dressing; e) Special Instructions (If any)**	
	NA	5 (2.2)
	No	6 (2.7)
	Yes	214 (95.1)
13	**Were the above post discharge care aspects explained in a language that you understand?**	
	No	5 (2.2)
	Yes	220 (97.8)
14	**Did you receive information on the next follow-up date?**	
	No	9 (4.0)
	Yes	216 (96.0)
15	**Has the booking been done for your next follow- up?**	
	NA	1 (0.4)
	No	90 (40.0)
	Yes	134 (59.6)
16	**Were you informed on when and how to obtain urgent care?**	
	No	20 (8.9)
	Yes	205 (91.1)
17	**Was the safe transport to home after discharge offered to you?**	
	NA	3 (1.3)
	No	99 (44.0)
	Yes	123 (54.7)
18	**Were you satisfied with the overall discharge process?**	
	No	19 (8.4)
	Yes	206 (91.6)

Supplemental Table 1: Summary statistics of study question

Phase 3: The minimum sample size for the field study to assess reliability and validity of the questionnaire, based on the item per participant ratio of 1:10 principle was 160. Each participating hospital was asked to recruit a minimum of 35 subjects to complete the questionnaire. The questionnaire was completed by 546 participants across the fifteen hospitals, after informed consent (Supplemental Table-2 and 3)

Variables	n (%)
Age (years); Mean (SD)	46.6 (19.38)
SEX	
Male	262 (48.0)
Female	284 (52.0)

Supplemental Table 2: Demographic characteristics of the sample [n=546] Main Study

Q. No.	Questions	n (%)
1	**Did the doctor explain about the tentative date of discharge prior / at the time of admission?**	
	NA	1 (0.2)
	No	33 (6.0)
	Yes	512 (93.8)
2	**Were you updated on your health condition by a healthcare professional prior to discharge?**	
	No	16 (2.9)
	Yes	530 (97.1)
3	**Were you and / or your family involved in the discharge decision?**	
	NA	1 (0.2)
	No	34 (6.2)
	Yes	511 (93.6)
4	**Did the staff explain about the time required for completing the discharge formalities (including process for discharge)?**	
	NA	3 (0.5)
	No	38 (7.0)
	Yes	505 (92.5)
5	**Were the unused medicines returned before your discharge?**	
	NA	29 (5.3)
	No	53 (9.7)
	Yes	464 (85.0)
6	**In case of insurance processing, was the approval or query status updated to you periodically?**	
	NA	238 (43.6)
	No	32 (5.9)
	Yes	276 (50.5)
7	**Did the staff explain the details of the amount payable which are not covered as part of the insurance?**	
	NA	19 (3.5)
	No	232 (42.4)
	Yes	295 (54.0)
8	**Were you explained on the final bill details on the day of discharge?**	
	NA	7 (1.3)
	No	64 (11.7)
	Yes	475 (87.0)
9	**Were post discharge medicines arranged?**	
	NA	5 (0.9)

	No	108 (19.8)
	Yes	433 (79.3)
10	**Were the discharge summary and investigation reports handed over to you?**	
	NA	9 (1.6)
	No	23 (4.2)
	Yes	514 (94.1)
11	**Were you informed on when the pending reports could be collected post discharge?**	
	NA	222 (40.7)
	No	24 (4.4)
	Yes	300 (54.9)
12	**Were you explained on the post discharge care to be taken: a) medicines; b) exercises; c) diet; d) dressing; e) Special Instructions (If any)**	
	NA	25 (4.6)
	No	11 (2.0)
	Yes	510 (93.4)
13	**Were the above post discharge care aspects explained in a language that you understand?**	
	NA	5 (0.9)
	No	10 (1.8)
	Yes	531 (97.3)
14	**Did you receive information on the next follow-up date?**	
	NA	4 (0.7)
	No	13 (2.4)
	Yes	529 (96.9)
15	**Has the booking been done for your next follow- up?**	
	NA	7 (1.3)
	No	214 (39.2)
	Yes	325 (59.5)
16	**Were you informed on when and how to obtain urgent care?**	
	NA	7 (1.3)
	No	36 (6.6)
	Yes	503 (92.1)
17	**Was the safe transport to home after discharge offered to you?**	
	NA	18 (3.3)
	No	201 (36.8)
	Yes	327 (59.9)
18	**Were you satisfied with the overall discharge process?**	
	NA	5 (0.9)
	No	38 (7.0)
	Yes	503 (92.1)

