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A Model for Hospital Discharge Preparation: From Case Management to Care Transition

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Abstract

There has been a proliferation of initiatives to improve discharge processes and outcomes for the transition from hospital to home and community-based care. Operationalization of these processes has varied widely as hospitals have customized discharge care into innovative roles and functions. This article presents a model for conceptualizing the components of hospital discharge preparation to ensure attention to the full range of processes needed for a comprehensive strategy for hospital discharge.

Improving hospital discharge processes and reducing readmissions are priority issues in the national agenda for healthcare reform.[1] These 2 interrelated issues embody the duality of needs for solutions to address a critical problem area related to both the quality and cost of healthcare—that of preparing the patient and family for a successful discharge.[2] This transition is evidenced by their ability to manage continuing care needs at home and in community-based settings without recurring need for acute or emergent care services. Transitional care models focus on coordination and continuity of care for high-risk populations such as the elderly,[3-5] those with high utilization conditions such as cardiac disease,[6,7] and mental/behavioral disorders.[8] However, all hospitalized patients, regardless of risk status or the setting to which they are being discharged, require some form of discharge preparation.

The terms typically used to refer to processes involved in preparing the patient for leaving 1 care setting such as the hospital and organizing subsequent systems of care include discharge preparation, discharge planning, care coordination, and case management. While discharge preparation has been commonly used as a surrogate term for discharge teaching and planning for subsequent services,[9] discharge planning encompasses assessment, planning, and coordination activities,[10] care coordination is services focused, and case management focuses on the complex needs of individual patients. Yet these concepts are inconsistently defined, often used interchangeably, or presented with overlapping meaning.[11] They are often included as core elements of intervention programs yet not well documented in standard documentation systems.[12] The lack of uniformity in description of the core processes, variability in roles aligned to these processes, and the plethora of homegrown tools for

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operationalizing and evaluating these processes create barriers to ongoing improvement efforts.

Although the concept of discharge preparation is applicable across many care settings, the purpose of this article is to propose a conceptual model of hospital discharge preparation (Figure 1) to standardize the use of the term and guide investigation and operationalization of core components of the hospital discharge process of care.

Conceptual Model for Hospital Discharge Preparation

A definition of the term "discharge preparation" was synthesized from review of the literature as the meta-term for multiple care processes whereby the patient, family, and receiving care providers become ready for the discharge and management of health needs in a subsequent care venue. Discharge preparation is the term that encompasses the 3 processes of discharge planning (composed of 2 components: [1] assessment and planning for discharge needs and [2] estimation of readmission risk), discharge coordination [arrangements for any necessary support after discharge], and discharge teaching [educational interventions].

Hospital discharge preparation is a complex process requiring input, timely information exchange, and coordination between multiple disciplines and with patients and families.[13] While numerous professional roles can perform various discharge functions, preparing the patient (and family/caregivers) for discharge from the hospital is a primary function of hospital-based clinical nurses. Clinical nurses are the frontline professionals responsible for preparing the patient and care delivery systems for discharge and postdischarge care needs [14,15] and are the last line of defense in ensuring quality discharge preparation before the patient is formally discharged.

Hospital-based discharge preparation activities sit within the larger context of transitions in care from hospital to the next care setting. Table 1 presents 5 nationally recognized discharge transition models with a cross-walk of hospital discharge preparation components initiated by hospital staff during the hospitalization to prepare for discharge and the posthospitalization period. To facilitate

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operationalization, a description of the 3 components of discharge preparation, including processes and roles, follows. Table 2 presents useful tools for operationalizing and evaluating the components of the model. The Table, Supplemental Digital Content 1, http://links.lww.com/JONA/A429, provides the citations for tools identified in Table 2.

Discharge Planning

Discharge planning is the development of an individualized discharge plan prior to leaving the hospital,[16] with the aim of improving patient outcomes and reducing costs of care through timely discharge and coordination of providers and services following hospital discharge to reduce readmission risk and promote community-based health management. Two key processes summarize the important steps to achieve the desired patient and system outcomes.

