

Transition with Success!

Increasing the Awareness of Medication Misadventures after Discharge from Hospital

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Outline

- Medication-related hospital visits
- Problems at hospital discharge
- Evidence on how to improve
 - Pharmacist in the discharge process
 - Hospital to home strategies
 - Home visiting pharmacist
- Case studies – what happens once home
- Review of factors that contribute to medication misadventure

Can you do this?

- Discharged from hospital, tired and glad to be home:
 - Determine what piece of paper is the prescription and get it to the pharmacy today
 - Review medication list of changes (if you received one!)
 - Sort through the old prescriptions, new prescriptions, herbals, OTCs
 - Get a blood test done
 - Deal with a side effect
 - Discard old medicines
 - Use a new gadget (e.g. Nitrospray)?



All of this change can lead to:

Discontinued and Expired

Problems



- Using wrong medications or dosages
 - Improper technique
 - Omission of critical therapy – non-adherence, stopping without medical advice
 - Lack of monitoring
 - Taking medications that interact or cause additive side effects
- Ultimately – can lead to ER visits due to adverse drug events or non-adherence**

Seniors + Medications = ER visits?

ADEs account for an estimated 10-17% of admissions to hospital involving elderly patients (Hayes et al, 2007), and it has been suggested that as many as 75% of these admissions could have been prevented if medications had been used appropriately (reviewed in Gallagher et al, 2007)



Emergency hospitalizations for adverse drug events in older Americans.

- 5077 cases, 65 years of age +
- 48% were > 80 years of age
- 66% were due to unintentional overdoses
- Top 4 medications implicated:
 - Warfarin (33.3%)
 - Insulin (13.9%)
 - Oral antiplatelets (13.3%)
 - Oral hypoglycemics (10.7%)

Outcomes of emergency department patients presenting with adverse drug events

“ED patients presenting with an adverse drug event incurred greater health services utilization and costs during a 6-month follow-up period compared with patients presenting for other reasons”

Incidence, severity and preventability of medication-related visits to the emergency department

- The most common reasons for drug-related visits were adverse drug reactions (39.3%), non-adherence (27.9%) and use of the wrong or suboptimal drug (11.5%).
- More than 1 in 9 emergency department visits are due to drug-related adverse events

Why are all these problems happening
to so many people?



Medication discrepancies identified at time of hospital discharge in a geriatric population

- “Physician discharge summaries contained the most medication discrepancies”
- “Discrepancies among medication lists are common, and the presence of a pharmacist may reduce the number that occur.”

'Seamless care? Just a list would have helped!'

- Interviewed 19 caregivers / patients in the U.K.
- “Inadequate explanations about medicines at discharge were commonly reported and led to omission of medicines, incorrect dosage, anxiety and confusion.”
- “Poor communication between the hospital and general practitioners or community pharmacists was also evident”

Medication Problems at Discharge

- Lack of patient involvement in the discharge process regarding medications
- Little or no teaching about medications
- Reconciliation – not being done consistently
- Assessment of the regimen
 - Can they pay for medications not covered
 - Can they get out for a blood test?
 - Will their eating habits once home affect their medication regimen
 - Simplification
- Community pharmacist not engaged



Are there any solutions?



Pharmacist in the discharge process

- **229 patients had pharmacist intervention at discharge**
 - Medication reconciliation
 - Counselling
 - Education materials
 - Linked with community providers
- **WLM – 1 FTE phm could discharge 7 or 8 patients daily**
- **30 day readmission rate was 15.7% (phm group) vs 21.6% (control group) p=0.04**

Medication reconciliation with and without patient counseling - at discharge from hospital

- 262 patients
- Without counselling 2.7 interventions/pt
- With counselling 5.3 interventions / pt
- After patient counseling, discharge prescriptions were frequently adjusted due to discrepancies in use or need of drug therapy.
- Patients also addressed their problems/concerns with use of the drug, which were discussed before discharge.

Transition Strategies



WHO Regional Office for Europe's Health Evidence Network (HEN) 2005

Effective and safe interventions made at the hospital – community interface were associated with a 20% reduction in hospital readmission.

- multidisciplinary teams using the principles of comprehensive geriatric assessment
- discharge co-ordinators (usually a specialist or advanced practice nurse) using defined protocols
- patient empowerment using educational approaches (primarily focused on medications)

Drug-related problems in older people after hospital discharge and interventions to reduce them

Hospital and Home recommended

Review of 20 studies concluded:



“ The findings suggested that combining hospital discharge measures with home follow-up strategies is of value”

Home Visiting Pharmacist



Drug related problems after discharge from an Australian teaching hospital

- Retrospective review of 76 patients who had home med review
- 398 DRP's identified in 71 (93.3%)
- 32% (128 of the DRP's) - clarifying discrepancies
- 22% - drug interactions
- 15% - adverse drug reactions

Opportunities for medication related support after discharge from hospital

Home Visiting in B.C.