Supplemental Table 3: Summary statistics of Main study questions

Limitations

The study has a few limitations. While the sample has been 546 for the study with inclusion of 15 different hospitals, there have been limitations on the inclusion of all categories of discharges. The emergency admissions, ICU discharge patients and patients leaving against medical advice or leaving to another healthcare facility have been excluded. This tool has been developed in English only. The study provides a snapshot of discharge experiences, but it does not follow long-term outcomes like readmissions or post- discharge problems. There is a scope for better responses if the questionnaire was available in vernacular language. This study was aimed only at developing and validating the PREM Tool for Discharge, the findings of the questionnaire responses need further analysis for hospitals to work on their improvement plans.

Discussion

Ensuring a smooth hospital discharge is a vital phase in the continuum of patient care, impacting both clinical results and patient satisfaction. A validated Patient-Reported Experience Measure (PREM) provides healthcare organizations with a systematic approach to evaluate discharge quality and pinpoint areas for systemic enhancement. Previous research has highlighted the link between patient experiences during discharge and clinical outcomes. For example, Goldstein et al. found that the quality of discharge as reported by patients was independently linked to 30-day readmission rates for those undergoing percutaneous coronary intervention (PCI) or coronary artery bypass grafting (CABG), with higher- quality reports being associated with fewer readmissions.22

In a related study, Waniga et al. demonstrated that patient satisfaction significantly improved when both nurses and physicians delivered detailed discharge instructions, underscoring the critical role of effective communication in refining the discharge process23. Moreover, Anatchkova et al. examined the integration of the Care Transitions Measure (CTM-15 and CTM-13) into CAHPS surveys, applying Item Response Theory (IRT) to enhance the precision of evaluating patient experiences, thereby highlighting advancements in the methodology for assessing discharge quality.24

Although international tools have established the foundation for structured PREM assessments, our study aimed to develop and validate a context-specific PREM tool tailored to the Indian healthcare environment. The developed tool encompasses 18 items across the following key domains: communication, clinical care, administrative processes, financial awareness, patients' rights, and safety. The tool specifically excluded emergency admissions and patients leaving medical advice, focusing on in patients undergoing elective procedures or medical management.

The pilot study demonstrated that the questionnaire was feasible, acceptable, and internally reliable, with a KR-20 value of 0.9455, indicating strong internal consistency and alignment with the intended construct. Participants often reported positive experiences regarding discharge communication, involvement in decision-making, and the clarity of post-discharge instructions, which aligns with previous pilot interventions focused on improving discharge readiness and satisfaction. (25)(26)

However, the pilot pointed out ongoing deficiencies, particularly in areas like insurance communication, the return of medications, and the organization of follow-up and transportation. These challenges are consistent with previous studies that suggest fragmented discharge procedures, especially concerning administrative and financial elements, can negatively impact patient experience.27

The full-scale study validated and expanded upon pilot findings, reaffirming high satisfaction scores in core domains, such as discharge instructions, documentation, and care planning. However, variability remained in insurance- related updates and pre scheduled follow-up appointments, reinforcing the need for integrated, patient-centered discharge workflows.28 As in earlier implementation research, operational constraints such as time pressure and fragmented care coordination continue to challenge the uniform delivery of all discharge components.29

These findings support the utility of a context-specific PREM tool and provide actionable insights for refining discharge protocols in resource-constrained high-volume healthcare settings. Future efforts should focus on embedding discharge communication into routine workflows and leveraging digital tools to streamline insurance coordination and post-discharge planning.

