Medication Safety at Transitions of Care

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PPL Network, TEGH
Objectives

1. Discuss how we learn from medication adverse events

2. Share strategies to enhance medication safety at transitions in care
   - Medication Reconciliation
   - Hospital to Home Facilitating Medication Safety at Transitions – A Toolkit for Healthcare Providers
   - National Medication Safety Checklist - 5 Questions to Ask about your medications

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About ISMP Canada

• Independent national not-for-profit organization committed to the advancement of medication safety in all healthcare settings.

• Incorporated in 2000 for the purpose of analysis of medication incidents, sharing learnings, and making recommendations for medication system safeguards.

• Our goal is the creation of safe and reliable systems for managing medications.
Medication Incident Reporting

• Incidents voluntarily reported

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<th>Practitioners</th>
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<td>Healthcare Professional - (e.g., nurse, pharmacist, physician)</td>
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<td>Preventing harm from medication incidents is a responsibility of health professionals. Consumers like you can also play a vital role.</td>
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• Incidents discussed by interdisciplinary team of analysts (nurses, pharmacists, physician)
Deaths Associated with Medication Incidents: Learning from Collaborative Work with Provincial Offices and Chief Medical Examiner

Background

Each province has a provincial Office of the Chief Coroner or Chief Medical Examiner responsible for investigating deaths. ISMP and the Office of the Chief Coroner for Ontario, in particular, have collaborated on medication incidents that have resulted in deaths. From 2012 to 2014, 256 deaths thought to be related to medications were investigated by the Office of the Chief Coroner for Ontario, which is responsible for investigating deaths in the province of Ontario.

Motivation

The primary objective of this project is to provide Ontario healthcare professionals and other interested parties with a better understanding of medication-related deaths. This is achieved by providing a comprehensive overview of medication incidents that have resulted in deaths, including a detailed analysis of the factors contributing to these incidents.

Methods and Findings

A detailed review of the medication-related deaths investigated by the Office of the Chief Coroner for Ontario was conducted. The review included a thorough examination of the medical records, death certificates, and any other relevant documentation. The data were then analyzed to identify patterns and trends in medication-related deaths.

Results

The analysis revealed that medication-related deaths are often preventable. The factors contributing to these deaths include patient errors, medication errors, and system failures. The study also identified several key areas for improvement, including the need for better medication management systems, improved communication, and increased education and training.

Conclusion

The study highlights the importance of collaboration between healthcare professionals and other stakeholders in addressing medication-related deaths. The findings underscore the need for ongoing research and the development of effective strategies to prevent medication errors and improve patient safety.

Promoting the Safe Use of Insulin in Hospitals

In the 2012-2013 fiscal year, health care practitioners across the country continued to report instances of incorrect insulin administration. To help address this issue, ISMP published the "Critical Incident Learning" series, which includes a range of resources aimed at promoting the safe use of insulin in hospitals.

The series includes case studies, best practices, and expert commentary on the errors and near misses reported by healthcare practitioners. It also features articles on the latest research and developments in insulin safety.

Call to Action for Hospitals

1. Develop and implement an insulin management protocol
   - Establish roles and responsibilities for insulin administration
   - Develop and implement policies and procedures for insulin management
   - Educate staff on the importance of insulin safety

2. Implement feedback systems to identify and address errors
   - Establish a system for tracking and analyzing insulin errors
   - Encourage staff to report errors and near misses

3. Improve insulin administration practices
   - Use insulin pens and syringes instead of vials
   - Implement a double-check system for insulin administration
   - Use insulin pumps for patients requiring insulin therapy

4. Annual education sessions for staff
   - Provide ongoing training on insulin administration
   - Encourage staff to participate in educational programs on insulin safety

5. Use standardized insulin delivery systems
   - Implement a standardized insulin delivery system
   - Use insulin pens and syringes for all insulin administration

The tools developed for this project, available from ISMP, include checklists, templates, and other resources designed to help healthcare practitioners promote the safe use of insulin in hospitals.
Medication Adverse Events at Transitions

• 54% of patients had at least one unintended discrepancy on admission to hospital; most common was omission. 39% had potential to cause moderate to severe harm or deterioration

  Cornish PL et al., Arch Intern Med. 2005

• 62% of patients had at least 1 unintentional discrepancy at transfer; most common was omission (56%)

  Lee JY et al., Ann Pharmacother. 2010

• 72% of adverse events at discharge are medication related; the majority are preventable

  Forster HD et al., Can Med Assoc. 2004
Aggregate Analysis of Medication Incidents in Home Care

• 68% of the incidents reviewed were due to medication transition failure and involved a problematic transition of the patient and his/her medications from the hospital back home.

