Medication Reconciliation: A Case Review

Marghie Giuliano, R.Ph.
December 8, 2022

This material was prepared by the IPRO QIN-QIO, a Quality Innovation Network-Quality Improvement Organization, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. Publication # 12SOW-IPRO-QIN-T1-A2-22-828

IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN–QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

Medication Reconciliation & Care Transition

- What is *medication reconciliation*?
  - Definition set by the Joint Commission:

"Medication reconciliation is the process of comparing a patient's medication orders to all of the medications that the patient has been taking. This reconciliation is done to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions. It should be done at every transition of care in which new medications are ordered or existing orders are rewritten."

- What is a *care transition*?
  - Transitions of Care
    - The movement of patients between health care locations, providers, or different levels of care within the same location as their conditions and care needs change.

The Joint Commission. Medication reconciliation. Sentinel event alert, Issue 35.2006. http://www.jointcommission.org/SentinelEvents/SentinelEventAlert/se_35.htm. Accessed August 15,2016

Coleman, Eric A. Commissioned Paper: Transitional Care Performance Measurement. Performance Measurement Report, Institute of Medicine, 2006. Appendix I, pp. 250-276.

IPRO QIN-QIO · Healthcentric Advisors · Qlarant
QIN–QIO Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES iQUALITY IMPROVEMENT & INNOVATION GROUP

Medication Errors During Transitions of Care

- 67% of prescription medication histories contain one or more errors
- 46% of medication errors at admission or discharge
- > 40% of medication errors associated with incomplete reconciliation; 20% of errors results in patient harm
- 36% of patients had medication errors at admission
  - 85% of errors originated with patient's medication history

Sullivan C, et al. Medication reconciliation in the acute care setting: opportunity and challenge for nursing. Journal of Nursing Care Quality, 2005, 20(2): 95-98.
Bates. DW, Spell N, Cullen DJ, et al. The costs of adverse drug events in hospitalized patients. Adverse Drug Events Prevention Study Group. JAMA 1997;277:307-11.
Rozich JD, Howard RJ, Justeson JM, et al. Patient safety standardization as a mechanism to improve safety in health care. JT Comm J Qual Saf. 2004;30(1):5-14.
Blumi BM. Definition of medication therapy management: development of a profession wide consensus. J Am Pharm Assoc. 2005:45:566-72.

IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN–QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

Medication Errors & Discrepancies in Nursing Homes

- 70% of nursing home admissions include at least one medication discrepancy and an average of 3.5 discrepancies per admission from hospital.
- Up to 90% of nursing home health records contained at least one medication discrepancy.
- A well-run medication reconciliation program improves outcomes
  - A nurse practitioner run standardized medication reconciliation process resulted in a 29.7% decreased in the rate of hospital readmissions within a 30-day period.

Tija, et al, Medication Discrepancies upon Hospital to Skilled Nursing Facility Transitions. J Gen Intern Med. 2009
Tong, et al, Nursing home medication reconciliation: a quality improvement initiative. J Gerontol Nurs. 2017
Anderson, et al. A nurse practitioner-led medication reconciliation process to reduce hospital readmissions from a skilled nursing facility. J Am Assoc Nurse Pract. 2020.

IPRO QIN-QIO · Healthcentric Advisors · Qlarant
QIN–QIO Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES iQUALITY IMPROVEMENT & INNOVATION GROUP

Medication Reconciliation Self-Paced Modules

Learning and implementing through case studies

IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN–QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

Steps Involved with Medication Reconciliation

1

VERIFICATION: TAKING THE BEST POSSIBLE MEDICATION HISTORY (BPMH)

2

CLARIFICATION: ENSURING APPROPRIATENESS OF MEDICATIONS

3

RECONCILIATION: DOCUMENTING CHANGES TO THE ORDERS

IHI. Getting Started Kit: Prevent Adverse Drug Events (Medication Reconciliation. How-to-Guide.)

Case 1

Harold Jones is an 88-year-old male with a past medical history of moderate dementia, hypertension, benign prostatic hyperplasia, diabetes, congestive heart failure, chronic back pain, and A-fib. He is being admitted to the skilled nursing facility, from the hospital, for cellulitis, a recent fall with pelvic fracture, acute kidney injury, and worsening dementia. The hospital discharge planner has faxed a copy of the W-10 (orders) to the admissions nurse at nursing facility, and the admissions nurse has in turn faxed a copy of the W-10(orders) to the LTC pharmacy. You are tasked to start the medication reconciliation process by obtaining more information from Mr. Jones' hospital stay to ensure a complete list of medications has been received and reviewed. This process should be timed as close as possible to his LTC admission.

IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN–QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

Sources of Information

- Patient/Resident
- Pharmacy
- Patient's/Resident's caregiver or family member
- Brown Bag – medication bottles
- Discharge summary/W-10
- Treating physicians
- Review of previous medical records
- Prescription monitoring programs
- Health information exchanges

IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN–QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

Drug Name	Strength	Indication	Notes
Cephalexin	500 mg PO QID	Cellulitis	Transitioned from IV Cefazolin in hospital
Eliquis	5 mg PO BID	Afib	
Lantus 15 units SQ HS	Diabetes		
Humalog	100 units/mL: sliding scale per FSBS AC and HS	Diabetes	See accompanying sheet for sliding scale details
Metoprolol	50 mg PO BID	Afib/HTN	
Tamsulosin	0.4 mg PO HS	BPH	
Benadryl	25 mg PO HS PRN	As needed for sleep	
Furosemide	40 mg PO QD	CHF; Edema/HTN	
Lisinopril	20 mg PO QD	CHF/HTN	
Seroquel	25 mg PO BID	Dementia	
Metformin	500 mg PO BID	DM	
Latanoprost 0.005% eyedrops	1 drop OU HS	No diagnosis listed in W-10	
Trazodone	25 mg PO Q6H PRN	As needed for anxiety or agitation	
Colchicine	0.6 mg PO QID	No diagnosis listed in W-10	
Oxycodone/APAP	10/325 mg 2 tabs PO Q6H	Pain	As an inpatient he had an order for Naloxone PRN opioid toxicity, but this was not on discharge orders to the SNF.
Oxycodone/APAP	10/325 mg 1 tab PO Q2H PRN breakthrough pain	Pain	

Key Elements:

