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Purpose. The purpose of this study was to describe how the discharge medication cost inquiry (DMCI) consult order and workflow were created and used to communicate transition of care needs and medication access barriers before discharge.

Summary. Health-system pharmacists collaborated with the information technology department to develop the DMCI consult order and workflow. This institutional review board–approved retrospective case study evaluated use of the DMCI consult order throughout the health system. Outcomes that could not be retrieved electronically were collected for every third patient encounter using manual chart review. The DMCI consult order was used at each hospital in the health system. Physicians placed the most DMCI consult orders; however, pharmacists at the large academic tertiary hospital utilized the DMCI consult order the most. The DMCI consult order was sent most frequently for anticoagulants. Although most medications were covered by insurance, the tool and workflow identified barriers to medication access. Almost 90% of the patients with a DMCI consult order had at least one prescription generated on discharge.

Conclusion. The DMCI consult order is a novel electronic tool to aid in communicating discharge medication needs. When incorporated into care transition planning, the DMCI consult order and workflow provide a model to ensure patients have access to medications. It can also be used to document and evaluate the role of pharmacy in transitions of care in the health system.

Keywords: access, consult, continuum of care, discharge, electronic, medication

Poor coordination, communication, and handoffs at care transitions result in fragmented care, placing patients at risk for adverse events as they transition from one healthcare setting to another.[1] When care is not coordinated for discharge or there is a lack of communication between clinicians, patients are at increased risk for medication errors.[2] Medication errors at discharge can lead to adverse events including nonadherence, worsening of disease, emergency department (ED) visits, and hospital readmissions. Medication management and transition planning are 2 key elements designated as essential categories for safe transitions in the National Transitions of Care Coalition Care Transition Bundle.[3]

Ensuring access to discharge medications is an essential step in care transition planning to prevent fragmented care. Without a streamlined process, it is difficult for inpatient clinicians to determine whether a patient has prescription insurance, what medications are covered for discharge, if step therapy or a prior authorization is required, or if cost would prohibit a patient's access to therapy at discharge. If an insurance formulary requires prior authorization or an alternative product, discharge may be delayed, length of stay can increase, or a patient may be discharged without access to the medication. Clinicians may send "test prescriptions" to an outpatient pharmacy to

determine whether the insurance company covers the medication. However, test prescriptions are discouraged by the Institute of Safe Medication Practices (ISMP) because they have led to near-miss medication errors or actual dispensing of the medication.[4] Other clinicians may verbally communicate with the outpatient pharmacy to determine medication costs; however, this communication may not be documented in the patient's medical record or shared with other providers, which may lead to duplicated efforts and further add to fragmented care. Furthermore, institutions may not have a practice model to sustain daily efforts required to evaluate discharge medication access. For example, ISMP recommends calling insurance companies to determine prescription coverage, but health systems may not have the resources for this time-consuming process.[4] Additionally, insurance companies have limited hours and are not available to support discharges late in the day or on weekends.

Key elements for successful medication management care transition models include multidisciplinary support and collaboration, effective integration of the pharmacy team, availability of data to justify resources, electronic patient information and data transfer between inpatient and outpatient partners, and a strong partnership network.[5] The majority of best practice models that use pharmacy technicians, students, and residents in innovative ways have been demonstrated to reduce readmissions and use a shared electronic medical record (EMR) for both inpatient and outpatient providers. Some models involve pharmacy personnel identifying and resolving medication access barriers. Common barriers encountered by these best practice models include financial and staffing resources, electronic transfer of patient information and data to partner groups, communication, and difficulty developing partnerships with inpatient or outpatient entities. Some models have also implemented pharmacy transition of

KEY POINTS

- The discharge medication cost inquiry (DMCI) consult order is an electronic tool used to communicate discharge medication needs with the health system's outpatient pharmacy.

- The DMCI consult order and associated workflow provide a model for health-system care transition planning.

- The health system's pharmacy workforce can use the DMCI consult order and workflow to identify and resolve discharge medication access barriers for both intensive care and general medicine patients.

care (TOC) services to ensure access to discharge medications; however, the models vary in terms of how patients are identified, when the outpatient pharmacy begins the TOC process, how medication access information is obtained, how the pharmacy technician is involved, and how pharmacy's efforts are documented in the patient's record for the multidisciplinary team.[5]

When this workflow lacks standardization, accountability, and transparency, there is poor handoff and communication regarding the results of test medication claims. It is also difficult to evaluate pharmacy's role in defragmenting care if this process is not documented in a way that aids in data analysis and process improvement.