- Flanagan et al did home pharmacist f/u visits for 110 patients recently discharged
- DRP's – median 2 per patient
- Discrepancies – median 1 per patient

Lessons to learn

- Most commonly implicated medications:
 - Calcium / Vitamin D
 - ASA
 - Furosemide
 - Ramipril
- Most common types of DRP's:
 - non-adherence
 - untreated indications

Medication Management Support Services (MMSS)



- Central CCAC (home care) program
- Home visiting pharmacist (provided by York Central Hospital / Southlake Regional Health Centre)
- Clarify and resolved discrepancies and drug-related problems with community providers (e.g. Family MD, community phm etc.)
- 2 visits authorized in a 60 day period

A Pharmacist Home Visit.....



- Can unlock the door to potential problems
- We can see exactly what the patient has at home (contrary to a list!)
- Patient is comfortable in their surroundings
- Minimal distractions – ***better learning conditions***
- Environment scan to see how managing the medications



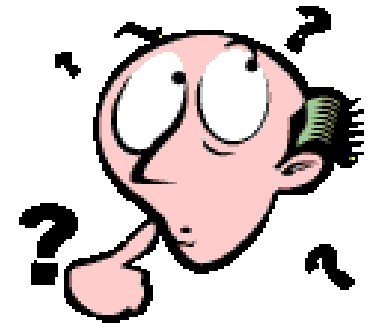
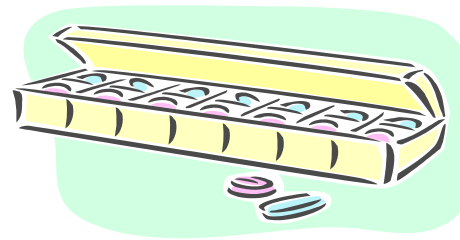
Pharmacist Home visit -how it flows

- Referral from Central CCAC Hospital Case Manager – discharge report with medication list
- Phm visit client in their home within 1 to 7 days post discharge
- Reconcile discharge medication list with actual medication usage (electronically documented)
- Identify and resolve discrepancies (includes OTC's and herbals, old Rx's found in home)
- Identify and resolve limitations to optimal usage



Assessing limitations - that lead to discrepancies or MRP's

- Physical
- Cognitive
- Accessibility
- Adherence
- Safety
- Knowledge
- Storage



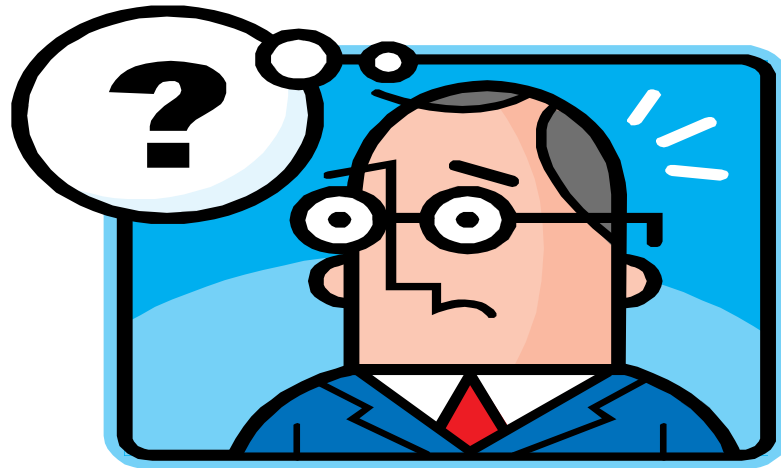
Why after Hospital Discharge Visit?

- **This visit can validate that the patient has been successful in implementing the plan**
 - Did they stop medications as ordered?
 - Are there other meds in the home to be clarified?
 - Did they fill the new prescriptions?
 - Are they tolerating the new regimen? Are the outcomes being met?
 - Can we help with discarding medications?
 - Do they understand how to use compliance packs – did they get an up to date medication list – is it correct?
 - Are they getting appropriate monitoring (e.g. INR, B.S.)?
- **Can also identify issues missed at discharge!!**

MMSS Outcomes

- Over 500 discharged patients have been assessed at home post discharge – 70% of patients had at least 1 discrepancy to be resolved
- Discrepancies -range 0 to 13, mean 2.9, median 2
- MRP's – range 0 to 12, mean 3, median 2
- ~ 30% of clients have compliance aids arranged by MMSS (dosettes, compliance packages)
- 89% response rate from family MD

Let's consider these case
What could possibly go wrong?



Case of J.B.

Medication taken prior to admission:

- ASA 81mg daily
- HCTZ 25mg daily
- Atacand 8mg daily

Discharged home on:

- Furosemide 20mg daily
- K-Dur 20meq bid
- Ramipril 5mg daily
- Warfarin 8mg daily
- Metformin 250mg twice a day
- Donepezil 10mg daily
- Mematine 10mg bid

What could go wrong?.....

New Care provider – the wife

Appt made with client's wife – who reluctantly agrees to have the pharmacist come.

She was given a detailed medication schedule at discharge. This had been reviewed with her by the hospital and community pharmacist.

What did the MMSS pharmacist find?.....



Case of the dizzy's

Medications reviewed with the son and client.