- ❑ Drug Name
- ❑ Diagnosis for use
- ❑ Strength
- ❑ Dosage form
- ❑ Dose
- ❑ Route
- ❑ Frequency
- ❑ Duration (if applicable)
- ❑ Last dose administration

W-10 MD/APRN signature: Claire Welch, MD

Allergies? No allergy info given on faxe

Blood Glucose Levels	Humalog Insulin Coverage in Units
60 – 124	No coverage
125 – 150	2 units
151 – 200	4 units
201 – 250	6 units
251 – 300	8 units
301 – 350	10 units
351 – 400	12 units

Pre-Med Rec Actions

- Verify orders are for correct patient
- Verify all pages of fax were sent over
  - Look at page numbers from hospital vs page number from SNF admissions nurse
  - Watch for possibility that a double-sided copy was faxed as a single-sided document, which means missing information, possibly even meds
- Check for MD/APRN/PA signature which makes the W-10 valid
- Check for patient allergy information
- Check for incomplete information on the med orders → drug, dose route, instructions for use, duration, diagnosis for use

Who Can Take a Med History

Prescriber

Nurse

Pharmacist

Pharmacy Technician

Medical Assistant

Intern (student)

- Medical
- Nursing
- Pharmacy*

IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN-QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES iQUALITY IMPROVEMENT & INNOVATION GROUP

Acknowledge the patient/resident	“Hi. Mr. Jones. How are you feeling today?”
Introduce yourself	“My name is Jane Smith. I am a certified pharmacy technician. I will be asking you some questions about the medications you take at home so that we can take the best care of you. Can you please tell me your full name and date of birth?”
Duration of visit	“This should only take about 20 minutes.”
Explain the importance	“We want to make sure we have the correct information recorded so the doctors can get the full picture of what you’re taking and why. Let’s get started!”
Thank the patient	“Thank you so much for your time, Mr. Jones!”

PE1
MG1

Slide 77

RF1 I made a separate slide from the dialogue that was in the previous slide's narration. I made up the last three, please review and edit if need be.
Rebekah Ferguson, 8/3/2022

MG1 Looks good!
Marghie Giuliano, 10/26/2022

The Pharmacy Student cheerfully calls the SNF admissions nurse.

Good afternoon Mary, this is Michael Smith. I'm a pharmacy student at Happy Valley LTC Pharmacy and I will be asking for more information regarding Harold Jones and his admission. It should take about 5 to 10 minutes. Is that OK?

Hello, Michael. Yes, that sounds OK.

To begin, can you confirm Mr. Jones' date of birth and address?

Yes, Harold Jones…date of birth is 2/11/1934 and his address is 220 Baxter St.

OK good. Thank you for faxing us his signed W-10 from the hospital. Do you also have a copy of all of the notes from this stay at the hospital?

Yes, it's fairly lengthy.

Oh, OK. Is it possible that you could scan that document and securely email it to me at the pharmacy please?

1 So...does this happen or is this is what ideally we would like to see happen....Or do the LTC pharmacies do a med rec in the real world.
Marghie Giuliano, 11/14/2022

1 It's admittedly ideal world. I or my colleague pharmacist always did the med rec's at my last job. We usually had access to EMR's ourselves which was most ideal. Otherwise, we would depend on a scan of the hospital notes that thankfully our admissions team would get for us. Real world...not likely any other LTC pharmacies are getting this much info.
But they SHOULD.
Charlie Page, 11/14/2022

You thank Mary for her time and help, then call Mr. Jones' local pharmacy for a list of his medications he was getting filled there.

Good afternoon, this is Michael Smith. I'm a pharmacy student at Happy Valley LTC Pharmacy and I'm doing a med rec for Harold Jones. Could I speak with the pharmacist please?

Sure. The pharmacist, Jane, will be with you in just a minute.

OK thank you.

This is Jane speaking, I'm one of the pharmacists. Can I help you?

Good afternoon, this is Michael Smith. I'm a pharmacy student at Happy Valley LTC Pharmacy and I'm doing a med rec for Harold Jones.

Hello Michael. Ok let me pull up Mr. Jones' med profile.

Slide 79

2 Again, is this what actually happens or are we describing what should happen. ASsume that if the LTC pharmacy had a question they would call local pharmacy....but who usually does a med rec. I love this!
Marghie Giuliano, 11/14/2022

2 In my experience, I did not regularly need to call a patient's pharmacy since I usually saw the hospital's ER department's work already done in the EMR. But if that's not the case (as it usually wouldn't be at other LTC pharmacies), then certainly good transitional care involves calling other pharmacist(s) to get as much info as is necessary.
Charlie Page, 11/14/2022

Jane goes through the list, and you notice some differences between it and the hospital W-10.

Was lisinopril ever filled there for him?

Nope, no lisinopril, just the benazepril 20mg PO daily

Also, you mentioned Lumigan. Was latanoprost ever filled for him there?

No latanoprost. Also, it looks like he last filled the 2.5mL Lumigan 90 days ago.

Oh, wow. And no insulin? Neither Lantus nor Humalog?

No, just metformin. I know he's been struggling a lot with his glucometer though.

When was the last fill date of his test strips?

He picked up a box of 50 strips back in early June.

Slide 80

3 THis slide might help to bring up adherence issues?
Marghie Giuliano, 11/14/2022

3 Most definitely. By seeing refill histories we get to see how the patient was getting by before being hospitalized.
Charlie Page, 11/14/2022

Finally, you inquire about Mr. Jones' oxycodone refill history.

Was he getting that Percocet filled for a long time?

Yes, his daughter has been taking him to a pain clinic in the city for quite a while.

So how long, approximately?

It looks like about 3 years. He is always on time, never seems to be late on a refill on that med. And I check the PMP each time…he only fills it here.

OK that's good to know. Has he ever seemed like it's too much for him?

It's hard to say. His daughter is the one who picks it up for him, plus he's got some dementia.

Right. Well, we will be able to monitor him while he's here.

That is good. I often wondered how well he was being watched at home. His daughter doesn't live that close to him so he's probably alone a lot.

You thank Jane, end the call, and work to combine the W-10 med list with the local pharmacy's med list, listing any discrepancies. The preceptor pharmacist then goes over the list with you and identifies potential medication related problems.