The purpose of this study was to describe how the discharge medication cost inquiry (DMCI) consult order and workflow were created and used to communicate TOC needs and medication access barriers before discharge.

Background

Henry Ford Health System is a nonprofit, comprehensive, integrated health system composed of 5 acute

care hospitals in southeast and central Michigan. Henry Ford Hospital (HFH), a level 1 trauma center and teaching and research facility, is the largest of the hospitals and has a tertiary care center with 877 beds. Henry Ford Allegiance Health (HFAH) is a 475-bed level 2 trauma center and teaching hospital. Henry Ford Macomb Hospital (HFMH) is a 475-bed level 3 trauma center and teaching hospital. Henry Ford Wyandotte Hospital (HFWH) is a level 3 trauma center and teaching hospital with 360 beds. Lastly, Henry Ford West Bloomfield Hospital (HFWBH), a level 3 trauma center, is the smallest of the hospitals with 191 beds. All hospitals have student pharmacists, 4 have postgraduate year 1 (PGY1) pharmacy residents, and 1 has postgraduate year 2 (PGY2) pharmacy residents. Inpatient pharmacists, pharmacy residents, and student pharmacists at each hospital perform various TOC activities daily. These activities include obtaining medication histories, resolving medication access barriers, determining optimal medications for discharge, dosing and monitoring anticoagulation for discharge, inhaler technique assessment and education, and placing antimicrobial orders for discharge. A pharmacy TOC coordinator works with other inpatient and outpatient pharmacists to standardize TOC pharmacy services throughout the health system.

At HFH, unit-based pharmacists practicing on the intensive care and general practice units participate in daily teaching rounds and/or discharge planning collaborative rounds where readiness for discharge, TOC concerns, and potential barriers to medication access are discussed with physicians, nurses, case managers, and other healthcare providers. Verbal discussions and collaboration are the predominant mode of communication for the healthcare team. Inpatient pharmacy has a longstanding collaborative relationship with outpatient pharmacy and frequently utilizes this collaboration to assist in determining medication access. The other 4 hospitals have a different inpatient pharmacy practice

model that does not utilize collaborative rounds but instead relies on verbal communication and secure messaging for collaboration about discharge readiness, TOC concerns, and potential barriers to medication access.

Each hospital has an outpatient pharmacy that is owned by the health system. The outpatient pharmacies are located either in the hospital or in the medical center adjacent to the hospital. The hours of operation for the outpatient pharmacies vary at the different hospital sites. The outpatient pharmacies at HFH, HFWBH, and HFAH are open 7 days a week, while those at HFMH and HFWH are open 6 days a week. The outpatient pharmacies provide outpatient pharmacy services to patients being discharged from the associated hospital and health-system clinics as well as to walk-in patients. The outpatient pharmacy team consists of pharmacists, technicians, interns, and clerks. The outpatient pharmacy team processes new and refill prescriptions for patients, including those discharged from the hospital. Hospitalized patients are offered the "meds to beds" service, which is delivery of discharge medications to patients before they leave the hospital.

Problem

Efforts to communicate discharge medication access planning were not standardized across the health system. Some inpatient clinicians would call the outpatient pharmacy, while others would place electronic prescriptions and indicate "test prescription" in the note to pharmacy field. The outpatient pharmacy staff would verbally report the result of the test claim to the clinician because they had read-only access to the EMR. The prior authorization process was initiated upon verbal request from the clinician. When an electronic prescription indicating "test prescription" was utilized, the inpatient clinician would have to update the electronic prescription to remove the test claim request before pharmacy started prior authorization or prescription processing. If the electronic prescription

was not updated to remove the note to pharmacy or there was a lack of communication between the inpatient clinician and outpatient pharmacy, patients were at risk of harm. At discharge, patients could leave with the test prescription medication listed on their discharge medication list but not have the medication in hand. These risks led to actual and near-miss medication safety events. There were also reports of duplicate verbal test claims from inpatient clinicians; however, because the outpatient pharmacy process for evaluating access to discharge medications was not documented in the patient's inpatient medical record, it was difficult to quantify the number of duplicate requests received. The health-system pharmacy medication access efforts lacked transparency and could not be evaluated. Therefore, we developed standard electronic communication and documentation processes between inpatient clinicians and the outpatient pharmacy to coordinate discharge medication access planning.