- A structured process initiated early during the hospitalization phase is required as a condition of participation in the Centers for Medicare & Medicaid Services programs.[17] Steps include identification of patients who will benefit from discharge planning services; assessment for postdischarge needs related to self-care, care provided by family members, and care from professionals; planning for information and resource needs; and coordination of service needs for the postdischarge period.[10,11,16,18]
- Readmission risk assessment has been introduced as part of transitions in care initiatives, specifically to identify high-risk, high-cost patients who will benefit from coordinated follow-up in the postdischarge period. Using a risk assessment tool identifies patients at risk of adverse postdischarge events for the purpose of initiating anticipatory monitoring and/or interventions that are targeted to avoiding unplanned readmission or emergency department (ED) visits.

Discharge planning begins prior to or on admission and continues throughout the course of hospitalization. Assessment of risks related to functional or cognitive status as well as the home environment, support systems, and psychosocial and cultural factors is often completed during the admission process, whereas other risk

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factors such as knowledge deficits may be assessed closer to discharge. The patient's evolving medical condition necessitates continual reassessment and underpins decisions about timing and disposition, including decisions about whether to go home independently, with family support, and/or with home-based continuing care services, or to transfer to a post–acute care facility.[19]

A key feature of the discharge planning process is engaging the patient and family and the multidisciplinary team. Discharge planning should be patient centered and driven by the patient's specific needs and preferences. Patient and family engagement is critical to successful hospital discharge planning.[20,21] Inputs from the entire care team aid the patient and family in developing individual and feasible posthospital plans of care prior to leaving the hospital.

Depending on the hospital's model of discharge planning, various disciplines can be involved in components of the process. For example, a discharge planning evaluation can be provided by an RN, social worker, or other appropriately qualified personnel as specified in the institution's policies and procedures.[17] Utilization managers, in their role to achieve timely discharge and maximize reimbursement for care, also contribute input to the planning process. Successful implementation of the discharge plan requires communication, coordination, and collaboration among the involved disciplines and functional roles.

Discharge Coordination

Discharge coordination involves implementation of actions targeted to smoothing the transition from hospital and diminishing problems after discharge through arranging, linking, and/or sequencing transition support services across providers and care delivery systems.[12,22,23] Coordination of care is not an intervention itself but a schema for management of interventions, with continuity of information and relationships among providers across settings viewed as outcomes.[12,24] Key coordination actions include communication within the interdisciplinary care team during hospitalization to achieve timely discharge, making arrangements for resources for postdischarge care, and transfer of information to postdischarge care providers.

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Discharge coordination functions are embedded within nationally recognized programs for transitioning care at hospital discharge that have demonstrated improvements in patient outcomes and costs of care (Table 1). While each of these programs identifies specific recommended coordination activities, core discharge coordination functions for hospitals have been accepted in the National Voluntary Consensus Standards for Care Coordination,[25] including

- medication reconciliation;
- a transition record given to the patient (containing specific elements of inpatient care, postdischarge and patient self-management information, advanced care plan, and contact information); and
- timely transmission (within 24 hours) of the transition record to the primary provider or next care setting.

The tension between best discharge practices and timely discharge is evident in the roles hospitals assign to discharge coordination functions. Case managers (either nurses or social workers), discharge advocates, and transition care coordinators focus on identification and mobilization of family, hospital, and community resources and services to achieve optimal postdischarge outcomes, prevention of adverse outcomes, and reduced costs of care. Discharge coordinators, sometimes called expeditors or flow coordinators, are charged with ensuring task completion to facilitate timely discharge, defined as on or before the expected length of stay, or early in the day on the day of discharge. Systems and structures to facilitate timely discharge include mechanisms such as a red/yellow/green light system for anticipatory planning for next-day discharge,[26] and the use of discharge lounges for those waiting for pending laboratory test results or transportation.[27]

Discharge Teaching

Discharge teaching, an essential component of discharge preparation,[28] is the composite of educational interventions that occurs mainly during hospitalization in order to prepare the patient and family/caregiver for the transition from hospital to home.[29]

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Teaching is integrated throughout the patient's hospital stay[14] and reaches a focal priority at the time of discharge. When left until the day of discharge, patients' decreased attention span and nurse time pressures may decrease effectiveness.[30]

Education of patient and families/caregivers is aimed at providing them with information to make informed decisions[31] and the knowledge, confidence, and skills needed for post–acute care.[32] Minimum core content includes[21,25]

- review of disease condition,
- test results,
- next steps in medical care including follow-up appointments,
- instructions for self-care at home,
- current medications,
- warning signs and problems to watch for, and
- contact information for primary care, pending tests, and emergencies.