Medication Related Problems (MRPs)

- Unnecessary medication
- Wrong medication
- Dose too high
- Dosage too low
- Adverse drug reaction
- Inappropriate adherence
- Needs additional drug therapy

Medication Discrepancies

- Unintended or unexplained/undocumented differences among medication lists across different sites of care
- Examples are:
  - Omissions, Duplications, Dose/frequency/route of administration errors, Drug name discrepancy/incorrect
- Sometimes discrepancies are differentiated as *"intended"* or *"unintended"* – intended discrepancies would have the rationale documented

IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN–QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

Drug Name	Strength	Indication	Notes	MRP/Discrepancy	Resolution?
Seroquel	25 mg PO BID	Dementia	**New med added at hospital.**	**Not approved for dementia but commonly used for it. Increased risk of overall mortality, as well as side effects/fall risk.**	
Metformin	500 mg PO BID	DM			
Latanoprost 0.005% eyedrops	1 drop OU HS	No diagnosis listed in W-10	**Was on Lumigan at home(very overdue for refill); hospital changed med according to formulary.**	**Patient may have been late on Lumigan refill due to cost issues.**	
Trazodone	50 mg PO HS	No diagnosis listed in W-10		**Need pertinent diagnosis from a licensed prescriber.**	
Trazodone	25 mg PO Q6H PRN	As needed for anxiety or agitation	**Added at hospital due to anxiety during stay**	**PRN psychotropic meds must be short term order (14 days or less, with reassessment) per LTC regulations.**	
Colchicine	0.6 mg PO QD	No diagnosis listed in W-10	**Need pertinent diagnosis from a licensed prescriber.**	**Check dose against recommended renal dosing based on creatinine clearance.**	
Oxycodone/APAP	10/325 2 tabs PO Q6H routinely, and 1 tab Q2H PRN for breakthrough pain	Pain	**Naloxone was part of his orders while inpatient at hospital, but it is not that hospital's policy to discharge a patient with a naloxone order.**	**This is a high dose of oxycodone, especially for an elderly patient. Could have led to his fall/fracture. Recommend reducing dose to lowest possible amount and making it PRN only. Also recommend adding an order for Narcan nasal spray PRN opioid toxicity and if patient goes home, continue this PRN Narcan order.**	

Allergies: Penicillin (rash), Latex (rash)

The final step is to…

Create a pharmacy consult sheet to give to the director of nursing at the SNF, who will then forward it to the in-house prescriber

Consult Sheet Q&A

- Do all meds have a pertinent diagnosis?
  - No, please provide pertinent diagnoses for the latanoprost, trazodone, and colchicine.
- Do all PRN meds have reason/indication for use within the order (i.e., on Rx label)?
  - Yes
- Are all diagnoses being treated?
  - Yes
- If diabetic, did all diabetes med orders make it onto the W-10 (orders)?
  - Yes
- Are all prescribed medications appropriate?
  - No, the oxycodone dose is very high especially for an elderly patient and could have led to his fall with fracture. It is also possible for this patient to experience opioid toxicity at this dose. Recommend adding Naloxone (Narcan) 4mg nasal spray,...4mg intranasally PRN suspected opioid toxicity, with another dose 2 to 3 minutes later if necessary. Be sure to train patient/caregiver on proper use of the naloxone if he is discharged home. Also, the Benadryl is listed on the BEERS criteria as a potentially inappropriate medication for use in the elderly. Please discontinue this medication due to fall risk and anticholinergic side effects.
- Are there opportunities for less expensive medications?
  - Yes, patient had been on Lumigan at home but seems to have compliance issues due to cost. Patient/caregiver needs to be informed that the latanoprost is very similar to Lumigan and costs much less.

IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN–QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

Consult Sheet Q&A cont.

- Does patient have ESRD (end stage renal disease)? If so, must discontinue Fleet enema and Milk of Magnesia standing PRN orders due to potential for serious electrolyte imbalances:
  - No
- Height: 5'8'' Weight: 170 lbs Age: 88 Gender: M Most recent serum creatinine: 1.6mg/dl
- Estimated creatinine clearance using Cockcroft/Gault with adjusted body weight:
  - 33 ml/min
- Are all meds dosed appropriately according to renal function?
  - The Eliquis should be reduced to 2.5mg PO BID due to serum creatinine >1.5 and age over 80. The cephalexin, metformin and colchicine are OK at current renal function but recommend regular monitoring of serum creatinine.
- Have meds been reviewed for potential ADR's (adverse drug reactions)?
  - Yes, see comments regarding Benadryl and metoprolol/tamsulosin, Seroquel/trazodone issues.
- Have meds been reviewed for interactions? (drug/drug, drug/food)
  - Yes, patient already takes metformin with food. Watch for drowsiness/lethargy with combination of Seroquel and Trazodone, and oxycodone. Does patient need KCL added to regimen due to Lasix usage? Check potassium level in first lab draw.

Consult Sheet Q&A cont.

- Are there any PRN psychotropic medications?
  - Yes, the PRN trazodone must be re-written as a 14-day order with reassessment per regulations.
- Is patient on any scheduled psychotropic medications?
  - Yes, Seroquel and trazodone. Please perform baseline AIMS (abnormal involuntary movement scale) test, and please list the behaviors that pose risk to self or others due to Seroquel usage. If these behaviors are not present and have not been present recently, recommend attempting a gradual dose reduction of the Seroquel.
- Other medication reconciliation findings:
  - Patient has PCN allergy but there is extremely low cross sensitivity with cephalosporins. If patient is to be discharged home, his caregiver may need training in the use of the insulins that were added at hospital. Benazepril was changed to lisinopril at hospital…notify patient/caregiver of this benign change so they know. Please specify duration of the cephalexin order.
- Monitoring:
  - Monitor orthostatic BP's due to metoprolol and tamsulosin usage. Monitor for signs/symptoms of opioid toxicity (shallow breathing, small pupils, unresponsiveness, or extreme lethargy). Recommend a BMP, CBC, HbA1c and lipid panel upon 1st lab draw.

IPRO QIN-QIO · Healthcentric Advisors · Qlarant
QIN–QIO Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES iQUALITY IMPROVEMENT & INNOVATION GROUP

The resident's admission, his care at the SNF, as well as his potential discharge are all part of multidisciplinary processes. A social worker should be involved in coordinating the resident's needs, especially in organizing a successful discharge if he is a candidate to go back home.
His safety at home is dependent on more care than he can give himself. His daughter will need to learn more about his care, including giving insulin and knowing how to use the Narcan spray if necessary.