Analysis and resolution

Intervention. In 2018, health-system pharmacists collaborated with the information technology (IT) department to develop an electronic DMCI consult order, a standard note template, and a workflow to aid in communication about discharge medication needs between inpatient clinicians and outpatient pharmacy. This development team consisted of 1 inpatient TOC pharmacist, 1 outpatient pharmacist manager, and 3 application analysts. The application analysts created the consult order, outpatient pharmacy consult queue, standard note template, and a tip sheet for implementation. They also modified the EMR access for outpatient pharmacy from read-only to full access. It is estimated that the application analysts' work totaled approximately 4 hours. The inpatient TOC pharmacist implemented the DMCI consult order and workflow as part of inpatient TOC activities. The outpatient pharmacist manager implemented the DMCI consult order,

outpatient pharmacy consult queue, standard note template, and workflow as part of outpatient pharmacy responsibilities. The DMCI consult order and note template were shared with system providers via a health-system clinical council and an electronic communication about EMR updates.

Any provider who has access to place orders in the EMR was able to place the DMCI consult order. The health system added the DMCI consult order to the list of orders a pharmacist could place "per protocol, no cosign required." The consult order is built similarly to a medication order in that it requires the medication name, dose, frequency, and days or doses of therapy and is placed from the "manage orders" section of the patient's records (Figure 1). The field containing the medication name pulls specific products from the outpatient EMR medication database. Standard text on the order reminds the provider that the consult order is not an actual prescription. If necessary, the inpatient clinician placing the order may provide additional information for the outpatient pharmacy in the comment section. Once electronically signed, the DMCI consult order routes to the hospital-specific outpatient pharmacy queue. An outpatient pharmacy technician is assigned to process DMCI consult orders. If necessary, the outpatient pharmacy technician or pharmacist initiates a prior authorization request. Once the DMCI consult order is completed, it is marked as completed in the EMR. The outpatient pharmacy technician documents the result for the DMCI consult order in the patient's medical record using a standard note template and standard results (Figure 2). This note is placed within the current inpatient encounter to communicate the result to inpatient clinicians. If the prior authorization process is not complete at the time the initial note is placed, the pharmacy technician places an additional note in the patient's EMR when the prior authorization information is available from the insurance company. The DMCI consult order workflow is detailed in Figure 3.

Figure 1. Discharge medication consult order.

Figure 2. Standard documentation of discharge medication cost inquiry consult order results.

- Covered with Copay: $ *(free text amount)*.
- Patient has not met the deductible.
- Patient has a remaining deductible of $ *(free text amount)*.
- Patient is currently in the donut hole.
- Not covered. Contact the pharmacist.
- Prior authorization required. Pharmacy Initiated.
- Prior authorization required & approved. Cost: $ *(free text amount)*.
- Step therapy required. Contact the pharmacist.
- Insurance mandates fill at a different pharmacy: *(free text name of pharmacy)*.
- Insurance recommends alternate product. Call the pharmacist.
- Insurance mandates patient to call *(free text information)*.
- *Free text for other information not listed above*

Analyzing the tool and workflow. This was an institutional review board–approved retrospective case study evaluating use of the DMCI consult order. Patients were eligible for inclusion in the study if they were 18 years of age or older, hospitalized at 1 of the 5 acute care hospitals, and had at least 1 DMCI consult order between August 1, 2019, and October 31, 2019. Patients were excluded if the DMCI consult order was sent from an ED, if the patient was pregnant or incarcerated, or if the DMCI consult order was a duplicate for the same patient encounter. Additionally, DMCI consult orders for transplant patients or patients requiring an intravenous medication were excluded because separate processes exist for these populations.