Recommendations for improving discharge teaching emphasize a patient-centered approach in which the content and method of teaching are individualized to the patient's characteristics and situation, rather than the typical approach of standardized information based on the patient's diagnosis.[33] While the amount of content is important in preparing patients for discharge, the quality of the delivery of the content or the way nurses perform the teaching is more strongly related to patient perception of readiness for discharge than the amount of content provided.[29,34] Patient engagement in the learning process and attention to health literacy are key priorities for improving discharge teaching. Discharge teaching requires establishing an effective line of communication to understand the patient-specific barriers to self-care.[30,35] Teach-back is a teaching method that incorporates patient engagement and verification of learning. Assessment of the health literacy facilitates identification of patients at risk of poor understanding of discharge instructions and customization of teaching at the patient's level of literacy.[28]

Education of patients and caregivers is a primary responsibility of staff RNs,[36] although other healthcare providers, including physicians and pharmacists, also claim this role. Lack of clear delineation of the role responsibilities for discharge teaching can

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result in duplication, omission, inconsistent, or confusing information provided to patients and families and poor adherence to discharge instructions.

The Role of Hospital-Based Nursing

Clinical nurses are responsible for performing discharge preparation activities alone or in collaboration with other team members with assigned discharge functions and for ensuring the completeness of preparation before discharge. The close and continuous relationships between patients and their nurses provide the mechanism for surveillance[37] of changing needs for the postdischarge period as the patient's clinical condition changes and for knowing the patient and the patient's context,[38] both of which are critical to achieving a safe and timely discharge. Preparation for discharge occurs throughout the hospitalization through ongoing monitoring of patient progress against expectations for recovery, identification of postdischarge needs, patient teaching, and communication with other providers, and documentation of the preparatory processes.[14] The role of the clinical nurse is central to an effective and efficient discharge process. As the frontline "coordinator," the nurse's role is to set the discharge plan in motion, oversee discharge activities, engage resources, serve as an information hub, and provide education.[15] Primary nursing care models assign a single clinical nurse as the overseer of care throughout the hospitalization; however, this type of assignment is rarely implemented in contemporary practice because of difficult scheduling logistics. While different nurses care for patients each shift, the discharge preparation role of the collective of nurses caring for a single patient should begin on admission and continue daily throughout the hospitalization.

The role of the clinical nurse is central and continuous during the hospitalization; however, other members of the professional team have roles and responsibilities in the discharge process. Specialized nursing roles such as discharge planners, care coordinators, case managers, and diabetic educators, as well as physicians, pharmacists, and social workers, are frequently involved, particularly with complex cases. The complexity of the RN role as the hub in the discharge process can result in confusion over responsibilities and workflow

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interruptions that disrupt patient care and lead to delays in discharge and nurse dissatisfaction.[15] Recognizing the need for an interprofessional and multirole solution to operationalizing discharge preparation, the proposed conceptual model for hospital discharge preparation describes the components (Figure 1), strategies and role assignments (Table 1), and measures to facilitate the operationalization of the discharge preparation process (Table 2), and the central role of the clinical nurse in managing the discharge preparation process.