It is possible or even likely that he will need a home care nurse to help with his daily care at home. It is also possible that the interdisciplinary care team determines that he is unsafe to go home, at which point he will be transitioned to a long-term care residency.
The success of this resident's care plan depends on many people, and good communication between departments is essential.

Resident discharge instructions for Naloxone nasal spray:
https://www.narcan.com/wp-content/uploads/2022/03/Digital-Quick-Start-Guide-2022.pdf

Name: Doe, Jane Date List Prepared: Date Med Boxes Last Filled:

Home phone: 860-555-5555, Husband's cell phone: 860-444-4444

Please bring this list to all doctor appointments and pharmacy visits, and please update your local pharmacy with any changes phone 860-444-4444; fax 860-444-5555

AM	Late Morning	Afternoon	Bedtime
EC Aspirin 325mg 1 tablet	Acetaminophen 325mg 3 tablets=975mg	EC Aspirin 325mg 1 tablet	Omeprazole 20mg 1 capsule
Losartan potassium 50mg 1 tablet		Tramadol 50mg 1 tablet	Trazodone 50mg 1 tablet
Sertraline 25mg 1 tablet		Acetaminophen 325mg 3 tablets=975mg	Tramadol 50mg 1 tablet
Metoprolol succinate ER 100mg 1 tablet			Acetaminophen 325mg 3 tablets=975mg
Tramadol 50mg 1 tablet			
Acetaminophen 325mg 3 tablets=975mg			

"As needed" medications: Tramadol 50mg: 1 tablet by mouth every 6 hours as needed for moderate to severe pain; Acetaminophen 325mg: 2 tablets every 4 hours as needed for mild pain (no more than once per day due to scheduled acetaminophen doses)

Other notes: Eliquis stopped 2/14/22

Please notify your local pharmacy of any changes.

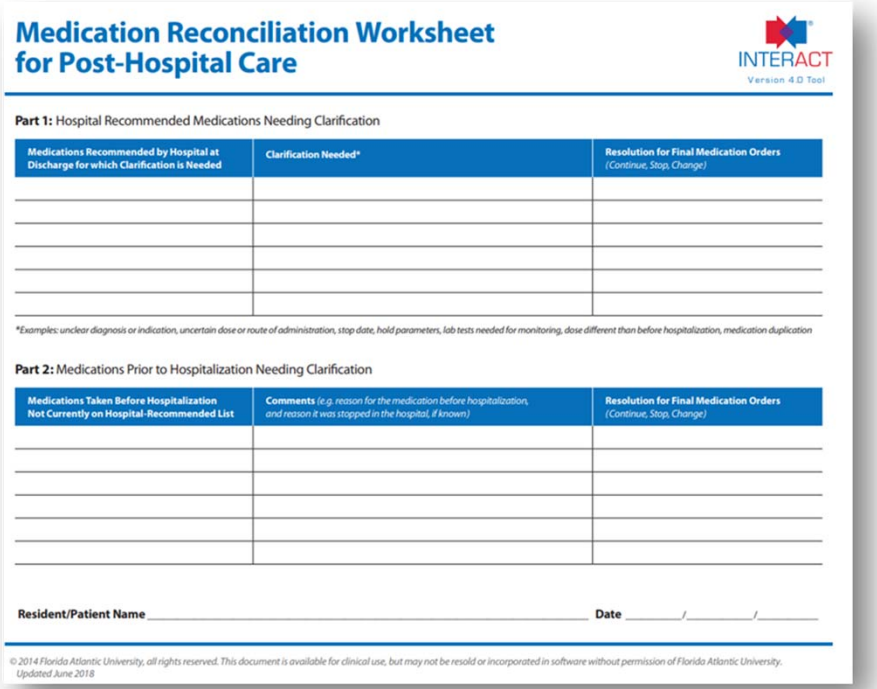
IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN-QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

Summary

- Implement an effective medications reconciliation program on resident admission and discharge.
- Medication reconciliation consists of verification (BPMH), clarification (med appropriateness), and documentation (documentation of changes and final list).
- Safe medication management requires effective communication on transitions of care.

Medication Reconciliation Resources

- Society of Hospital Medicine's MARQUIS Implementation Manual and Med Rec Collaborative
- INTERACT tools and resources
- Institute for Healthcare Improvement Medication Reconciliation Resources to Prevent Adverse Drug Events



Medication Reconciliation Worksheet for Post-Hospital Care

INTERACT Version 4.0 Tool

Part 1: Hospital Recommended Medications Needing Clarification

Medications Recommended by Hospital at Discharge for which Clarification is Needed	Clarification Needed*	Resolution for Final Medication Orders (Continue, Stop, Change)

*Examples: unclear diagnosis or indication, uncertain dose or route of administration, stop date, hold parameters, lab tests needed for monitoring, dose different than before hospitalization, medication duplication

Part 2: Medications Prior to Hospitalization Needing Clarification

Medications Taken Before Hospitalization Not Currently on Hospital-Recommended List	Comments (e.g. reason for the medication before hospitalization, and reason it was stopped in the hospital, if known)	Resolution for Final Medication Orders (Continue, Stop, Change)

Resident/Patient Name _____ Date ____/____/____

Updated June 2018

IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN–QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