DMCI consult orders and patient demographic data were extracted from the EMR and recorded in a standardized electronic case report form. Ten percent of all patient encounters were validated manually. Outpatient pharmacy prescription fill history and prescription insurance data were extracted from the outpatient pharmacy database for patients who met the inclusion criteria and received the DMCI consult order medication from the hospital's outpatient pharmacy at discharge. Due to feasibility, outcomes that could not be retrieved electronically were collected on every third patient encounter using manual chart review.

Measures for all DMCI consult orders placed included provider type, hospital

Figure 3. Discharge medication cost inquiry consult order workflow.
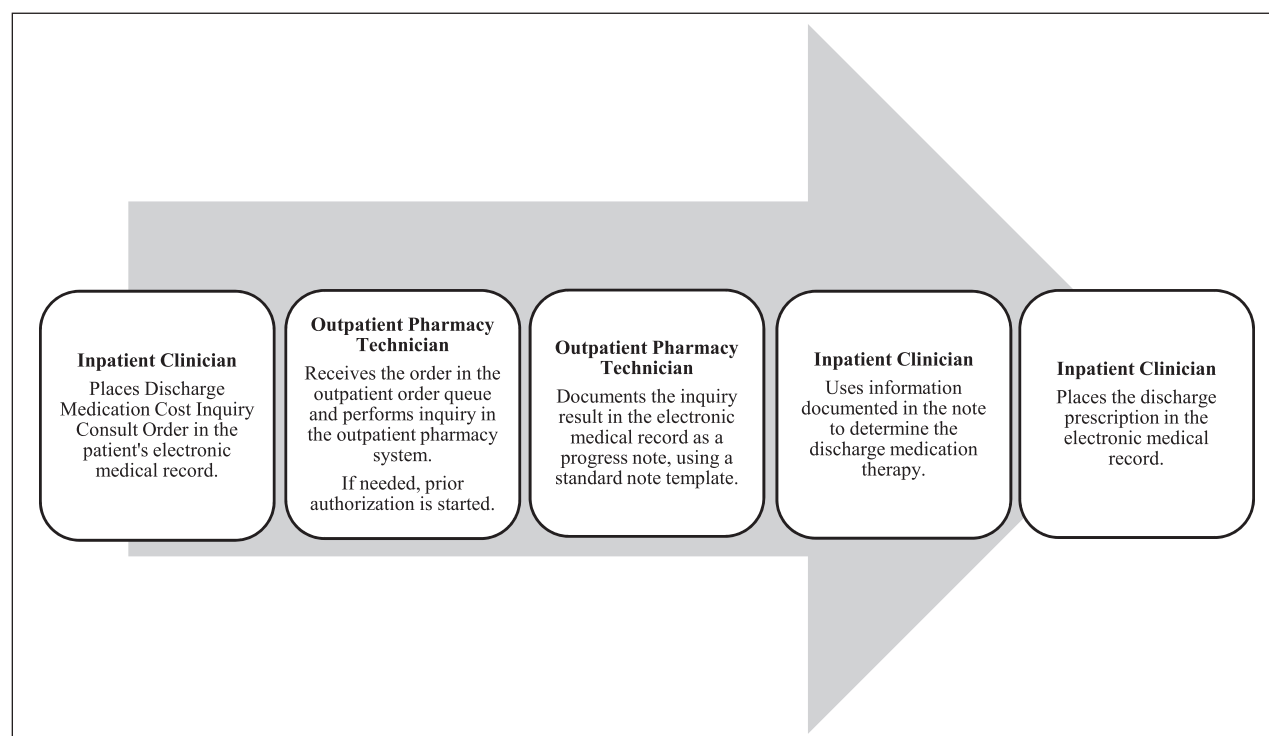
location and unit description (intensive care, general practice, or stepdown unit), number of DMCI consult orders per encounter, time between admission and DMCI consult order placed, time between DMCI consult order placed and note placed in EMR, DMCI consult order medication class, insurance, discharge disposition, and length of stay. Outcomes collected on one third of the patient encounters included DMCI consult order result, ED visit or readmission within 30 or 90 days for a medication access issue related to the DMCI consult order sent, and prescription capture by health-system outpatient pharmacy. Type of prescription insurance was determined from discharge medication prescriptions submitted to the outpatient pharmacy and dispensed to the patient on discharge.