Outcomes of Discharge Preparation

The immediate, proximal outcome of discharge preparation is discharge readiness. Readiness for hospital discharge can be assessed from the perspectives of the patients, families, and providers and encompasses dimensions of physical and emotional status on the day of discharge, knowledge about personal and medical self-care, ability to cope at home after discharge, and expected support in the postdischarge period. High-quality, effective discharge education has been associated with readiness for hospital.[29,34]

Intermediate outcomes are successful patient/family management of care needs at home after discharge with or without formal care services or transfer to an appropriate post–acute care facility for continuing care.[12,19,39] Postdischarge coping difficulties or development of postdischarge problems is a poor intermediate outcome that can lead to the distal outcome, unplanned return to the hospital for an ED visit, or readmission. The trajectory of influence from discharge readiness to postdischarge coping and subsequently to unplanned return to the hospital for an ED visit or readmission has been documented,[29,34] as has the impact of transitional care programs on reduction in readmissions.[32,40,41] Similarly, for patients discharged from skilled nursing facilities, an individualized discharge transition plan results in better adherence to the medical plan of care, better attendance at medical appointments, and fewer readmissions within 30 days.[42]

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Implications for Nurse Leaders

1. The proposed conceptual model for hospital discharge preparation (Figure 1) can serve as a guiding structure for ensuring that the 3 major components of discharge (discharge planning, discharge coordination, and discharge teaching) are fully operationalized, with role functions and relationships clearly delineated.
2. With many existing and emerging programs describing care innovations to improve patient outcomes and reduce readmissions, role assignments for each component will evolve uniquely in each hospital to address the desired outcomes identified in the model.
3. The clinical nurse providing direct care is central to the process of discharge preparation over the course of hospitalization, and as such, the time and effort invested in discharge preparation activities have value to the organization and should be recognized and rewarded.

Conclusion

The conceptual model for hospital discharge preparation (Figure 1) coalesces the many existing components used in discharge and care transition processes into a comprehensive framework for hospital discharge activities. Compilation of components of transitional care models that are initiated in the hospitalization phase of care provides a menu of options of selecting a package of discharge processes for each component of the model. Use of structured tools to support and evaluate the discharge preparation process will create a more standardized approach to measurement of processes and outcomes. This model should not replace discharge transition models and programs that are already well tested but should serve as a framework for operationalizing the discharge preparation process on nursing units and hospital-wide.

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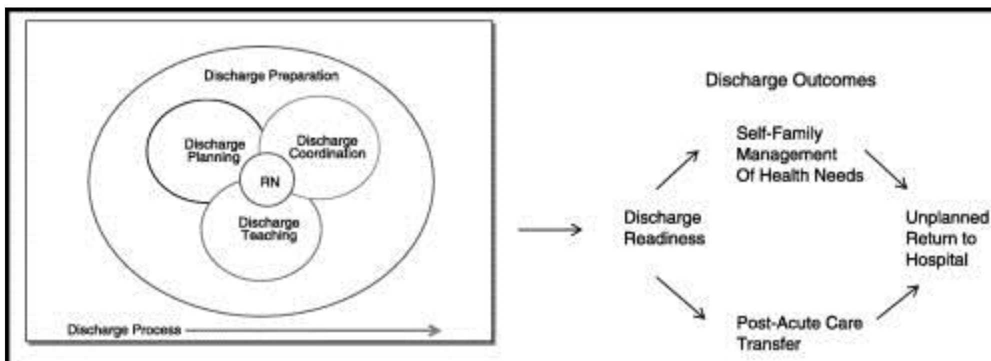