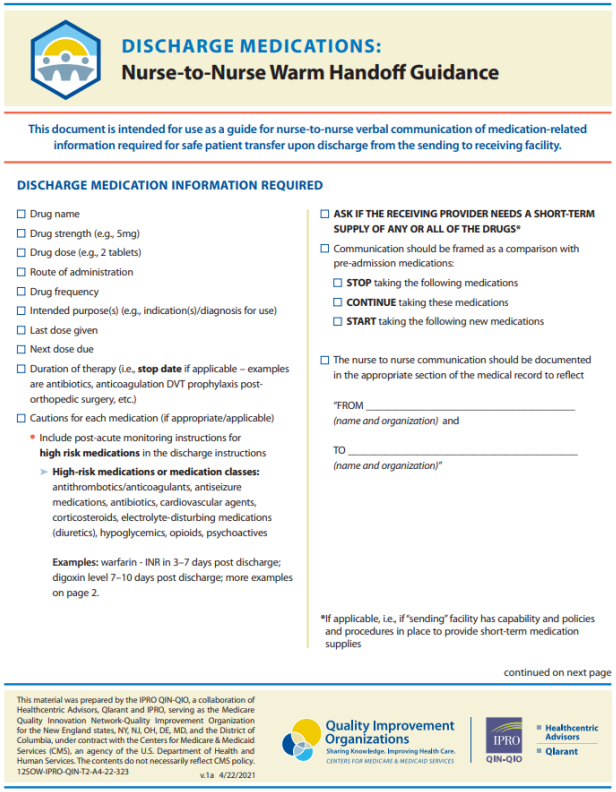
Resources for Safe Medication Use

- Be aware of medications that should not be crushed
- http://www.ismp.org/tools/donotcrush.pdf

Drug Product	Active Ingredient(s)	Dosage Form(s)	Reasons/Comments
Abilify MyCite kit	(aripiprazole)	Tablet	Drug-device combination
Absorica	(**ISO**tretinoin)	Capsule	Mucous membrane irritant
Abstral	(fenta**NYL**)	Tablet	Note: Sublingual tablet; do not suck, chew, or swallow whole.
AcipHex	(rabeprazole)	Tablet	Slow-release
AcipHex Sprinkle	(rabeprazole)	Capsule	Slow-release; Note: contents are intended to be sprinkled on food or liquid but should not be chewed or crushed.
Acticlate	(doxycycline hyclate)	Capsule; Tablet	Film-coated; tablet is scored and may be split; Note: 150 mg tablets can be broken into two-thirds or one-third to provide a 100 mg and 50 mg strength, respectively
Actiq	(fenta**NYL**)	Lozenge	Slow-release; Note: this lollipop delivery system requires the patient to slowly allow dissolution. If chewed and swallowed, may result in a lower peak concentration and bioavailability.
Actonel	(risedronate)	Tablet	Irritant; Note: chewed, crushed, or sucked tablets may cause oropharyngeal ulceration.
Actoplus Met Xr	(combination)	Tablet	Slow-release
Adalat CC	(**NIFE**dipine)	Tablet	Slow-release
Adderall XR	(amphetamine salts)	Capsule	Slow-release (a)

IPRO QIN-QIO
Healthcentric Advisors
Qlarant
QIN–QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES iQUALITY IMPROVEMENT & INNOVATION GROUP

Nursing Home Warm Hand-off Across Care Settings



DISCHARGE MEDICATIONS: Nurse-to-Nurse Warm Handoff Guidance

This document is intended for use as a guide for nurse-to-nurse verbal communication of medication-related information required for safe patient transfer upon discharge from the sending to receiving facility.

DISCHARGE MEDICATION INFORMATION REQUIRED

- ☐ Drug name
- ☐ Drug strength (e.g., 5mg)
- ☐ Drug dose (e.g., 2 tablets)
- ☐ Route of administration
- ☐ Drug frequency
- ☐ Intended purpose(s) (e.g., indication(s)/diagnosis for use)
- ☐ Last dose given
- ☐ Next dose due
- ☐ Duration of therapy (i.e., **stop date** if applicable – examples are antibiotics, anticoagulation DVT prophylaxis post-orthopedic surgery, etc.)
- ☐ Cautions for each medication (if appropriate/applicable)
  - Include post-acute monitoring instructions for **high risk medications** in the discharge instructions
    - **High-risk medications or medication classes:** antithrombotics/anticoagulants, antiseizure medications, antibiotics, cardiovascular agents, corticosteroids, electrolyte-disturbing medications (diuretics), hypoglycemics, opioids, psychoactives

    Examples: warfarin - INR in 3–7 days post discharge; digoxin level 7–10 days post discharge; more examples on page 2.

- ☐ **ASK IF THE RECEIVING PROVIDER NEEDS A SHORT-TERM SUPPLY OF ANY OR ALL OF THE DRUGS***
- ☐ Communication should be framed as a comparison with pre-admission medications:
  - ☐ **STOP** taking the following medications
  - ☐ **CONTINUE** taking these medications
  - ☐ **START** taking the following new medications
- ☐ The nurse to nurse communication should be documented in the appropriate section of the medical record to reflect

  "FROM _____
  (name and organization) and

  TO _____
  (name and organization)"

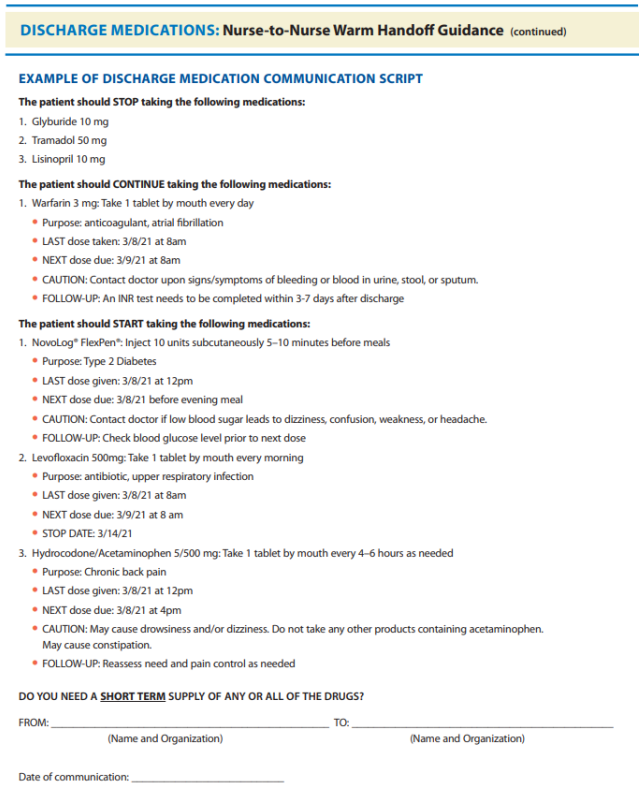
*If applicable, i.e., if "sending" facility has capability and policies and procedures in place to provide short-term medication supplies

continued on next page

This material was prepared by the IPRO QIN-QIO, a collaboration of Healthcentric Advisors, Qlarant and IPRO, serving as the Medicare Quality Innovation Network-Quality Improvement Organization for the New England states, NY, NJ, OH, DE, MD, and the District of Columbia, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents do not necessarily reflect CMS policy.
12SOW-IPRO-QIN-T2-A4-22-323 v.1a 4/22/2021