During the study period, the health-system EMR was Epic (version 2018; Epic Systems Corporation, Verona, WI). The outpatient pharmacy prescription management system was EnterpriseRx (version 10.4; McKesson, Irving, TX). Data were evaluated using Microsoft Excel (version 16; Microsoft Corporation, Redmond, WA) and Microsoft Access

2016 (version 16; Microsoft Corporation, Redmond, WA). Descriptive data were reported as number and percentage for categorical data and median and interquartile range (IQR) for continuous variables.

Results of analysis. *DMCI consult orders.* Between August 1, 2019, and October 31, 2019, there were 4,607 DMCI consult orders placed. After review of these orders for inclusion and exclusion criteria, 4,027 DMCI consult orders were identified for analysis (Figure 4), which represented 2,236 patient encounters and 2,145 patients. The median number of DMCI consult orders placed per encounter was 1 (IQR, 1, 2). Most DMCI consult orders were placed by physicians (1,873, 46.5%). Health-system inpatient pharmacists placed 1,413 (35.1%) DMCI consult orders. Of these, 470 (33.3%) were placed by PGY1 and PGY2 pharmacy residents. At the large tertiary care hospital, a majority of the DMCI consult orders were placed by pharmacists (1,380, 54.9%) (Figure 5). Most DMCI consult orders were placed from general medicine floors (3,128, 77.7%). Although the DMCI consult orders were placed

Figure 4. Discharge medication cost inquiry consult order selection for analysis. DMCI indicates discharge medication cost inquiry.
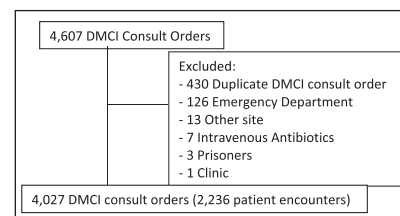
for a wide variety of medication classes, the majority were placed for anticoagulants (2,245, 55.7%). The median time from admission to placement of a DMCI consult order was 2.21 days (IQR, 1.01, 4.66 days). Additional details of DMCI consult orders regarding provider type, patient location, and medication classes are in Table 1.

The total number of DMCI consult orders assessed for additional details was 1,397 (34.7%), which accounted for 747 patient encounters. Of these DMCI consult orders, 1,301 (93.1%) had a note indicating the result of the DMCI consult order. For the 96 DMCI consult

Figure 5. Discharge medication cost inquiry consult order by provider type. DMCI indicates discharge medication cost inquiry.
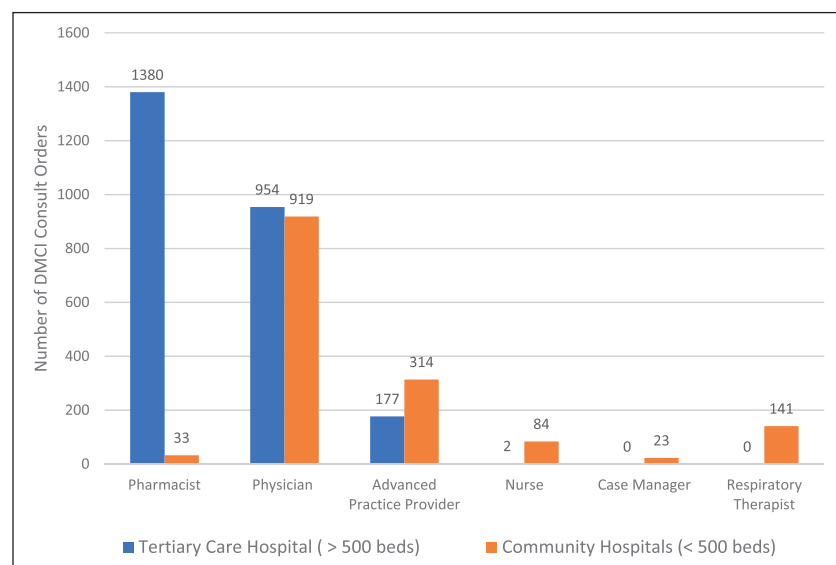
orders that did not have a note, this was due to discontinuation of the DMCI consult order in 15 cases (15.6%), 65 (67.7%) of the orders were placed the day of discharge, and the reason for no note was unknown for the remaining 16 orders (16.7%). The median time from placement of a DMCI consult order to placement of an initial note was 4.32 hours (IQR, 1.4, 18.5 hours). The median length of stay was 5 days (IQR, 3, 9 days) per encounter ($n = 2,236$). Most patients were discharged home (1,654, 77.1%), while 422 (19.7%) patients were discharged to a skilled nursing or rehabilitation facility, 67 (3.1%) patients were discharged to hospice or died, and 2 patients were still admitted.

