Quality Improvement Initiative

Medication Reconciliation in Primary Care:

Our Experience At Queen's Family Health Team

Medication Reconciliation in Primary Care

Welcome and Introductions

Let's start with a case....

- Your nurse brings you the morning mail and highlights an ER record at the top of the pile: Mrs. Smith has been admitted for a lower GI bleed. Her INR was 10.2.
- Mrs. Smith is not a patient that you know well; she comes in infrequently. You look her up and see that she was in last week by your colleague for a pneumonia and was prescribed azithromycin.
- Your nurse comments: "Gosh, we didn't have it recorded that she was on even on warfarin". (from cardiology followed by the KGH INR Clinic)
- ***At your table, for the next few minutes, come up with some ideas about what went wrong and why.***

Case review....

What went wrong and why?

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What we want to want to cover today…

1. Reflect on the importance of maintaining accurate medication lists.
2. Explore process development and implementation of a medication reconciliation program.
3. Share some medication reconciliation pearls.

Clarification: "Reconciliation versus assessment"

- Noun: reconciliation - getting two things to correspond; *"the reconciliation of her chequebook and the bank statement"*
  Synonym: balancing, equalization, or leveling
- It is *not* the act of recommending different medications. It is simply the act of making two lists equal and to match up. (However it is the starting point for medication optimization: one can't set the family budget until it is known how much money is in the bank account.)

But what does this mean?

Medication reconciliation is a process designed to prevent medication errors at all patient TRANSITION points.

We propose that any 'encounter' with your office such as:

- face to face office visit
- ER records
- consultant documents
- fax requisitions or phone calls from a pharmacist

are all transition points, therefore are places where 2 lists should be compared and reconciled.

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But what does this mean?

Placing emphasis on medication reconciliation *in primary care* is a bit of a paradigm shift. Literature reviews show that thus far reducing medication error vis a vis medication reconciliation discusses almost exclusively an acute care or long term care facility setting.

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Guiding Principle

An up-to-date and accurate medication list is essential to ensure safe prescribing in any setting thus reducing medication errors.

Create the "Best Possible Medication History" (BPMH)

Making a case for medication reconciliation: Why bother?

1. Research
2. Rules
3. Expectations
4. Cases

Research

- Drug related illness accounts for 5-23% of all hospital admissions.
  - 2/3 of these events were preventable.
- Drug related illness is the 6th leading cause of mortality in US in 2004.
- ISMP Canada tracks medication errors. Since 2000 there have been 30,000+ voluntary reports of medication error.
  - 4% of these had an outcome of harm or death.

Research

- 1 in 9 ER visits are drug related.
  - 68% of those were preventable.
- 185,000 of 2.5M (7.4%) annual hospital admissions in Canada were due to adverse drug events.
  - 37% of these were potentially preventable.
- Research has confirmed the link between the adverse drug events and the number of medications that a patient is on.

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Making a case for medication reconciliation in primary care?

Rules

CPSO:

- *Prescribing Practices* policy states that "the primary care provider would be aware of all the patient's prescriptions,"
- *The Medical Records Policy Statement* states that physicians should actively maintain the information contained in CPP and specifies "current medications".

- College of Physicians and Surgeons of Ontario. "Policy #2-05 Drugs and Prescribing: Prescribing Practices." c2005 [cited 2008 Aug 09]. Available from: www.cpso.on.ca/Policies/drug_prac.htm.
- College of Physicians and Surgeons of Ontario. "Policy Statement #5-05 Medical Records." c2006 [cited 2008 Aug 09]. Available from: www.cpso.on.ca/Policies/medicalrec.htm.

The family physician is 'the keeper' of the medication list.

Making a case for Medication Reconciliation in Primary Care

Expectations

- It is inherently expected by a patient that the family doctor knows "what they are on".
- Who hasn't heard "it's in there"- when patients are asked what medications are on -- pointing to the chart?

QFHT Observations

- Wrong medication (or incorrect dose or frequency) recorded in chart and perpetuated by re-prescribing by other providers.
- Specialists have started or stopped drugs that we were missing from our list.
- "big ticket" drugs that patients were on that we did not have listed (warfarin, methotrexate, digoxin, prednisone, insulin, ACEI, NSAIDS, DMARDs etc). Some of these had adverse outcomes.

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Table Work

At your tables discuss:

- How accurate do you think your medication lists are?
- How do you know?

Our Process of Developing a Medication Reconciliation Program at QFHT

- Started with an impression that our lists were not kept up to date.
- Questioned: how accurate were are medication lists?
- Measured: hired a medical student to do a baseline audit of patients on 4 or more medications.
  - Met with patients prior to appointments- she had previously phoned them and asked them to bring their 'shoebox' of home meds.
  - She compared their shoebox of what was taken at home with our computer list and found that out of 85 medication lists reviewed….