Strengths of the Study:

This study was a multicentric study, with respondents from 15 different hospitals within India. Care has been taken to ensure the respondents are from different locations. Small, medium and large hospitals were also involved in this study to get a comprehensive response. While satisfaction scores are being taken from patients, this study helped develop a structured tool with the process mapped for the discharge. The tool before the start of the study has been reviewed by the experts including the clinicians, nurses, hospital administrators, patients and bystanders. The final 18 numbered questionnaire has undergone several reviews and revisions before the study with the aim of capturing the patient experience to ensure areas for improvement are identified by the hospitals which use the same. Compared to traditional satisfaction surveys, PREMs focus on objective aspects of treatment processes, reducing subjectivity and delivering more actionable data for healthcare improvement.

Conclusions

Our study has been important in developing and validating the PREM Tool for the Discharge Process in an Indian context. The development of the PREM Tool for the discharge process, has been done with a detailed discussion, and inputs from various stakeholders of the process. While the tool has been validated across 15 hospitals in India, the results of the analysis indicates that the more the positive responses for the questions, the enhanced experience of the discharge process has been for the patients. The responses, helped Hospitals, look into specific processes to relook into for further improvement.

Implications

This study provides a validated PREM tool tailored to Indian hospitals, enabling systematic assessment of discharge processes. Its adoption can help:

- Healthcare providers improve communication, care coordination, and post-discharge planning.
- Administrators and quality teams use data-driven insights to refine workflows and benchmark performance.
- Policy and accreditation bodies incorporate patient- centred discharge metrics into quality standards.
- Patients and families gain a stronger voice in shaping safer, clearer discharge experiences.
- Future work should extend the tool to emergency and ICU discharges, translate it into regional languages, and explore digital integration for wider accessibility.

References

1. World Health Organization. World Patient Safety Day 2023—Engaging patients for patient safety. Published 2023.
2. Talking HealthTech. Patient reported experience measures (PREMs). Accessed May 2025.
3. Male L, Noble A, Atkinson J, Marson T. Measuring patient experience: a systematic review to evaluate psychometric properties of patient-reported experience measures (PREMs) for emergency care service provision. Int J Qual Health Care. 2017;29(3):314-326.
4. Walimbe V, Brismée JM, Kulkarni S, Malani R. Patient-reported experience measures: a new scale that records another dimension of patient care quality important in clinical practice. Eur J Physiother. 2024;26(2):119-122.
5. Consortium of Accredited Healthcare Organizations. A white

