Supplemental File (Table exceeds 2 pages)

Table 2. Themes from qualitative cluster analysis and actionable takeaways

Theme	Example event	Actionable takeaways
Conflict between clinical advice and competing priorities	• Dialysis treatment terminated 45 minutes early per patient request so she can accompany his family member to an appointment. Counseled on risks and complications of inadequate Hemodialysis. • Patient came to urgent care for recheck of blood pressure and blood sugar level…Patient had basic metabolic panel done with the results of potassium level of 5.7 and blood sugar of 410. Patient was offered urgent care for IV fluids and insulin in order bring potassium level and glucose down to safer levels. Patient refused treatment and stated she needed to go to work and could no longer wait. Pt stated she would come back on her day off. Provider explained the risk and complications to patient. Pt verbalized understanding and signed against medical advice form. • Patient requested to be off hemodialysis early due to reported anxiety. Patient was out of is out of anti-anxiety medication and needed to pick it up today. Denied dizziness or chest pain, reminded to watch fluid intake. Patient verbalized understanding.	*Elicitation of patient priorities when providing safety precautions to patient in order to identify potential competing priorities in advance; employing ask- tell-ask technique in order to effectively communicate a potential safety risk* *Provision of convenient care options, such as a range of options of hemodialysis timing or urgent care access on-site at place of work.* *Coordination with social services to address social determinants of health such as transportation access, medication availability*
Medication adverse events caused by communication and education breakdowns	• Pt was prescribed Insulin Isophane Human Recombinant 8 units before breakfast and dinner, sent to same pharmacy. On Day 0 it was noticed that patient was taking Humalog insulin with direction for 18 units twice daily. Patient also reports hypoglycemic episodes with this dose. Pharmacy was called and they noted order for Insulin Isophane Human Recombinant 18 units before breakfast and dinner. They acknowledged that Humalog was filled instead of what was ordered. We suspect that the pharmacy never discontinued a prior order and also filled the incorrect type of insulin. Assessment: In EMR when you discontinue a medicine the pharmacy	*Prioritization of high risk medication classes (hypoglycemics such as insulin, opioids, anticoagulants) for medication reconciliation and education; enhanced patient- clinician communication with new prescriptions including full name, indication, dose, potential adverse*

	does not get automatically notified. Patient error: not aware of different medicine types, and not bringing medicines to each appointment to verify what he is taking and picking up. Provider error: provider not calling pharmacy to discontinue old medicines. • Reaction to Benadryl given as allergy meds for immunomodulator infusion. Patient actually allergic to Benadryl, but didn't realize Benadryl was the same as diphenhydramine. • Discovered that patient was discharged home after obstetrical stay on Lantus insulin instead of NPH. During patient's hospitalization, patient was on NPH and Humalog. As soon as it was discovered, MD notified. Staff attempted to reach patient multiple times at the telephone number listed, but was unable to reach patient. Pharmacy was contacted to inquire if patient had picked up her medications. Walgreen's informed that the patient had picked up Lantus and Humalog three days prior. Called patient's emergency contact who contacted the patient. Patient called back, stated that she had not been checking her blood sugar levels and denied signs or symptoms of hypoglycemia. Advised patient to immediately discontinue Lantus and to pick up new prescription for NPH at Walgreen's pharmacy. Patient resisted suggestions until follow up appointment with doctor. Educated patient on risks of abnormal blood sugar in pregnancy. Notified MD who counseled patient and sent correct insulin prescription. As of two days since that call, per pharmacy patient has not picked up new insulin prescription. • Patient was inadvertently discharged from anticoagulation clinic. The error was recognized and the patient was immediately put back into the anticoagulation work-flow and re-established reopened episode. However, when the pharmacist reopened the anticoagulation episode, she did not add in the anticoagulation modifier. This essentially meant that the patient was not	*effects, and expected duration; electronic medical record interoperability between pharmacy and prescriber in order to ensure medication dispensing accuracy; patient education on fasting parameters; patient education on brand name/generic name; inclusion of pharmacist on care team to support communication*

	followed by the clinic electronically and was lost to follow-up. Unfortunately, because the modifier was not re-initiated, there was no way to catch that the patient was not getting followed by warfarin clinic and not getting labs drawn. The patient continued to get INR checked, but no one from anticoagulation clinic received a notice that the patient had a lab drawn. The patient did not call to ask the result either. Patient eventually stopped taking warfarin and was admitted subsequently with a stroke. The patient did sign a contract that stated they would call within 48 hours if they did not hear from anticoagulation clinic and the patient never called to talk to anticoagulation clinic after any labs. In addition, the patient had refills of warfarin available at the pharmacy but failed to pick them up. Of the 11 INR readings in the chart, there was only 1 therapeutic INR. Three were supra-therapeutic and 7 were sub- therapeutic. The prescribing cardiologist is aware of these issues. This is a human error (incorrect discontinuation of episode) and an electronic error re-establishment of the episode does not add the modifier for anticoagulation back in). All staff have been educated in how to properly re- open an anticoagulation episode and continued patient education to call the clinic if they do not hear from us will continue.	
Patients with disabilities are vulnerable to external environmental and caregiver behaviors	• Patient attempted to get out of wheelchair to use the restroom when she lost his balance and fell. Patient was assisted to a sitting position by spouse, MA and LVN. Patient was alert and oriented and understood what happened. Patient was then assisted back in to the wheelchair by patient's spouse, LVN, and MD. MD was notified and came out to check on patient as she was complaining of left hip pain. • Wife was home with patient. Patient wanted to go into bathroom by herself. Patient stood up from wheelchair using his walker and lost his balance and fell over striking his head on the tub. Patient also received cuts on his leg near the thigh and forearm. Fire department and paramedics on	*ADA accessibility for all clinic or hospital rooms and waiting areas to ensure physical safety for patients with mobility challenges; development of staff protocols and training for patients using assistive devices; home caregiver support and education in how to prevent falls in the presence of mobility challenges; enhanced*

	called to scene. Patient was transported to emergency department for evaluation. • Patient reports falling while walking outside on his patio; cannot recall a specific reason but thinks she may have caught his foot on an irregularity on cement. She denies dizziness, fatigue, short of breath or fainting. Was using her walker at the time. Unwitnessed as she was home alone. Husband aware when he returned home. Patient was able to get herself up from ground and return to inside her home. She sustained a skin tear to arm that was cleaned and bandaged by husband. Patient was seen by home physical therapist and general status was assessed, fall prevention measures were reviewed and recommendations made to improve overall safety. Patient and caregiver declined need to be assessed by MD. • Patient was outside, alone without assistive device in slippers in the rain. He slipped on wet leaves and fell on his shoulder. Patient did not notify MD or home care. No bruising, redness or abrasion. No change in ROM. Patient had physical therapy ordered but no MD approval. No one noticed this for 1 week. Patient refused follow up with primary care/urgent care.	*access to home safety evaluation*

Note: IV: intravenous. EMR: Electronic medical record. MD: Medical doctor. NPH: Neutral Protamine Hagedorn Insulin. INR: International Normalized Ratio. MA: Medical Assistant. LVN: Licensed Vocational Nurse. ROM: Range Of Motion