Our Process of Developing a Medication Reconciliation Program at QFHT

- Only ONE was correct.
- **(this was AS GOOD as we could make our lists look– we could get to 1/85 being correct only if we excluded obvious duplications, time limited expired meds such as antibiotics, missing over the counter medications etc)

Types of Discrepancies Found

We found that there were three different types of errors/discrepancies:

1. COMMISSION DISCREPANCIES
   Medications that were discontinued previously were still listed as active.(i.e metoprolol was stopped 2 months ago and it was not 'discontinued' from the med list)
2. OMISSION DISCREPANCIES
   Meds started elsewhere (i.e. started by a specialist in AHC, eyedrops) were missing
3. INTERNAL DISCREPANCIES
   Incorrect dose, strength, frequency or route listed in our record.

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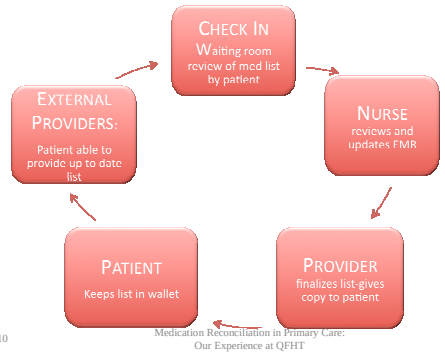
Physician feedback regarding causes of discrepancies

- We also gave the physicians a summary delineating the discrepancies and asked them to report why, in their opinion, did the two lists differ? That is, why were there errors?
- Some of the top the reported reasons for the errors were caused by:
  - Cumbersome software making it time consuming to update,
  - Non EMR clarifications of meds- ie verbal orders, handwritten 'fax backs' to pharmacies etc,
  - Multiple providers for patient, and
  - *Medications not routinely reviewed at office visits*

- We formed a medication standardization group that consisted of members from all parts of our FHT (reception, nursing, physician, pharmacist) who designed our medication reconciliation process.
- Criteria for our medication reconciliation program:
  - Sustainable
  - Includes everyone in the patients' circle of care (including the patient)
  - Must result in a perpetually accurate medication list (rather that a one time blitz that would quickly come out of date)

We developed a process to include everyone in the patients' circle of care



Medication Reconciliation Process

CHECK IN
Waiting room review of med list by patient

At check in patents are given a print out of their medication list as recorded in our EMR on a clipboard.

They are instructed by the receptionist to review the list, cross off what is no longer being taken, add things that are missing and then give it to the nurse.

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Medication Reconciliation Process

NURSE reviews medications and updates EMR

With patient, nurse verifies and updates medication list:

'Discontinues' medications that are no longer active and populates list with medications that were missing (including OTCs, drops, creams etc)

Verifies and updates allergies

Medication Reconciliation Process

PROVIDER

Further finalizes list. Gives copy to patient.

Final clarification and pruning of the medication list is done by the physician or nurse practitioner.

At end of visit patient is given a copy of their medication list with instructions to keep it in their wallet and present it to their pharmacist to make sure that the two lists are the same. Also to show it at ER, specialist appointments etc.

Important to 'take back' old lists from patients so that they do not carry around outdated lists.

Medication Reconciliation Process

EXTERNAL STAKEHOLDERS

Patient is able to present an up to date list to external providers and keep track of alterations to list to present to next PCP visit.

Medication Reconciliation Process

Incoming mail /faxes (consults, ER records discharge summary etc) – changes in medications are updated by **nursing or provider**

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Medication Reconciliation: ASAP

ADD MEDICATIONS THAT ARE MISSING

STOP MEDICATIONS THAT ARE NO LONGER ACTIVE.

ALLERGIES NEED TO BE UPDATED.

PRINT-OUT GIVEN TO PATIENT TO KEEP IN THEIR WALLET.

Mini re-audit

- January we did a repeat mini audit to assess if we were on the right track.
- We found that out of 12/19 med lists reviewed were accurate (in the same manner as the original audit). 1/19 was perfect- even included OTCs

Mini re-audit Observations

- Still having software trouble
- When we started checking we were struck by the number of times that there were discrepancies between how we had recorded the medications and how the patient was actually taking it.

Table work

- What barriers and what advantages do you have in your home team to maintaining and accurate medication list?
- That is, what works for you and against you right now?

