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## Currents in Pharmacy Teaching and Learning

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## Experiences in Teaching and Learning

## Preliminary findings from a student pharmacist operated transitions of care pilot service

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## ARTICLE INFO

## Keywords:

Transitions of care  
Student pharmacist  
Advanced pharmacy practice experience

## ABSRACT

**Background and purpose:** Student pharmacists are well equipped to complete transitions of care (TOC) activities. This communication describes the implementation of a student-operated TOC pilot service at a community hospital and explores the clinical and educational findings of such a service.

**Educational activity and setting:** Patients admitted to the hospital were included in the service if they had a primary care provider from an affiliated ambulatory care office. The TOC student pharmacist verified the medication history upon admission, reviewed the inpatient chart during the hospitalization, assessed medication adherence, provided discharge counseling, and prepared a TOC document to share with the patient's ambulatory care office.

**Findings:** Forty-one patients were followed in the TOC pilot service. Student pharmacists identified 208 medication discrepancies between hospital and ambulatory care medication lists upon admission for 35 of the patients. Review of the discharge medication reconciliation was performed for 31 (75.6%) of the patients prior to discharge. The Adherence Estimator® was performed for 32 (78%) of the patients, with a mean score of 2.2. Student pharmacists anecdotally reported satisfaction with their involvement, and preceptors felt confident that the students were able to serve as an extension of the TOC service.

**Discussion and summary:** Implementation of a student pharmacist-operated TOC service broadened student involvement on advanced pharmacy practice experience (APPE) and improved patient care through resolution of medication discrepancies, reinforcement of adherence, and communication with primary care providers.

## Background and purpose

Transitions of care (TOC) occurs when patients are moving from one location or level of care to another.<sup>1</sup> This shift can be a source of medication errors and, therefore, requires considerable coordination by healthcare providers.<sup>1</sup> These errors can lead to increased healthcare costs due to readmissions and increased lengths of stay.<sup>1</sup> Student pharmacists are capable of completing TOC activities and can serve as a dedicated resource to further enhance care coordination and improve the patient care experience.

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**Table 1**  
Student pharmacist involvement in transitions of care.

Authors	Setting	Student Activities	Student Supervision	Student Feedback	Other Pharmacy Staff Involved
Walker et al. <sup>3</sup>	Academic Teaching Hospital	<ul style="list-style-type: none"> <li>- Attended discharge rounds</li> <li>- Screened patients and performed medication use behavior interviews</li> <li>- Interviewed patients and identified/addressed barriers to adherence</li> <li>- Assessed discharge medications and estimated drug coverage</li> <li>- Reconciled readmission and discharge medications</li> <li>- Provided medication counseling</li> <li>- Conducted post discharge follow-up phone calls</li> </ul>	<ul style="list-style-type: none"> <li>- For the first week, students shadowed a preceptor and were allowed greater responsibility in the remaining weeks</li> <li>- Students were directly supervised by a preceptor through week 3</li> </ul>	<ul style="list-style-type: none"> <li>- A formal survey of six students revealed that the students had increased confidence in their abilities after the APPE</li> <li>- Preceptors also reported that student performance met or exceeded all expectations</li> </ul>	<ul style="list-style-type: none"> <li>- Clinical pharmacist preceptor</li> </ul>
Conklin et al. <sup>4</sup>	Hospital and family medicine clinic	<ul style="list-style-type: none"> <li>- Documented interventions</li> <li>- Inpatient admission medication reconciliation</li> <li>- Discharge medication review and hospital-community pharmacist handoff</li> </ul>	<ul style="list-style-type: none"> <li>- Students were supervised by residents, with weekly quality checks by a pharmacist</li> </ul>	<ul style="list-style-type: none"> <li>- Student feedback about their participation was not discussed</li> </ul>	<ul style="list-style-type: none"> <li>- Inpatient and outpatient pharmacist</li> <li>- Pharmacy residents</li> </ul>
Anderegg et al. <sup>5</sup>	Academic medical center	<ul style="list-style-type: none"> <li>- Follow-up phone call reminder</li> <li>- Admission medication histories</li> <li>- Patient education</li> </ul>	<ul style="list-style-type: none"> <li>- Students were supervised by a pharmacist</li> </ul>	<ul style="list-style-type: none"> <li>- The authors reported that students were essential to the team and practiced at the top of their skill set</li> </ul>	<ul style="list-style-type: none"> <li>- Pharmacists</li> <li>- Pharmacy residents</li> <li>- Pharmacy technicians</li> </ul>
Gilmore et al. <sup>6</sup>	Inpatient and outpatient	<ul style="list-style-type: none"> <li>- Medication reconciliation</li> <li>- Patient education</li> </ul>	<ul style="list-style-type: none"> <li>- Students were trained and then allowed to complete tasks independently</li> <li>- Tasks were delegates by a rounding pharmacist</li> <li>- Preceptor supervision was always available if needed</li> </ul>	<ul style="list-style-type: none"> <li>- The students reported satisfaction with their participation</li> <li>- The authors reported that students enhanced the service, there were more requests for students on rotation, and there were no concerns about students assisting with activities</li> </ul>	<ul style="list-style-type: none"> <li>- Clinical pharmacy specialists</li> <li>- Point-of-care pharmacists</li> <li>- Pharmacy residents</li> <li>- "Transitions pharmacist extender"</li> <li>- Pharmacists</li> <li>- Pharmacy technicians</li> </ul>
Gunadi et al. <sup>7</sup>	Community teaching hospital – heart failure patients	<ul style="list-style-type: none"> <li>- Admission medication reconciliation</li> <li>- Discharge medication reconciliation</li> <li>- Discharge counseling</li> <li>- Daily patient medication profile review</li> </ul>	<ul style="list-style-type: none"> <li>- Student supervision was not discussed</li> </ul>	<ul style="list-style-type: none"> <li>- Student feedback about their participation was not discussed</li> </ul>	<ul style="list-style-type: none"> <li>- Pharmacy residents</li> </ul>
Christy et al. <sup>8</sup>	Community teaching hospital and outpatient pharmacy	<ul style="list-style-type: none"> <li>- Readmission risk complexity score determination</li> <li>- Discharge medication review</li> <li>- Medication counseling</li> <li>- Delivery of medications to bedside</li> <li>- Ambulatory care clinic scheduling</li> <li>- Follow-up phone calls</li> </ul>	<ul style="list-style-type: none"> <li>- Students were supervised by a clinical pharmacy specialist</li> </ul>	<ul style="list-style-type: none"> <li>- Student feedback about their participation was not discussed</li> </ul>	<ul style="list-style-type: none"> <li>- Clinical pharmacy specialist</li> <li>- Pharmacy residents</li> </ul>

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