“Poor communication at transitions can undo a lot of effort and compromise otherwise excellent care.”

Dr. M. Hamilton

SHN! November 2015 Teleconference Your discharge is someone’s admission
Medication Reconciliation
Where are you at with MedRec?

We have a lot of work to do

We are doing alright

We are doing great
Summary of MedRec Evidence

- Research has shifted from admission MedRec to discharge and strategies to reduce readmissions
- MedRec, amongst a suite of interventions has been shown to reduce re-admissions
- Pharmacy-led and pharmacist involvement in MedRec have showed substantial reduction in the rate of all-cause readmissions (19%), all-cause ED visits (28%) and ADE-related hospital revisits (67%).
MedRec - One Component of Medication Management

Medication Management
Patient-centred care to optimize safe, effective and appropriate drug therapy. Care is provided through collaboration with patients and their health care teams.

Clinical Medication Review
Addresses issues relating to the patient's use of medication in the context of their clinical condition in order to improve health outcomes.

Medication Reconciliation
A formal process in which healthcare providers work together with patients to ensure accurate and comprehensive medication information is communicated consistently across transitions of care.

Best Possible Medication History
A complete and accurate list of all the medications a patient is taking created using at least 2 sources of information including a client and/or family interview.

1. Developed collaboratively by the Canadian Pharmacists Association, Canadian Society of Hospital Pharmacists, Institute for Safe Medication Practices Canada, and University of Toronto Faculty of Pharmacy, 2012
2. www.health.gov.bc.ca/pharm.aspx
3. ISMP Canada. Medication Reconciliation in Acute Care: Getting Started Kit. 2011
4. ISMP Canada. Medication Reconciliation in Acute Care: Getting Started Kit. 2011

Adapted from Fraser Health, Providence Health Care, Provincial Health Services Authority, Vancouver Coastal Health
What Is Medication Reconciliation?

It is a formal process comparing:

A patient’s accurate and comprehensive medication history (Best Possible Medication History)

Discrepancies are identified and brought to the attention of the healthcare team.

Medications prescribed at Admission, Transfer and Discharge
Retroactive MedRec Model

Occurs when the BPMH is conducted after admission medication orders are written

Step 1: Primary Medication History
Step 2: Admission Medication Orders (AMOs)
Step 3: BPMH
Step 4: Compare BPMH with AMOs and resolve any discrepancies

Developed by ISMP Canada for Safer Healthcare Now!
Proactive MedRec Model

Occurs when the BPMH is conducted **before** admission medication orders are written

Step 1

BPMH

LEADS TO

Step 2

Admission Medication Orders (AMOs)

Step 3

Verify every medication in BPMH has been assessed by prescriber

Developed by ISMP Canada for *Safer Healthcare Now!*
Hybrid MedRec Model

• Where proactive/retroactive models co-exist

• Hybrid models exist because of:
  • Inadequate staffing to perform a BPMH proactively
  • Complex patients with extensive medication histories, or
  • Incomplete information available to complete a BPMH prior to admission orders
How the Patient’s Truth can be a MedWrecker

Patient Story shared by:
Colleen Cameron, RPh, Pharm.D.
Grand River Hospital, Kitchener ON
(SHN teleconference 2015 – Your discharge is someone’s admission)
Ms. C, 72 years old

- Admitted to hospital for **acute delirium**, UTI, new onset diabetes, new onset atrial fibrillation.
- **PMH** – HTN, seizures, recurrent DVTs on warfarin
- **Social Hx**: widowed, lives alone in home, Gr. 8 education, manages meds & ADLs independently
- **Meds** – phenobarbital, carbamazepine, telmisartan/HCTZ, warfarin
- **Warfarin history** – on between 7-8 mg/day for > 15 years. Has always had 5mg and 1mg tablets dispensed. INRs pre-admission – consistently stable for years between 2.3-3.0
On discharge - delirium clearing and getting close to baseline, I took the home warfarin bottles out of her bag. “Can you please show me how you would take 7mg of warfarin?”