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Implementation and Process Pearls

- Include everyone in the circle of care.
- Focus on creating a sustainable and continuous practice that will maintain your lists

Implementation and Process Pearls Getting "Buy In"

- Find a champion – ideally in a leadership position
- Track results – set parameters and pick a goal
- Make it more difficult not to do it

Implementation and Process Pearls SUPPORT STAFF

- Train staff to train patients
- Anticipate questions and push-back – provide tools for front-line staff
- Train how to use the EMR – provide "how tos" and training sessions

Implementation and Process Pearls ENGAGING PATIENTS

1. Enable
   - Give patients their medication list on check in to review and update
   - Encourage them to bring in all of their medications to every visit
   - Give them a copy of their list for their wallet to present every visit

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Implementation and Process Pearls
ENGAGING PATIENTS

2. EDUCATE

- Explain what you are doing and why
- Define what a 'medication' is. Many people forget that inhalers, drops, creams, over the counters are medications to be recorded on their chart
- Use the opportunity to educate in general about medication safety

Implementation and Process Pearls:
FOLLOW THROUGH

If your ask a patient to participate in updating their medication, make sure that it actually gets done

Implementation and Process Pearls
COMMUNICATION

- Newsletters,
- Patient mailouts,
- WEB posts
- Waiting room DINS,
- Signage at check in and in exam rooms,
- FAQs that staff know about anticipating patient questions and comments

Implementation and Process Pearls
PATIENCE

- Slow and steady wins this race– this will take longer than you anticipate and take more explaining and educating than you think.

Future Goals for QFHT

- Overall, our goal is reducing of medication errors and medication list accuracy is the first step of this process.
- Further refine our processes
- Next we want to do a thorough audit of our lists in the summer 2010.
- We want to track and categorize medication errors that leave our buildings- pharmacy fax backs
- Track errors with ER reconciliation– this is how we can really look at reduction in medication errors.

What about Mrs Smith?

At your table – what changes would you consider in this practice to reduce future similar misadventures?

Final Comments

Effectively engaging the patient and family in medication reconciliation is a key strategy for targeting and preventing prescribing and administration errors, and thereby reducing patient harm.

Although in outpatient setting, we want to leave you with this final point:

- After implementing a patient-centered medication reconciliation program, three hospitals in Massachusetts experienced an average **85% REDUCTION IN RELATED MEDICATION ERRORS OVER A 10-MONTH PERIOD.** Hundreds of health-care provider teams are implementing similar strategies such as participating in the Safer Healthcare Now!, (Canada) and the 100K Lives, (US) campaigns.

Questions??

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Resources

- Canadian Institute for Safety in Healthcare
- Safer Healthcare Now
- Institute for Healthcare Improvement (IHI.org)
- Institute for Safer Medication Practices in Canada (ISMP Canada)

- What do you think of when you think of quality improvement? Of all of the possible quality improvement projects that you could engage in within your setting, which ones are the highest priority?
  - Idea is that medication reconciliation is often not high priority, but what we have found is that not only is it valuable in itself, it is connected to so many other components within our practice that to not focus on it can affect the success of other projects. It's also a quality improvement project that can be easily adopted – even in environments with limited resources – and one that engages your entire team. It has bang for buck!
- Objectives for today:
  - The value and necessity of medication reconciliation
  - Background and findings of our initial study
  - Practical solutions and clinical pearls
  - "One year later" and next steps
- The value and necessity of medication reconciliation
  - Why bother?
    - Stats on adverse events
    - CPSO guidelines
  - Whose job is it?
  - What is it? (reconciliation vs. assessment)
  - Why is it an important part of QI? How does it fit into QI initiatives?
  - Often associated with hospitals, but it's an important part of primary care too.
- Background and findings of our initial study
  - How accurate do you think your lists are? Why? What do you do to ensure that they are accurate? What do you do that works well?
    - What about patients who don't regularly come in?
  - When we set out on our study, we wanted to achieve two things:
    - engage everyone – including patients – in the circle of care
    - sustainable and on-going
  - Both of these required a change in culture (see below)
  - Vague perception that the meds lists were not a problem. They seemed okay and besides, we knew our own patients, so we were confident of the lists in our heads. The problem is, this doesn't work in an environment like ours with residents or if you're taking over patients – in fact, it's dangerous.
  - The process for our original audit
- Practical solutions and clinical pearls
  - When we received our preliminary results, we started thinking big picture – medication reconciliation can be driven by an individual, but you need to focus on fixing the system so that you're not dependent on the individual.
  - Challenges to implementation
    - Convincing people of its value
    - Patient buy-in and understanding
      - Getting them to understand their role
      - Communicating what counts as medication – i.e. "I don't take anything. Well, except for this…and this…and this….and this…"
      - Need to craft language and messaging – how does it benefit them and why do we need them to do it.
    - Finding time
      - It will get easier – as the lists get better, they take less time
      - Sometimes, you won't be able to update the list in one appointment – we often had to ask patients to come back, just to clean up the med lists
    - Collaboration and sharing the work
      - This involves everyone – you need to have the clinical team on board, nurses, and physicians. It doesn't work unless everyone is committed.

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