Quality Improvement Organizations
Sharing Knowledge. Improving Health Care.
CENTERS FOR MEDICARE & MEDICAID SERVICES

IPRO QIN-QIO
Healthcentric Advisors
Qlarant



DISCHARGE MEDICATIONS: Nurse-to-Nurse Warm Handoff Guidance (continued)

EXAMPLE OF DISCHARGE MEDICATION COMMUNICATION SCRIPT

The patient should STOP taking the following medications:

1. Glyburide 10 mg
2. Tramadol 50 mg
3. Lisinopril 10 mg

The patient should CONTINUE taking the following medications:

1. Warfarin 3 mg: Take 1 tablet by mouth every day
   - Purpose: anticoagulant, atrial fibrillation
   - LAST dose taken: 3/8/21 at 8am
   - NEXT dose due: 3/9/21 at 8am
   - CAUTION: Contact doctor upon signs/symptoms of bleeding or blood in urine, stool, or sputum.
   - FOLLOW-UP: An INR test needs to be completed within 3-7 days after discharge

The patient should START taking the following medications:

1. NovoLog® FlexPen®: Inject 10 units subcutaneously 5–10 minutes before meals
   - Purpose: Type 2 Diabetes
   - LAST dose given: 3/8/21 at 12pm
   - NEXT dose due: 3/8/21 before evening meal
   - CAUTION: Contact doctor if low blood sugar leads to dizziness, confusion, weakness, or headache.
   - FOLLOW-UP: Check blood glucose level prior to next dose
2. Levofloxacin 500mg: Take 1 tablet by mouth every morning
   - Purpose: antibiotic, upper respiratory infection
   - LAST dose given: 3/8/21 at 8am
   - NEXT dose due: 3/9/21 at 8 am
   - STOP DATE: 3/14/21
3. Hydrocodone/Acetaminophen 5/500 mg: Take 1 tablet by mouth every 4–6 hours as needed
   - Purpose: Chronic back pain
   - LAST dose given: 3/8/21 at 12pm
   - NEXT dose due: 3/8/21 at 4pm
   - CAUTION: May cause drowsiness and/or dizziness. Do not take any other products containing acetaminophen. May cause constipation.
   - FOLLOW-UP: Reassess need and pain control as needed

DO YOU NEED A <u>SHORT TERM</u> SUPPLY OF ANY OR ALL OF THE DRUGS?

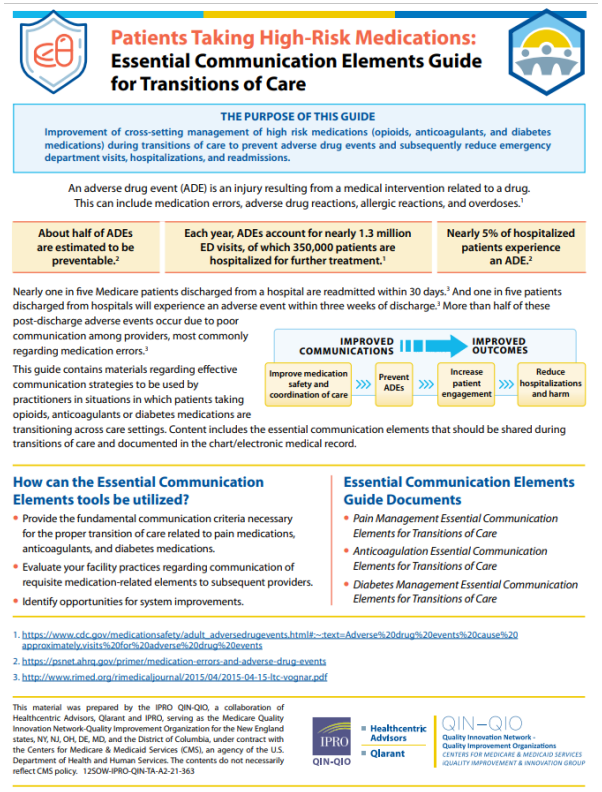
FROM: _____ TO: _____
(Name and Organization) (Name and Organization)

Date of communication: _____

IPRO QIN-QIO
Healthcentric Advisors
Qlarant

QIN–QIO
Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

High Risk Medication Essential Communication at Transitions of Care



Patients Taking High-Risk Medications: Essential Communication Elements Guide for Transitions of Care

THE PURPOSE OF THIS GUIDE

Improvement of cross-setting management of high risk medications (opioids, anticoagulants, and diabetes medications) during transitions of care to prevent adverse drug events and subsequently reduce emergency department visits, hospitalizations, and readmissions.

An adverse drug event (ADE) is an injury resulting from a medical intervention related to a drug. This can include medication errors, adverse drug reactions, allergic reactions, and overdoses.[1]

About half of ADEs are estimated to be preventable.[2]	Each year, ADEs account for nearly 1.3 million ED visits, of which 350,000 patients are hospitalized for further treatment.[1]	Nearly 5% of hospitalized patients experience an ADE.[2]

Nearly one in five Medicare patients discharged from a hospital are readmitted within 30 days.[3] And one in five patients discharged from hospitals will experience an adverse event within three weeks of discharge.[3] More than half of these post-discharge adverse events occur due to poor communication among providers, most commonly regarding medication errors.[3]

IMPROVED COMMUNICATIONS → IMPROVED OUTCOMES

Improve medication safety and coordination of care → Prevent ADEs → Increase patient engagement → Reduce hospitalizations and harm

This guide contains materials regarding effective communication strategies to be used by practitioners in situations in which patients taking opioids, anticoagulants or diabetes medications are transitioning across care settings. Content includes the essential communication elements that should be shared during transitions of care and documented in the chart/electronic medical record.

How can the Essential Communication Elements tools be utilized?

- Provide the fundamental communication criteria necessary for the proper transition of care related to pain medications, anticoagulants, and diabetes medications.
- Evaluate your facility practices regarding communication of requisite medication-related elements to subsequent providers.
- Identify opportunities for system improvements.