Medication access results. The majority of the DMCI consult orders were identified as covered (849, 60.8%); however, several access barriers were identified for the remaining 548 orders (39.2%). The most common access barrier was prior authorization (63%). Of these orders, prior authorization was completed for 49 (44.5%) before discharge while approval was pending for 61 (55.5%) at discharge. The results of the DMCI consult orders can be found in Table 2.

Outpatient prescription generation and patient assistance. Of the 747 patient encounters manually reviewed, 646

(86.5%) encounters had at least one prescription generated on discharge. A total of 576 prescriptions were generated for the exact DMCI consult order medication. Of those, 21 prescriptions (3.6%) were not filled by the health system's outpatient pharmacy. The type of prescription insurance was evaluated for the 555 DMCI consult orders for which prescriptions were filled by the health system (Table 3). Outpatient pharmacy secured medication access assistance for 114 of the 555 prescriptions filled (20.5%). Of these, a manufacturer discount card was used for 100 prescriptions (87.7%) and the institution's emergency medical needs fund was used for 14 prescriptions (12.3%).

Readmission. There was 1 readmission within 30 days because the patient did not have access to a nebulizer for medication administration. There were 3 readmissions within 90 days, including for 1 patient who ran out of medications, 1 patient who was nonadherent, and 1 patient who could not afford their medication.

Lessons learned. *Successes.* Development of this electronic tool and workflow helped expand pharmacy TOC activities to include medication access. The DMCI consult order facilitated communication with the outpatient pharmacy, in contrast to the previous

process in which providers waited for a telephone call throughout the day. Electronic communication also resulted in a more efficient workflow for outpatient pharmacy. As a result of this process, each site dedicates a pharmacy technician to process and communicate the results of DMCI consult orders instead of multiple pharmacy staff receiving telephone calls regarding medication access. Because of the ease of use and success of this process, providers requested it be incorporated into the admission order set for heart failure. It was also incorporated into the respiratory therapists' workflow at one hospital.

Challenges. As stated previously, pharmacy TOC activities were routinely performed at all health-system hospitals before introduction of the DMCI consult order. However, ensuring medication access was not a primary focus. After implementation of the DMCI consult order, inpatient pharmacists were challenged with understanding the DMCI consult order results and how to overcome medication access barriers. As a result, TOC informational sessions were offered to inpatient pharmacists, which described insurance company tiers, step therapy, deductibles, Medicare Part D, patient assistance programs, and manufacturer coupons and vouchers.

Although the DMCI consult order increased communication with the outpatient pharmacy, the DMCI consult order note is placed as a progress note and thus is not easily differentiated from other progress notes in the encounter. This sometimes leads to confusion about whether the DMCI consult order has been processed and documented in the EMR. As a result, a request was recently submitted to the IT department to create a new note type that would allow clinicians to easily identify the DMCI consult order note.

Lastly, after readily and frequently adopting the DMCI consult order into the discharge planning workflow, clinicians who also covered in the ED began placing DMCI consult orders for patients in the ED. The outpatient pharmacy workflow was not available to manage the urgent DMCI consult

Table 1. Discharge Medication Cost Inquiry Consult Order Characteristics

Characteristic[a]	DMCI Consult Orders (n = 4,027)
Clinician type	
Physician	1,873 (46.5)
Pharmacist	1,413 (35.1)
Midlevel provider	491 (12.2)
Respiratory therapist	141 (3.5)
Case manager	109 (2.7)
Patient location	
General medicine unit	3,128 (77.7)
Intensive care unit	750 (18.6)
Stepdown unit	107 (2.7)
Perioperative unit	42 (1)
Medication class	
Anticoagulant	2,245 (55.7)
Respiratory inhaler	602 (14.9)
Antimicrobial	428 (10.6)
Antidiabetic	220 (5.4)
Antiplatelet	143 (3.6)
Antihypertensive	87 (2.2)
Respiratory nebulization	63 (1.6)
Analgesic	58 (1.4)
Cardiac	47 (1.2)
Colony-stimulating factor	37 (1)
GI/hepatology	19 (0.5)
Neurologic	17 (0.4)
Respiratory	13 (0.3)
Immunosuppressant	13 (0.3)
Other	35 (0.9)