Figure 1. A conceptual model for hospital discharge preparation

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Components of Discharge Preparation	Project RED[2]	Transitional Care Model[3-5]	Care Transitions[3-5]	BOOST[3,5]	H2H (Hospital 2 Home)[6,7]
Targeted populations	All discharges	High-risk older adults: cognitive impairment or 2 risk factors (age, functional ability, comorbidities)	Elders	Patients with risk factor on 8P screening tools (problem medications, psychiatry, principal diagnosis, polypharmacy, poor health literacy, patient support, prior hospitalization in past 6 mo, palliative care)	All heart failure and myocardial infarction patients
Discharge planning	• Assess need for and arrange language assistance • Plan for obtaining medications • Reconcile discharge plan per national guidelines	• Comprehensive in-hospital assessment • Preparation of evidence-based plan of care • Comprehensive holistic focus	• Involved in decisions about care • Knows plan/next steps	• General Assessment of Preparedness • Risk specific interventions linked to the 8Ps	• Assess barriers to 7-d follow-up • Assess barriers to medication management • Simplify dosage regimen • Assess medication access
Discharge coordination	• Make appointments for follow-up • Follow up on test results • Organize outpatient services and durable medical equipment • Transmit discharge plan to clinicians	• Ensuring continuity from hospital to home: home visits and phone support × 2 mo; transitional care nurse accompanies patient to 1st follow-up visit • Coordination with primary care provider • Active engagement of patient and family • Multidisciplinary approach emphasizing communication among patient, family, caregivers, and providers	• Family knows postdischarge needs • Has contact information if problems arise • Patient empowered to make follow-up appointment and transportation • Has personal health record to facilitate communication • Follow-up calls to review medications, check on outcome of appointments, provide advocacy, and reinforce red flags	• Medication reconciliation • Discharge information communicated to primary care provider, receipt confirmed • Outpatient follow-up arranged • Follow-up call within 72 h • Direct (phone) communication with primary outpatient provider encouraged	• Prior to hospital discharge, follow-up appointment scheduled within 7 d with outpatient provider or with cardiac rehabilitation • Patient brings medications list to outpatient visit • Medication reconciliation
Discharge teaching	• Review medications	• Education and support for patient and family/caregivers	• Know medications/adverse effects/symptoms and whom to call	• Teach back: medication use, self-efficacy, diagnosis, prognosis, self-care, action plan for symptoms and complication, discharge plan	• Patient/caregiver provided with documented instructions and prescriptions, understands each medication and need for adherence to med regimen
	• Teach/assess understanding of discharge plan, educate on diagnosis • Use a written plan • Review what to do if there are problems • Telephone reinforcement	• Managing symptoms/early identification • Promote self-management	• Understand red flags; is condition worsening and how to respond • Physician/nurse answered questions	• Written discharge instructions	• Educate about symptom and self-care management • Patient must be able to recognize warning signs and have plan to address