Essential Communication Elements Guide Documents

- *Pain Management Essential Communication Elements for Transitions of Care*
- *Anticoagulation Essential Communication Elements for Transitions of Care*
- *Diabetes Management Essential Communication Elements for Transitions of Care*

1. https://www.cdc.gov/medicationsafety/adult_adversedrugevents.html#:~:text=Adverse%20drug%20events%20cause%20approximately,visits%20for%20adverse%20drug%20events
2. https://psnet.ahrq.gov/primer/medication-errors-and-adverse-drug-events
3. http://www.rimed.org/rimedicaljournal/2015/04/2015-04-15-itc-vognar.pdf

This material was prepared by the IPRO QIN-QIO, a collaboration of Healthcentric Advisors, Qlarant and IPRO, serving as the Medicare Quality Innovation Network-Quality Improvement Organization for the New England states, NY, NJ, OH, DE, MD, and the District of Columbia, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents do not necessarily reflect CMS policy. 12SOW-IPRO-QIN-TA-A2-21-363

IPRO QIN-QIO ■ Healthcentric Advisors ■ Qlarant | QIN–QIO Quality Innovation Network - Quality Improvement Organizations CENTERS FOR MEDICARE & MEDICAID SERVICES iQUALITY IMPROVEMENT & INNOVATION GROUP

ANTICOAGULATION ESSENTIAL COMMUNICATION ELEMENTS FOR TRANSITIONS OF CARE GUIDE

Purpose: Adverse drugs events (ADE) have been identified as a major contributor to preventable hospitalizations and emergency department visits. This guide identifies the fundamental provider communication criteria necessary for the safe transition of care for patients receiving anticoagulants. Additionally, it can be used to evaluate your facility practices regarding communication of requisite anticoagulation-related elements to subsequent providers and identify opportunities for system improvements.

Anticoagulation Essential Communication Elements	Guidance
Anticoagulant(s) currently utilized	Subsequent providers should be informed of all currently prescribed anticoagulants, as well as recently administered agents that are likely still active in the patient's body (e.g. warfarin discontinued a day prior is expected to have continued anticoagulant activity)
Indication(s) for anticoagulation therapy	Documentation provided to downstream providers should include a clear listing of all indications for anticoagulation (AC), acute or chronic
Documentation describing whether the patient is new to anticoagulation therapy or a previous user	Whether a patient is "new to therapy" has implications for thrombotic risk, drug management (e.g. INR stability), and drug duration (e.g. orthopedic prophylaxis). As such, patient initiation of anticoagulation in previous 30 day should be clearly stated for subsequent providers. Patients who have longstanding chronic indication(s) for anticoagulation (e.g. atrial fibrillation) and who then develop a new indication that warrants more intense anticoagulation (e.g. pulmonary embolism) should be considered "new users," in that details of the acute indication and date of therapy modification be communicated.
If a patient is new to anticoagulation therapy, the start date of anticoagulation is provided	For patients who have initiated anticoagulation within the past 30 days, the explicit date of initiation of anticoagulation must be communicated. For chronic AC users who develop a new indication warranting more intense anticoagulation, the date of AC intensification should be clearly communicated to downstream providers.
Documentation indicating whether treatment for each indication is intended to be acute (short-term) or chronic (long-term)	Documentation should make it abundantly clear to subsequent providers whether anticoagulation therapy for each listed indication is intended to continue, be reduced in intensity, or discontinued

PAIN MANAGEMENT ESSENTIAL COMMUNICATION ELEMENTS FOR TRANSITIONS OF CARE GUIDE

Purpose: Adverse drugs events (ADE) have been identified as a major contributor to preventable hospitalizations and emergency department visits. This guide identifies the fundamental provider communication criteria necessary for the safe transition of care for patients receiving pain medication. Additionally, it can be used to evaluate your facility practices regarding communication of requisite pain-related elements to subsequent providers and identify opportunities for system improvements.

Pain Essential Communication Elements	Guidance
Pain diagnosis	Expectation is that pain is clearly indicated as a medical condition, regardless of whether it is a primary purpose for receiving services from the index (i.e., "upstream") provider. Diagnosis NOT to be deduced by evaluation of drug regimen.
Pain category(s) or classification	Pain characterized according to recognized category(s) including but not limited to: acute (e.g., post-operative), subacute, chronic (e.g., cancer and persistent non-cancer), nociceptive, neuropathic, inflammatory, central, or mixed.
Temporal characteristics	Expectation is that duration of pain is communicated to some degree (acute vs. chronic; new diagnosis vs. pre-existing condition [> 30 days]).
Pain severity, recent	Subsequent providers are to receive documentation of recent pain symptoms and response to therapy over previous 7 days (longer period preferred, describe full length of stay at index provider if LOS < 7 days). Include overview of severity of pain in recent days as well as frequency and responsiveness to interventions (pharmacological and other).
Pain severity, current	Most recent objective assessment of pain severity is documented and communicated to subsequent providers, including details of date and time of last two assessments and date and time the next assessment is due. Prefer accepted/validated pain scoring method.
Drug name, dose, strength, formulation, route, and frequency for entire current daily medication regimen	Subsequent providers should receive at the time of transition between care settings, detailed characteristics of all drugs, including opioids prescribed to control pain symptoms, including drug names, dosages, routes, and frequencies. Communication should also include date and time last doses given AND date and times next scheduled doses are due. The location of transdermal patches and the date time of last placement and subsequent removal should be communicated.

IPRO QIN-QIO ■ Healthcentric Advisors ■ Qlarant | QIN–QIO Quality Innovation Network - Quality Improvement Organizations CENTERS FOR MEDICARE & MEDICAID SERVICES iQUALITY IMPROVEMENT & INNOVATION GROUP

Nursing Home "Warm Hand-Off" to Pharmacy

Short Stay Nursing Home to Community Pharmacy "Warm Hand-Off" Process

PURPOSE: To establish a nursing home to community pharmacy care coordination process for patients discharged to home on high-risk drugs.

INSTRUCTIONS:

1. ***Identifying the Community Pharmacy***: The name and contact information of the patient's preferred community pharmacy for discharge medications will be obtained by the discharging nurse.