Abbreviations: DMCI, discharge medication cost inquiry; GI, gastrointestinal.
[a]Data shown as No. (%).

orders from the ED, as these orders require a faster turnaround time. The ED DMCI consult orders were also placed 24 hours a day, although staff are not available at all hours in the outpatient pharmacy. After completion of this study, the DMCI consult order was expanded to the ED, but the order routes to a different outpatient pharmacy queue so that ED requests can be triaged more quickly to prevent delays in discharge.

Discussion

The Joint Commission recognizes that many factors contribute to ineffective TOC.[6] Experts often describe communication, patient education, and accountability breakdowns as the cause of poor transitions.[7] Use of electronic tools to communicate and coordinate care has been shown to be effective.[8,9] The DMCI consult order is a novel electronic tool for communication between inpatient clinicians and

outpatient pharmacy.[7,10] This study describes how the DMCI consult order and workflow were used proactively to communicate TOC needs and medication access barriers for discharge.

The DMCI consult order was used by many different clinician types. Although physicians placed the most DMCI consult orders, pharmacists, midlevel providers, respiratory therapists, and case managers also placed orders, demonstrating that an electronic tool provides a method to engage a multidisciplinary approach for discharge planning. However, differences were seen with regard to the provider type most frequently placing orders based on the size and resources of the hospital. At the institution's largest teaching and tertiary care hospital, pharmacists were the most common users, followed by physicians. This could be due in part to the hospital's inpatient pharmacy practice model and training program. Patient care coordination and discharge, including medication access, are discussed Monday through Friday on multidisciplinary rounds. In addition, this site has the largest number of pharmacy trainees incorporated into the unit-based practice model. At the other 4 hospitals, which all have fewer than 500 inpatient beds, physicians were the most common users and a variety of provider types placed orders, including nurses, case managers, and respiratory therapists. Staffing resources and practice models could impact how the DMCI consult order can be incorporated into the multidisciplinary team approach to ensuring medication access for discharge. This also identifies an opportunity to improve use of this electronic tool and workflow in care coordination and discharge planning. Other health-system pharmacy practice models that already focus on medication access may benefit from implementing the DMCI consult order to allow for earlier patient identification and resolution of outstanding medication access barriers.

Before implementation of this consult order and workflow, inpatient clinicians would use telephone calls

Table 2. Discharge Medication Cost Inquiry Consult Order Results

DMCI Consult Order Result[a]	DMCI Orders (n = 1,397)[b]
Covered	849 (60.8)
Prior authorization required	174 (12.4)
Not covered	124 (8.9)
No insurance	71 (5.1)
Deductible not met	48 (3.4)
Other[c]	131 (9.4)

Abbreviation: DMCI, discharge medication cost inquiry.
[a]Data shown as No. (%).
[b]Results are shown for the one third of patient encounters reviewed manually.
[c]Filled elsewhere, too soon, unknown, or insurance-specific specialty pharmacy.

Table 3. Prescription Insurance for Discharge Prescriptions Captured

Insurance Type[a]	Discharge Prescriptions (n = 555)
Medicare Part D	161 (29)
Private insurance	135 (24.3)
Medicaid	104 (18.7)
No insurance	103 (18.6)
First fill for discharge to facility	48 (8.7)
Medicare Part B	3 (0.5)
Dual prescription coverage	1 (0.2)

[a]Data shown as No. (%).

to discuss discharge medications with the outpatient pharmacy. This previous workflow lacked transparency, standardization, and accountability. Because the results of the test medication claims were not documented in the medical record, there was poor handoff and communication regarding the status and results of test claims, placing patients at risk for fragmented care. The American Society of Health-System Pharmacists (ASHP) Practice Advancement Initiative (PAI) 2030 recommends that pharmacy advocate for IT that is interoperable and transparent with respect to usability, security, and functionality across the continuum of care.[11] The new DMCI consult order, standardized note template, and associated workflow became the method of communicating inpatient discharge medication access information. The