paper on PREMs. Published 2023. Accessed May 2025.https://www.caho.in/
6. Bonvin E, Tacchini-Jacquier N, Monnay S, Verloo H. Protocol for a patient-reported experience measures (PREMs) survey of patients discharged during the COVID-19 pandemic and their family caregivers. BMJ Open. 2021;11(2): e047033.
7. Waring J, Marshall F, Bishop S, et al. An ethnographic study of knowledge sharing across the boundaries between care processes, services and organisations: the contributions to 'safe' hospital discharge. Health Serv Deliv Res. 2014;2(29):1-160.
8. Rognan SE, Sporrong SK, Bengtsson K, et al. Discharge processes and medicines communication from the patient perspective: a qualitative study at an internal medicines ward in Norway. Health Expect. 2021;24(3):892-904. doi:10.1111/hex.13232
9. Yathindra C, Saldanha AL. Patient-reported experience measures: an assessment of the in-patients in a tertiary care teaching hospital. Int J Community Med Public Health. 2024;11(7):2679-2685.
10. David S, Wärnberg MG. Patient-reported outcomes relevant to post-discharge trauma patients in urban India. medRxiv. Published February 20, 2024.
11. Kynoch K, Ameen M, Ramis MA, Khalil H. Use of patient-reported data within the acute healthcare context: a scoping review. Int J Environ Res Public Health.2022;19(18):11160.
12. OECD. Patient-reported indicators survey 2019: Understanding health care from the patient's perspective. OECD Publishing; 2019.
13. Black N, Varaganum M, Hutchings A. Relationship between patient reported experience (PREMs) and clinical outcomes: a systematic review. BMJ Open. 2014;4(7): e004145.
14. Bull C, Byrnes J, Hettiarachchi R, White J. A systematic review of the validity and reliability of patient-reported experience measures. Health Serv Res. 2019;54(5):1023– 35.
15. Kishore K, Jaswal V, Kulkarni V, De D. Practical guidelines to develop and evaluate a questionnaire. Indian Dermatology Online Journal [Internet]. 2021 Mar 1;12(2):266–75. PMID: 33959523; PMCID: PMC8088187
16. Lynn MR. Determination and quantification of content validity. Nurs Res. 1986;35(6):382-386.
17. Lawshe CH. A quantitative approach to content validity. Pers Psychol. 1975;28(4):563-575.
18. Polit DF, Beck CT. The content validity index: are you sure you know what's being reported? critique and recommendations. Res Nurs Health. 2006;29(5):489-497.
19. Kuder GF, Richardson MW. The theory of the estimation of test reliability. Psychometrika. 1937; 2:151–60.
20. Doyle C, Lennox L, Bell D. A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. BMJ Open. 2013;3(1): e001570.
21. Streiner DL, Norman GR, Cairney J. Health Measurement Scales: A practical guide to their development and use. 5th ed. Oxford University Press; 2015.
22. Goldstein JN, Hicks LS, Kolm P, et al. Is the care transitions measure associated with readmission risk? Analysis from a single academic center. J Gen Intern Med. 2016;31(7):732-738.
23. Waniga HM, Gerke T, Shoemaker A, et al. The impact of revised discharge instructions on patient satisfaction. J Patient Exp. 2016;3(3):64-68.
24. Anatchkova MD, Barysauskas CM, Kinney RL, et al. Psychometric evaluation of the care transition measure in TRACE-CORE: do we need a better measure? J Am Heart Assoc. 2014;3(3): e001053.
25. Hesselink G, Schoonhoven L, Barach P, et al. Improving patient discharge and reducing hospital readmissions by using an evidence-based care transition model. BMC Health Serv Res. 2012; 12:117.
26. Weiss ME, Yakusheva O, Bobay KL. Quality and cost analysis of nurse staffing, discharge preparation, and postdischarge utilization. Health Serv Res.2011;46(5):1473-1494.
27. Kripalani S, Theobald CN, Anctil B, Vasilevskis EE. Reducing hospital readmission rates: current strategies and future directions. Annu Rev Med. 2014; 65:471-485.
28. Coleman EA, Parry C, Chalmers S, Min SJ. The Care Transitions Intervention: results of a randomized controlled trial. Arch Intern Med. 2006;166(17):1822-1828.
29. Shepperd S, Lannin NA, Clemson LM, McCluskey A, Cameron ID, Barras SL. Discharge planning from hospital to home. Cochrane Database Syst Rev. 2013;2013(1):CD000313.
30. Lindpaintner LS, Gasser JTh, Schramm MS, et al. Discharge intervention pilot improves satisfaction for patients and professionals. Eur J Intern Med. 2013;24(8):756-762.
31. Shahid A, Sept B, Kupsch S, et al. Development and pilot implementation of a patient-oriented discharge summary for critically ill patients. World J Crit Care Med. 2022;11(4):255-268.
32. Edwards P, Anwer S. The effect of a pilot Discharge to Assess process on unscheduled care performance. Int J Integr Care. 2019;19(4):334.
33. Austad K, Thai C, Zavatti A, et al. Tools to improve discharge equity: protocol for the pilot TIDE trial. Contemp Clin Trials Commun. 2024; 43:101419.
34. Langhorne P, Baylan S. Early supported discharge services for people with acute stroke. Cochrane Database Syst Rev. 2017;2017(7):CD000443.
35. Boateng GO, Neilands TB, Frongillo EA, Melgar- Quiñonez HR, Young SL. Best practices for developing and validating scales for health, social, and behavioral research: a primer. Front Public Health. 2018; 6:149