I confirmed with her “Is that 7mg?” → “Yes”

I put the 5mg vial behind my back and again asked her to put 7 mg in her hand using only 1 mg tablets.

= 27mg

= 7mg
Why the confusion?

Taking 7mg using  is  MATH

Taking 7mg using  is  COUNTING
What would the next admission look like if this hadn’t been caught?

In the next admission for hematuria, pulmonary hemorrhage, GI bleed and an INR > 10, when we ask her what her warfarin dose is for her BPMH: “I take 7 mg of warfarin every day.”

The Patient’s Truth
Outcome

Ms. C has been back in her home for 6 months.

She is independent with her ADLs and is managing her medications using warfarin 1 mg tablets.
Morals of the story...

1. What we tell the patient is often very different than what their truth ends up being.

2. A medication history or list is simply a hint of what the patient may actually be doing.
Morals of the story...

3. The only hope we have of finding out the patient’s truth
   - Talk and listen
   - Dialogue
   - Demonstrate (us and them)
   - Keep sleuthing...

4. The patient’s truth is often cause for someone else’s admission.
Measuring Your MedRec Process

“If you can’t measure it, you can’t improve it”

- **Was it done?**
  - Percentage of Patients Reconciled

- **How well was it done?**
  - BPMH > 1 source
  - Actual med use verified with patient/family
  - Each drug includes name, dose, strength, route, frequency
  - Every med is accounted for on orders
  - Prescriber has documented rationale for held or discontinued meds
  - Discrepancies communicated, resolved, documented
Hospital to Home - Facilitating Safe Medications at Transitions

A Toolkit and Checklist for Healthcare Providers
Rationale for a Medication Focused Transition checklist

- Hospital discharge is a critical interface of care.
- Patients at high risk of fragmented care and adverse events
- Goal of using the checklist is to increase patient safety especially when a patient goes home from hospital.
Contents of the Toolkit

- Patient story
- How this will benefit the patient experience
- Rationale for developing a toolkit and checklist
- Identify your target population
- Define key players - roles and responsibilities
- Home support for medication follow-up
- Pharmacists – a good return on investment
- Change ideas, overcoming barriers
And the Checklist....

Interventions to reduce medication errors when a patient goes from hospital to home.

Hospital to Home—Medication-Focused Transitions Checklist

The goal of using this medication-focused transition checklist is to increase patient safety by reducing medication errors and incidents that occur when a patient goes from hospital to home.

Create the Best Possible Medication Discharge Plan (BPMDP)

- Compare a admission Best Possible Medication History, recent medication profile and discharge prescriptions. Note any queries or discrepancies.
- Ensure all prescriptions are legible and complete (e.g., name, dose, quantity, frequency, form, and name of provider and facility).
- Ensure formulary/non-formulary auto-substitutions in hospital have been reverted to what the patient was on, where appropriate.
- Resolve any outstanding discrepancies or queries with the prescriber.
- Create a patient-friendly medication discharge list and include the name of medication, what it is used for, and how to take it.
- Identify each medication as NEW, CONTINUED, STOPPED or CHANGED.
- Include pertinent information for follow-up by the family physician (e.g., baseline labs or recommended labs for follow-up, medications to be reassessed).
- Obtain lab requisitions, to monitor medication efficacy or toxicity.

Chat with patient/caregiver to improve understanding of their medications

- Gather medication information counseling tools (e.g., medication pamphlets, inhaler or insulin pen for training purposes).
- Engage with patient - introduce yourself and your role, keeping a open dialogue:
  - Review prescriptions and patient-friendly medication discharge list.
  - Counsel patient using the Best Possible Medication Discharge Plan (BPMDP) patient interview guide.
  - Counsel patient regarding any new medications (indications, side effects, drug interactions) using a teach-back method.
  - Show prescription— to be faxed to the pharmacy – verify vials vs. compliance pack, pickup vs. delivery.
  - Validate that patient can perform specific monitoring (e.g., pulse check, blood pressure monitoring, go to lab - INR).
  - Convey the importance of bringing their medication list to every appointment, and keeping it up-to-date.
  - Remind patient to see their family physician within a week to review their medications.
  - Return patient's own medications – discard stopped medications with their permission.
  - Modify prescriptions and medication discharge list with prescriber, if needed, and review to ensure they do not have conflicting information.