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Name of Tool/Measure	Purpose	Content and Scoring
Discharge planning: postdischarge need		
Early Screen for Discharge Planning	Discriminate between adults who will use specialized discharge planning services by a discharge planner	Sum of weighted points for age; disability level using Rankin Disability Score (slight, moderate, or greater); Prior living status (lives alone); self-rated walking limitation
Blaylock Risk Assessment Screening Score	Identification on admission of patients at risk of prolonged hospitalization and in need of discharge planning resources	Weighted score for age; living situation/emotional support; functional status; cognition, behavior pattern; mobility; sensory deficits; previous admissions/ED visits; active medical problems and drugs
Discharge Decision Support System (D^2S^2)	Identify patients who should be referred for post-acute care	Algorithm calculates score based on walking limitation; self-rated health; age; length of stay; number of comorbid conditions; depression
BOOST 8Ps	Assessment of risk of adverse events after discharge	Individual risks identified: problem medications, psychological, principal diagnosis, polypharmacy, poor health literacy, patient support, prior hospitalization, palliative care
Transitional Care Model, screening criteria	Identify patients in need of transitional care for the elderly	Cognitive impairment, or 2 of the following: age ≥80 y; moderate to severe functional deficits (eg, HARP score >2, KATZ <4, Lawton <5); an active behavioral and/or psychiatric health issue (eg, GDS >5); ≥4 active coexisting health conditions; ≥6 prescribed medications; ≥2 hospitalizations within the past 6 mo; a hospitalization within the past 30 d; inadequate support system; low health literacy; documented history of nonadherence to the therapeutic regimen
Discharge planning: readmission risk		
LACE	Risk of death or readmission within 30 d postdischarge	Sum of weighted points for L = length of stay A = acute (emergent) admission C = Charlson comorbidity index E = ED visits in prior 6 mo
Hospital Readmission Prediction Model	Readmission within 30 d postdischarge	Sum of weighted points: insurance status (Medicare, Medicaid, self-pay); currently married; has a regular physician; Charlson comorbidity index; SF-12 physical component score; ≥1 admission within the past year; current length of stay >2 d
Risk Prediction Models for Hospital Readmission: Systematic Review	Summarize factors included in systematic review of readmission risk models	Specific medical diagnoses or comorbidity index; mental health comorbidities; illness severity; prior use of medical services; overall health and function; sociodemographic factors, social determinants of health
Discharge coordination		
Care Coordination Measures *Atlas*	List of existing care coordination measures	Measures focusing on coordination between healthcare entities, and over time; structure, process, and outcomes; patient/family, professional, and system perspectives. Greatest number of measures related to communication from patient/family perspective. Many focused on primary care/chronic illness care coordination
National Voluntary Consensus Standards for Care Coordination	Performance measurement	1. Reconciled medication list received by discharged patient 2. Transition record includes all of the following: a. Inpatient care: reason for admission, test/procedures with results, discharge diagnosis b. Postdischarge/patient self-management: current medications, results pending, patient instructions c. Advanced care plan: advanced directives or surrogate decision maker or reason not d. Contact information/plan for follow-up care 24/7 contact for emergencies, contact for pending tests, plan for follow-up, primary provider for follow-up care (continues) 3. Timely transmission of discharge record to primary care provider or next care facility within 24 h after discharge 4. 3-Item Care Transitions Measure (CTM) within 30 d after discharge
CTM	Quality of care transition out of the hospital from the patient's perspective	CTM-15: 4 subscales: critical understanding (6 items); preferences important (3 items), management preparation (4 items), care plan (2 items). Completed 6-12 wk after discharge CTM-3: 3 items from the CTM-15. Endorsed by the National Quality Forum
Discharge teaching		
IDEAL Discharge Planning checklist	Provider checklist to increase patient and family engagement	I = include patient and family D = discuss life at home, medications, signs and problems, test results, appointments E = educate in plain language about disease, next steps A = assess how well physicians and nurses explain and use teach back L = listen and honor patient and family goals, preferences, observations, concerns
Rapid Evaluation of Adult Literacy in Medicine—Short Form	Health Literacy Assessment	A 7-word recognition test
Quality of Discharge Teaching Scale	Patient perception of the quality of discharge teaching provided by nurses over the course of hospitalization	Discharge content needed (6 items); discharge content received (6 items); delivery of teaching (18 items). Completed on day of discharge
Discharge preparation		
PREPARED Instruments	Assess the quality of discharge planning from different stakeholders perspectives (medical practitioners, residential care administrators, community service providers, patients, and carers)	For patients and carers, 4 domains assessed: information exchange (5 items), receipt of medication information (3 questions), preparation for coping postdischarge (2 questions); control of discharge circumstances (2 questions for patient, 1 for carer). Completed 1 wk postdischarge. Other forms available to assess provider perspectives
Brief-PREPARED (B-Prepared)	Preparedness for hospital discharge from the patient's perspective	Self-care information about medications and activities (4 items); equipment and services (4 items), confidence (3 items); 7 of 11 items relate to the amount of information received. Completed 1 wk postdischarge
Discharge outcomes		
Readiness for Hospital Discharge Scale (RHDS)	Patient self-report of discharge readiness; nurse assessment of discharge readiness	Patient and nurse versions of the RHDS in long (21 items) and short forms (8 items) for adult medical-surgical patients, parents of hospitalized children, and postpartum mothers Four subscales: Personal status (6 items), knowledge (8 items), perceived coping ability (3 items), expected support (4 items). Two items per subscale in short forms. Completed on the day of hospital discharge.
Problems After Discharge Questionnaire- English	Problems and unmet needs experienced in the postdischarge period	47 Items in 8 subscales: information needs (13 items); personal care (5 items), household activities (7 items), mobility (5 items), using equipment (1 item), following instructions (1 item), physical complaints (9 items), psychological complaints (6 items). Completed 1 wk after discharge
Post-Discharge Coping Difficulty Scale	Patient self-report of level of difficulty coping at home after hospital discharge	10-Item scale. Completed 2-3 wk postdischarge

[a]Sources/references for tools included in Table 2 are provided in Supplemental Digital Content 1, http://links.lww.com/JONA/A429.

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