DMCI consult order and notes provide a standard method of communication between inpatient and outpatient team members, creating transparent transition planning, as 93.1% of the DMCI consult orders had a note placed. Additionally, because this information is documented in the EMR, the health system can use the electronic health record to obtain data on discharge medication planning, patient outcomes, and prescription capture. Health systems can use this workflow and tools to improve medication management, transition planning, information transfer, healthcare provider engagement, and shared accountability across providers and organizations, as recommended in the National Transitions of Care Coalition Care Transition Bundle.[3] This also provides a framework for the health-system pharmacist and

technician to ensure discharge medication access for patients.

Many successful TOC models address medication access and early discharge planning.[12] In this study, most medications were covered; however, the workflow identified medication access barriers. Almost one quarter of the medications had access barriers, including medications not covered by insurance, lack of prescription insurance, or another type of barrier. For medications requiring prior authorization, 63% of requests for prior authorization were submitted by the outpatient pharmacy before hospital discharge. This process also helped identify patients who needed patient assistance programs to make their medications more affordable, and the health system was able to provide some level of financial assistance for 20.5% of the medications for which prescriptions were filled. By sending and processing DMCI consult orders before discharge, inpatient clinicians were able to proactively identify and prevent medication access barriers at discharge and ensure patients could initiate or continue medications after discharge. These TOC interventions would have been challenging without a standardized process, which could have led to fragmented care. This study describes how health-system clinicians can use an electronic tool to evaluate access to discharge medications, which could be a barrier to discharge and adherence if barriers to access are not identified before prescriptions are sent to a pharmacy for hospital discharge. The DMCI consult order and workflow allow for early recognition and resolution of such barriers.

Pharmacy's role in TOC includes interventions at admission and discharge, focusing on high-risk populations, and follow-up with an ambulatory care pharmacist.[11,13,14] Pharmacists and pharmacy support personnel have a prominent role in determining discharge medication access. Best practice models deploy pharmacy technicians to obtain medication histories and insurance information, process test claims, adjudicate prescriptions, discuss

payment options with patients, and provide follow-up after discharge.[5] This study describes how inpatient pharmacy departments can collaborate with the health system's outpatient pharmacy to identify and communicate medication access needs for discharge using the EMR. Because the outpatient pharmacy technician documents data in the EMR, other clinicians across the continuum of care can obtain information regarding medication access efforts, even after discharge. This aligns with ASHP PAI 2030, which recommends integration of pharmacy to provide care across the continuum and participation of pharmacy technicians in advanced roles.[11,15] In this study, pharmacy's efforts to defragment care through transition planning were not limited to the general medicine floor but were also included in the intensive care unit workflow, demonstrating how determining access to discharge medications can begin in the intensive care unit. If such efforts are incorporated into the multidisciplinary workflow and clinical pharmacy services, health-system pharmacies could demonstrate their role in defragmenting care through early discharge planning, including in the intensive care unit.

This study has several limitations. First, it is limited because it does not compare use of the DMCI consult order tool to previous workflows for evaluating medication access before implementation of the DMCI consult order. Because previous workflows were neither consistent among the hospitals nor documented electronically, a pre-post comparative study was not possible. Second, information documented in the EMR was limited due to the retrospective nature of this study. Third, because the DMCI consult orders assessed were during the latter half of the calendar year, the DMCI consult order results may not be representative of various insurance requirements throughout the calendar year. For example, insurance deductibles are more common earlier in the calendar

year and there may have been more patients in need of assistance if the study were conducted earlier in the year.

Conclusion

The DMCI consult order is an electronic tool that can be used to communicate discharge medication needs. It also provides a model for TOC planning and prescription generation. When incorporated into the health-system workflow, it can help identify, communicate, and resolve medication access barriers that may not have otherwise been recognized before patient discharge. Future studies should evaluate how the DMCI consult order may be used to optimize therapy in high-risk populations and prevent delays in hospital discharge r–elated to medication access barriers.

Disclosures

The authors have declared no potential conflicts of interest.

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