Connect with community partners to ensure supports are in place

- Determine home supports currently in place (e.g., caregiver, set, home care).
- Link with community pharmacist regarding patient's discharge by fax or phone.
  - Complete and fax the Discharge Medication Cover Sheet with the prescriptions and the medication discharge list.
  - Contact community pharmacist concerning medications not readily stocked or covered by drug plan.
  - Referal of patient to community pharmacy medication programs (e.g., MedsCheck or MedsCheck at Home).
  - Fax family physician's office with follow-up issues and medication discharge list.
  - Refer to CCAC and provide them the patient medication list, if home medication management support is needed.

Complete the transition

- Give finalized prescriptions and patient medication discharge list to the patient.
- Document patient interaction and place copies of prescriptions and discharge medication list on chart.
- Be available to respond to questions from patients, caregivers and community partners, and to follow on outstanding issues.

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Create the Best Possible Medication Discharge Plan (BPMDP)

• Compare BPMH (home list), current medication profile (MAR) and discharge prescriptions.

• Identify each medication as new, continued, stopped or changed and if possible the reason for the changes.

• Ensure scripts are legible, complete and formulary auto-substitutions reverted where appropriate.
Chat with the patient/caregiver

• Gather medication info counselling tools
• Engage patient, keeping open dialogue
  • Review patient friendly medication discharge list and prescriptions (show them)
  • Counsel patient on new medications using teach back method
• Return patient’s own meds
• Make changes to scripts/discharge lists as needed.
Connect with community partners

- Determine home supports in place
- Link with community pharmacist via fax or phone (Fax cover letter template)
- Fax follow-up issues and medication discharge list to family physician’s office
- Refer to CCAC and provide them with discharge medication info
- Cross-continuum team collaboration
Complete the transition

• Give finalized scripts and discharge medication information to patient/caregiver

• Document patient interaction

• Be available to respond to questions from patients, caregivers, community partners and to follow on outstanding issues
Alignment with Accreditation Canada Required Organizational Practices (ROPs)

- Medication reconciliation as a strategic priority
- Medication reconciliation at care transitions
- Information transfer at care transitions

TESTS FOR COMPLIANCE

Major  Upon or prior to admission, a Best Possible Medication History (BPMH) is generated and documented, in partnership with clients, families, caregivers, and others, as appropriate.

Major  The BPMH is used to generate admission medication orders OR the BPMH is compared with current medication orders and any medication discrepancies are identified, resolved, and documented.

Major  A current medication list is retained in the client record.

Major  The prescriber uses the Best Possible Medication History (BPMH) and the current medication orders to generate transfer or discharge medication orders.

Major  The client, community-based health care provider, and community pharmacy (as appropriate) are provided with a complete list of medications the client should be taking following discharge.

2016 ROP Handbook
Partnering with our Patients

National Medication Safety Checklist

5 questions to ask about your medications
Background

• 2014 National Medication Safety Summit
  
  • Goal: Improving communication about medication among providers and patients and families at transitions of care
  
  • Action: Create and disseminate a national medication safety checklist for patients and families at transitions in care.
Collaborative Process

- Completed environmental scan
- Working group developed draft checklist
- Feedback obtained from patients, clinicians, advisory panel and external stakeholder groups
  - Electronic survey
  - Email
- Checklist revised based on feedback received
### 5 Questions to Ask About Your Medications

1. **Changes?**
   - Have any medications been added, stopped or changed, and why?

2. **Continue?**
   - What medications do I need to keep taking, and why?

3. **Proper Use?**
   - How do I take my medications, and for how long?

4. **Monitor?**
   - How will I know if my medication is working, and what side effects do I watch for?

5. **Follow-Up?**
   - Do I need any tests and when do I book my next visit?