Client used to be independent with his medications, but now getting assistance from his son. Client's main complaint was "dizzy a lot".

Standing BP 97/59

Medications being given:

- Amlodipine 5mg daily
- Metoprolol 50mg bid
- HCTZ 25mg daily

Were these the discharge instructions.....

Lots of pills - Overwhelmed

Patient was discharged home to care of her family.

All new Rx's were written and they were dispensed by the pharmacy. Started fresh with 15 new Rx's.

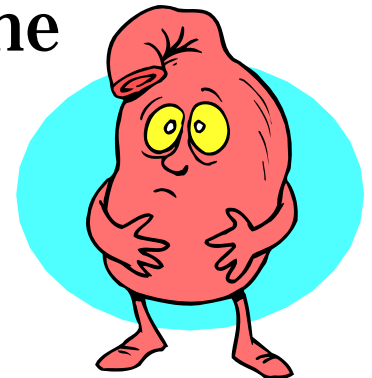
Family was so overwhelmed – they didn't know where to start. Visiting RN arranged to have the pharmacy compliance package the medications, except the warfarin and 2 other prns.

Visiting phm arrived at Day 5 to review found.....

Money Talks - \$\$\$\$

- Client had been admitted to hospital for GI bleed.
- During the **early** part of his admission he had swallowing difficulties so the PPI lansoprazole was ordered as the Fastab.
- Computerized Rx at discharge included Fastabs
- Discharge prescription given to Community phm. They had to order in the Fastabs. Three days later, the client was called, advised of the availability and the cost

What did the client do?.....



Contributing Factors for medication discrepancies or problems post discharge

- 1. Patient / Caregiver / Home Environment**
- 2. Hospital Discharge Procedure**
- 3. Community care (community phm, family MD, service provider)**

Patient / Caregiver / Home

- Fear of or experienced a side effects once home
- Misunderstood or forgot verbal instructions
- Overwhelmed / confused by the changes
- Cluttered environment / disorganized med management
- Physical impairment – could not depress inhaler, swallowing issues
- Lack of pt “buy-in” to a new medication started in hospital
- Labels don’t match new instructions (e.g. using up current supply)

Hospital Discharge procedure

- No written list of medications to take once home
- No recall of teaching about medication changes at hospital
- Did not understand urgency in having discharge Rx filled timely
- Was not given (or couldn't find) a discharge Rx
- Rx'd a medication that was cost prohibitive
- Incomplete medication reconciliation – had medications at home and didn't know to continue, stop or modify – no instructions from hospital

Community Health Providers



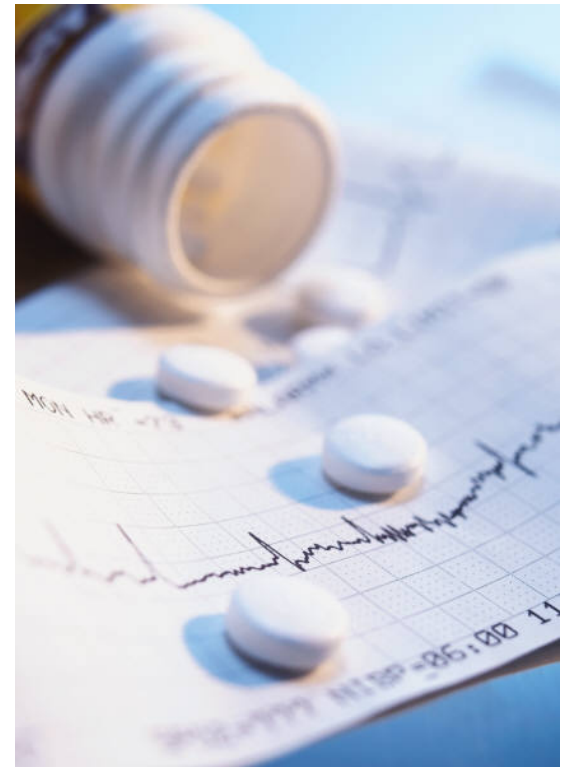
Community PHM

- Unable to dispense new Rx timely (stocking, closed on Sundays, want extra time to make compliance pack etc)
- No delivery service available for Homebound client
- Refusal to acknowledge a computerized hospital Rx
- Errors on dispensing

Community Health Providers

Family MD

- Difficult to assume responsibility if no report from hospital
- May not be able to assume outpatient care (e.g. On vacation and patient on warfarin)
- Difficult to help solve medication problems if unable to assess the patient (e.g. Homebound – MD may not make house calls)



Community Health Providers

Service Provider (RN, PSW etc)

- Lack of knowledge may lead to inappropriate recommendations (e.g. Buy imodium for your watery, foul smelling, bloody stools)
- Discharge plan not always shared – so unable to identify areas that require follow-up
- Have to work within scope of practice

How can we increase success?

Suggestions:

- **Have a committed caregiver (if needed)**
- **Provide a written medication list (reconciled)**
- **Involve the patient in the discussion about medication changes**

- **Involve pharmacists in the hospital discharge**
- **Increase communication to community health providers**
- **Following up at home to address any medication problems**

Thank You!