2. ***Nursing Home Discharging Nurse will initiate the High Risk Medication Form (HRMF)***

   LIST OF HIGH-RISK MEDICATIONS: anticoagulants (Coumadin (warfarin), Pradaxa (dabigatran), Eliquis (apixaban), Xarelto (rivaroxaban), Savaysa (edoxaban), Lovenox (enoxaparin), Fragmin (Dalteparin), Arixtra (fondaparinux), heparin, insulins, oral hypoglycemic agents, aspirin, clopidogrel, dual therapy, digoxin, opioids, and cases of polypharmacy (>5 routine meds).

   - The discharging nurse will fax discharge instructions, the discharge medication reconciliation, and the HRMF to preferred community pharmacy.
   - The discharging nurse telephones the pharmacy to confirm fax receipt and to discuss relevant information with the pharmacist (i.e., "warm hand-off"). Relevant information will include discussion of medication list, any necessary follow up due to clinical status, whether patient already has drug in home, and patient's educational needs. If there are any concerns, the prescriber will be notified.

3. ***Role of Community Pharmacist***
   - Once discharge instructions and discharge medication reconciliation are received, medication related problems (MRPs) will be evaluated.
   - The pharmacist will ensure that medications are in-stock or ordered if necessary for next-dose-due date and time. Or, in the case of non-availability of drug, that an alternative drug or other resolution to the problem is achieved.
   - If medication is not picked up **~1 hour prior** to closing on the next-dose-due date, the pharmacy is to call nursing home nurse to verify if patient was discharged. If so, the pharmacy is to call patient using phone number on the discharge instructions to follow-up on pick up of prescription(s). If the patient is unable to be contacted on the day of discharge, the pharmacy will continue to attempt to call the patient daily for pick up and alert the prescriber of prescription delay.
   - Follow-up is to be documented on the HRMF

HIGH-RISK MEDICATION FORM (HRMF)

NAME OF PATIENT:			MEDICAL RECORD NUMBER:
TO BE COMPLETED PRIOR TO PATIENT DISCHARGE FROM NURSING HOME			
Most recent medication list reviewed? ☐ Yes ☐ No	Most up-to-date discharge summary and discharge instructions reviewed? ☐ Yes ☐ No	Documents available for fax to community pharmacy? ☐ Yes ☐ No	
High risk medication 1:	MRPs identified & resolved, including insurance issues:		Date & time of next dose due upon discharge:
High risk medication 2:	MRPs identified & resolved, including insurance issues:		Date & time of next dose due upon discharge:
High risk medication 3:	MRPs identified & resolved, including insurance issues:		Date & time of next dose due upon discharge:
List any additional high risk medications?	Call community pharmacy to perform "warm hand-off" – list potential issues to be addressed by receiving pharmacist, other issues identified, etc.:		
Name of nurse completing form:	Name of Pharmacy & Fax #:	Date & time of fax to community pharmacy:	
TO BE COMPLETED BY PHARMACY 1 HOUR PRIOR TO CLOSING ON NEXT DOSE DUE DATE			
Did patient pick up prescription for high risk medication(s)? ☐ Yes ☐ No	If no, did pharmacist call the nurse regarding discharge status? ☐ Yes ☐ No	Date & time of call to nurse:	Was patient discharged ☐ Yes ☐ No
If discharged, did pharmacist call the patient for rx pick-up? ☐ Yes ☐ No	Date & time of call to patient:	Follow-up notes:	

IPRO QIN-QIO · Healthcentric Advisors · Qlarant

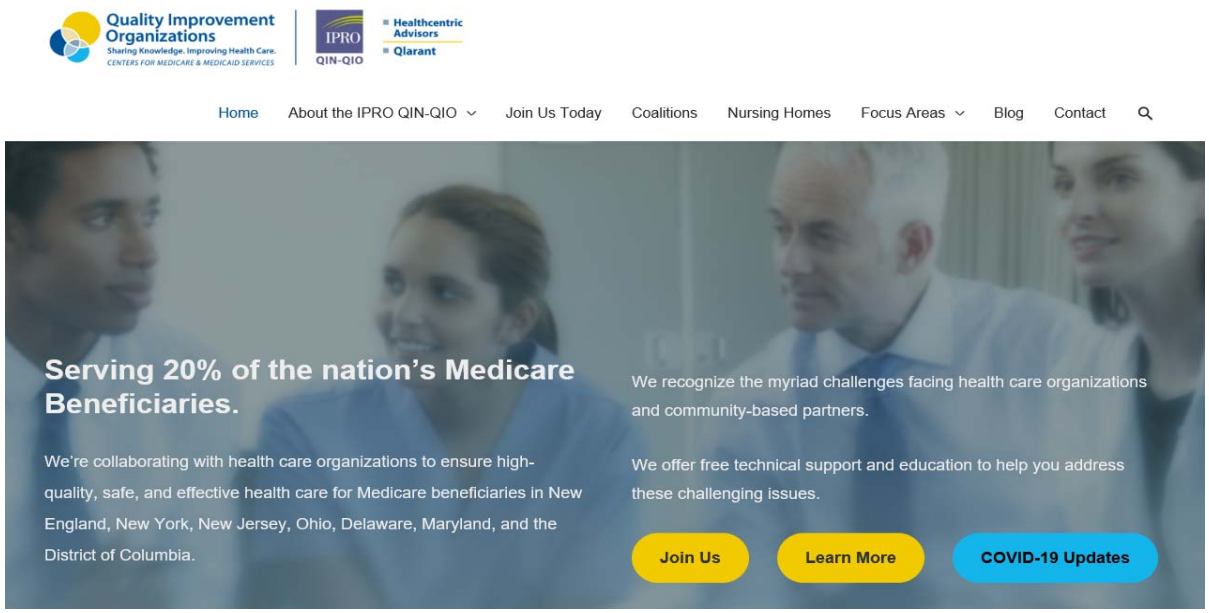
QIN–QIO Quality Innovation Network - Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES iQUALITY IMPROVEMENT & INNOVATION GROUP

Thank you!


IPRO
QIN-QIO
Healthcentric Advisors
Qlarant
QIN–QIO
Quality Innovation Network -
Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
iQUALITY IMPROVEMENT & INNOVATION GROUP

Learn More & Stay Connected

https://qi.ipro.org/



Follow IPRO QIN-QIO

This material was prepared by the IPRO QIN-QIO, a Quality Innovation Network-Quality Improvement Organization, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. Publication # 12SOW-IPRO-QIN-T1-A2-22-828