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- **Available in EN & FR**
- **Media campaign planned for March 9th, 2016**
It’s about starting a conversation

• “…initiates 2 way communication and encourages everyone to be more involved with their personal health care – take more accountability and responsibility”
How can it be used

• Patients
  • Before they leave the hospital
  • Bring it to every appointment

• Healthcare providers
  • Guide their discussion

Adapted from Medication Reconciliation in Home Care Getting Started Kit, January 2011
Communication and Dissemination Plan

- National webinar
- Social media e.g. MedRec Facebook page, Twitter
- Disseminate to key stakeholder organizations
- Post on websites (www.safemedicationuse.ca)
- Safe Medication Use bulletin
- Word of mouth
- Media Launch March 9th, 2016
Medication Safety Resources
Medication reconciliation is a formal process in which healthcare providers work together with patients, families and care providers to ensure accurate and comprehensive medication information is communicated consistently across transitions of care. Medication reconciliation requires a systematic and comprehensive review of all the medications a patient is taking (known as a BPMH) to ensure that medications being added, changed or discontinued are carefully evaluated. It is a component of medication management and will inform and enable prescribers to make the most appropriate prescribing decisions for the patient.

"[Medication Reconciliation] is definitely the right thing to do. We have certainly caught errors that could have caused harm to patients, which helps staff and physicians better understand the importance of MedRec."

Winnipeg Regional Health Authority, MB

A Best Possible Medication History (BPMH) is a history created using 1) a systematic process of interviewing the patient/family; and 2) a review of at least one other reliable source of information to obtain and verify all of the patient’s medication use (prescribed and non-prescribed). Complete documentation includes drug name, dosage, route and frequency. The BPMH is more comprehensive than a routine primary medication history which is often a quick preliminary medication history which may not include multiple sources of information.

The BPMH is a ‘snapshot’ of the patient’s actual medication use, which may be different from what is contained in their records. This is why the patient involvement is vital.

ISMP Canada supports Medication Reconciliation provincially, nationally and internationally

ISMP Canada created Getting Started Kits for Medication Reconciliation in Acute Care, Long Term Care, Home Care for the Canadian Safer Healthcare Now! campaign and for the World Health Organization High 5’s initiative and provides ongoing support to teams around the world.
To Keep Up-to-Date with the Latest News on Medication Safety

Follow Us:

@SafeMedUse  @CanMedRec
MedRec Ontario Network

• Join the conversation!

• MedRec Ontario Network a pan-Ontario network for community healthcare providers
  • A discussion forum for sharing information, questions and resources about medication reconciliation in the community
  • Email medrec@ismp-canada.org to join
  • Supported by Health Quality Ontario
Preventing harm from medication incidents is a responsibility of health professionals. Consumers like you can also play a vital role.

Reporting Medication Incidents benefits all Canadians.

REPORT NOW

- About SafeMedicationUse.ca
- About Medication Incidents
- Why Report?
- Resolving Concerns About the Safety of Your Care
- Frequently Asked Questions (FAQs)
- Your privacy

Tell Us How We're Doing:

TAKE THE SURVEY

Latest News and Resources

- Similar Patient Names Leads to Pregnant Woman Getting Wrong Prescription
- Safe Practices for Medication Use (Take Charge of Your Medicines!)
- "Take as Directed: Your Prescription for Safe Health Care in Canada" is now available in Canadian bookstores!
  "The authors provide helpful information that can guide Canadians on how to manage their health care, including safe medication use" says Sylvia Hyland, Vice President and Chief Operating Officer of ISMP Canada.
- Health Canada is reminding Canadians about using acetaminophen safely.
  - Read Health Canada's Information Update on Acetaminophen
  - Read the SafeMedicationUse article "Spotlight on Acetaminophen"
- Angeliq Drug Samples Mistakenly Provided as Birth Control - Newsletter - PDF
- Epinephrine Auto-Injectors - Know How to Use EpiPen and Twinject Properly
Medications: More Than Just Pills

Prescription Medicines
These include anything you can only obtain with a doctor’s order such as heart pills, inhalers, sleeping pills.

