Supplemental Digital Content, Table 1. Identified Barriers

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| **Adherence Challenges** |
| * Patients find it hard to understand medication instructions due to low health literacy or diminished capacity.
* Patients cannot remember prescribed multiple medications that need to be taken at different times of day, with or without food, etc,
* Patients cannot remember medication names (identify it by its features "the blue one" or function "my water pill"), brand names vs. generic, or dosage.
* Patients have difficulty understanding discharge orders or changes in medications/dosages, and will often not discontinue medications that they no longer need.
* Patients are not aware that OTC and PRN medications should be reported in case of contraindications, and often, providers do not ask about these types of medications.
* Patients under-report use of medications that might be "embarrassing."
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| **Access Challenges** |
| *Costs** Many elderly patients cannot afford to make numerous changes to their prescriptions, they may not dispose of medications if they perceive that they might need the medication in the future, or do not understand how to dispose of them.
* Patients cut pills into pieces when they needed to lower dosages as opposed to refilling the prescriptions with the new dose.
* Patients share medications with friends and family.
* Patients use prescriptions off-label when not authorized by their provider.
* Medications ordered through a mail order pharmacy cannot be returned and are often dispensed in three month supplies.

*Physical challenges to access** Transportation to pharmacies- when a medication change is identified, patients may not be able to acquire new medications quickly.
* In rural communities, pharmacies may be closed at the time patients are discharged from the hospital or when they need refills.
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| **Structural Challenges** |
| *Communication between patients and providers** If discharge summaries are shared with the clinic, they often do not indicate an emergency vs. inpatient visit.
* Patients often use multiple pharmacies, or mail order pharmacies, making prescriptions challenging to monitor.
* Medications offered in the hospital formulary may differ from those offered in the insurance approved formulary for patients, compounding confusion for the patient/caregiver.
* There are sometimes multiple people who help to care for a single patient including home health agencies and family members.
* Caregivers are not always given medical power of attorney.

*Communication within and across healthcare entities** Patients may believe that their medical information is shared across healthcare entities, which is often not the case. Even WITHIN a care facility, different electronic health record vendors may make it impossible to share information.
* Communication between facilities during clinical handoffs is not optimal, as electronic health record vendors may vary across and within facilities, which limits a providers' ability to get a comprehensive view of the patients' care unless self-reported by the patient.
* Discharge lists are not sent to the pharmacy, the patient must bring it with them.
* Frequent nursing staff turnover made the points of responsibility for communication between health care facilities challenging.
* Finally, specific to the current process across clinics, the hospital reported that they implemented a new system to fax currently discharged patients to a central fax machine at the clinic, where a designated person would create task notes for providers with patients on the list. The fax number was incorrect. This was corrected immediately by the researchers on this project.
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