Over-The-Counter Medicines
These include non-prescription items that can be purchased at a pharmacy without an order from the doctor such as aspirin, acetaminophen, laxatives, other bowel care products, herbs like garlic and Echinacea or vitamins and minerals like calcium, B12 or iron.

DON’T FORGET THESE TYPES OF MEDICATIONS

Eye/Ear Drops  Inhalers  Nasal Spray  Patches

Liquids  Injections  Ointments/Cream

Prompt the patient to include medicines they take every day and also ones taken sometimes such as for a cold, stomachache or headache.

Adapted from Vancouver Island Health Authority

www.SaferHealthcareNow.ca
Introduction
- Introduce self and profession.
- I would like to take some time to review the medications you take at home.
- I have a list of medications from your chart/ file and want to make sure it is accurate and up to date.
- Would it be possible to discuss your medications with you (or a family member) at this time?
  - Is this a convenient time for you? Do you have a family member who knows your medications that you think should join us? How can we contact them?

Medication Allergies
- Are you allergic to any medications? If yes, what happens when you take (allergy medication name)?

Information Gathering
- Do you have your medication list or pill bottles (vials) with you?
  - Use show and tell technique when they have brought the medication vials with them
  - How do you take (medication name)?
  - How often or When do you take (medication name)?
- Collect information about dose, route and frequency, for each drug. If the patient is taking a medication differently than prescribed, record what the patient is actually taking and note the discrepancy.
  - Are there any prescription medications you (or your physician) have recently stopped or changed?
  - What was the reason for this change?

Community Pharmacy
- What is the name and location of the pharmacy you normally go to? (Anticipate more than one).
  - May we call your pharmacy to clarify your medications if needed?

Over the Counter (OTC) Medications
- Do you take any medications that you buy without a doctor's prescription? (Give examples, i.e., Aspirin). If yes, how do you take (OTC medication name)?

Vitamins/Minerals/Supplements
- Do you take any vitamins (e.g. multivitamin)? If yes, how do you take (vitamins name(s))?
- Do you take any minerals (e.g. calcium, iron)? If yes, how do you take (minerals name(s))?
- Do you use any supplements (e.g. glucosamine, St. John’s Wort)? If yes, how do you take (supplements name(s))?

Eye/Ear/Nose Drops
- Do you use any eye drops? If yes, what are the names? How many drops do you use? How often? In which eye?
- Do you use ear drops? If yes, what are the names? How many drops do you use? How often? In which ear?
- Do you use nose drops/nose sprays? If yes, what are the names? How do you use them? How often?

Inhalers/Patches/Creams/Ointments/Injectables/Samples
- Do you use inhalers, medicated patches, medicated creams or ointments, injectable medications (e.g. insulin)? For each, if yes, how do you take (medication name)? Include name, strength, how often.
- Did your doctor give you any medication samples to try in the last few months? If yes, what are the names?

Antibiotics
- Have you used any antibiotics in the past 3 months? If so, what are they?

Closing
This concludes our interview. Thank you for your time. Do you have any questions?
If you remember anything after our discussion please contact me to update the information.

Note: Medical and Social History, if not specifically described in the chart/file, may need to be clarified with patient.

Adapted from University Health Network
Excellent Resources

- STAAR - IHI - How-to Guide: Improving Transitions from the Hospital to Community Settings to Reduce Avoidable Re-hospitalizations
  [link](http://www.ihi.org/resources/pages/tools/howtoguideimprovingtransitionstoreduceavoidablerehospitalizations.asp)

- Project RED “Project RED (Re-Engineered Discharge)” – (Boston University) [link](http://www.bu.edu/fammed/projectred/)

- “Project BOOST” (Society of Hospital Medicine) – Dr. Jeffrey Schnipper
  [link](http://www.hospitalmedicine.org/AM/Template.cfm?Section=Home&TEMPLATE=/CM/HTMLDisplay.cfm&CONTENTID=27659)
Quality at St. Michael's: Medication Reconciliation

https://www.youtube.com/watch?v=LnOecYXw_UE

It’s our job to ensure we know as much as possible about the medications our patients are taking – how many, how much and how often.

Learn how St. Michael’s is improving the process that best tracks this information.
“It made a difference to that one”

Starfish story:
DISCUSSION/QUESTIONS
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