Solving the PPMI Puzzle -
Here Are Some Pearls

Medication-related Continuity of Care

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September 13, 2012

The speaker has no conflict to disclose.

Global Objectives

- Describe individual components of the Pharmacy Practice Model Initiative (PPMI) where achievement in Illinois is less than optimal.
- Provide recommendations for implementation of specific aspects of the PPMI including obtaining hospital administration buy-in.
- Discuss solutions to implementation of the PPMI in specifically identified areas.

Continuity of Care

Definition [PPMI][1]:

Continuity of Care provides for the safe and seamless transition of patients within the health care continuum, such as when patients are discharged from an acute care setting to an outpatient community environment, and includes the communication of their medication list and treatment plan.

PPMI Hospital Self-Assessment

Do pharmacists facilitate medication-related continuity of care when patients experience **transitions of care**?[2]

IL	National	
4.17%	5.93%	Exists in all areas/situations (100%)
16.67%	22.00%	Exists in most areas/situations (50-99%)
70.83%	53.04%	Exists only in some areas/situations (1-49%)
8.33%	18.41%	Does not exist (0%)
0%	0.62%	Not applicable

PPMI Hospital Self-Assessment

When on rotations at your hospital, are pharmacy students trained on **transitions of care** in the medication-use process?

IL	National	
62.50%	59.44%	Yes
20.83%	27.77%	No
16.67%	12.79%	N/A

Is **medication reconciliation** performed by the pharmacy staff at your hospital?

IL	National	Medication reconciliation is . . .
12.50%	9.05%	Performed by pharmacy staff in ALL areas
25.00%	19.81%	Performed by pharmacy staff in SOME areas
25.00%	26.83%	Partially performed by pharmacy staff in some or all areas
37.50%	43.68%	Not performed by pharmacy staff
0%	0.62%	Not applicable

PPMI Hospital Self-Assessment

Do pharmacists provide **discharge education** to patients at your hospital?

IL	National	Discharge education is . . .
0%	2.50%	Provided to all patients
25.00%	15.13%	Provided to some patient-care units
20.83%	19.03%	Provided to high-risk patients
54.17%	56.94%	Available upon request
0%	6.40%	Not applicable

Does your hospital have processes to ensure medication-related continuity of care for **discharged patients**?

IL	National	
41.67%	53.98%	Yes
58.33%	46.02%	No

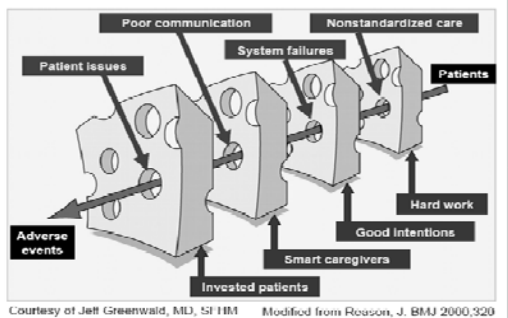
PPMI Hospital Self-Assessment

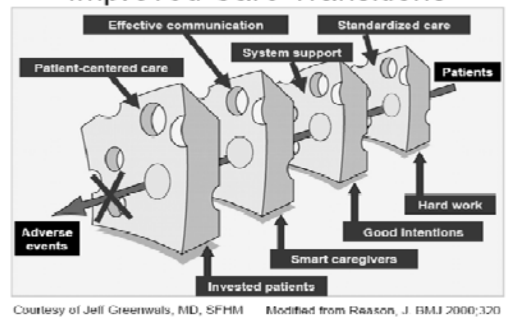
Illinois vs. Nation

Strengths:
- Existence of at least some pharmacist-facilitated medication reconciliation
- Some discharge education provided by Pharmacists
- Education of pharmacy students in transitions of care

Opportunities:
- Establish processes for medication-related continuity of care for discharge patients
- Expand reach of pharmacists' role in transitions of care

Why are **care transitions** so important?





What **opportunities** are there for our profession?

Affordable Care Act

- Value Based Purchasing
- Readmission Reduction
- Healthcare Acquired Conditions

Overview of Value Based Purchasing Program

- Improve quality and safety for Medicare beneficiaries by linking payment to quality of care[4]
- VBP Program is continuously updated as part of the annual rulemaking
- Hospital performance for each measure is compared to national performance standards[5]
- Points awarded for:
  1.) Achieving high quality and
  2.) Improving towards goals

Value Based Purchasing Program[6]: Federal Fiscal Year 2013

12 Clinical Process Measures: 70%

- AMI -7a, AMI-8a
- HF-1
- PN-3b, PN-6
- SCIP-Inf-1, SCIP-Inf-2, SCIP-Inf-3, SCIP-Inf-4
- SCIP-Card-2, SCIP-VTE-1, SCIP-VTE-2

8 HCAHPS Domains: 30%

- Communication with Nurses
- Communication with Doctors
- *Responsiveness of Hospital Staff*
- **Pain Management**
- **Communication About Medicines**
- Cleanliness and Quietness of Hospital Environment
- **Discharge Information**
- *Overall Rating of Hospital*

Value Based Purchasing Program[6]: Proposed Federal Fiscal Year 2014

13 Clinical Process Measures: 45%

- AMI -7a, AMI-8a
- HF-1
- PN-3b, PN-6
- SCIP-Inf-1, SCIP-Inf-2, SCIP-Inf-3, SCIP-Inf-4, SCIP-Inf-9
- SCIP-Card-2, SCIP-VTE-1, SCIP-VTE-2

8 HCAHPS Domains: 30%

- Communication with Nurses
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- *Overall Rating of Hospital*

3 Mortality Measures: 25%

- **AMI 30 day mortality**
- **HF 30 day mortality**
- **PN 30 day mortality**

Readmission Reduction

Readmission Initiatives from Medicare and Medicaid

- Improve quality of care and experience for patient
- Trend to reduce or deny payments for preventable readmissions

The Readmission Issue

- 19.6% of readmissions within 30 days and approximately 76% may be preventable[7]
- Over 50% of readmitted patients received no care or follow up in the 30 days after hospitalization
- CMS estimates that unplanned readmissions cost Medicare over $17 billion annually

Most Common Reasons for Avoidable Admissions (AHRQ)[8]

- Poor discharge instruction
- Poor transfer of information/handoff communication
- Lack of timely post-discharge physician visit
- Poor medication reconciliation

Readmissions Medicare: Hospital Readmissions Reduction Program

Section 3025 of the Affordable Care Act

- **FY2012** – data collection/submission for 3 high-volume conditions: HF, Pneumonia, AMI (2008-2011)
- **FY2013**—beginning Oct 1, 2012: CMS to reduce payments to hospitals with excess readmissions
  - Up to 1% reduction of net inpatient Medicare payment
- **FY2014**—up to 2% payment reduction
- **FY2015**—up to 3% payment reduction
- **Future**—additional readmission measures?

Readmissions Medicare: VBP Anticipated Rules

- Anticipated rules that will penalize hospitals for “excess” 30-day, all-cause, unplanned readmissions
- *Proposed* VBP Fiscal Year 2015 rules include the following readmission measures:[9]
  - 30-day Risk Standardized Readmission Measure: AMI, HF, PN, Total Hip/Total Knee Arthroplasty
  - Hospital-Wide All-Cause Unplanned Readmission (HWR)

Readmissions: Medicaid

- Providers to receive **reduced (or zero) payment** for potentially preventable readmissions[10]
- In process: Establishment of benchmarks for hospitals to measure and align payments to **reduce hospital readmissions, inpatient complications, and unnecessary ER visits**
- Senate Bill 2840, p. 181-2: ”The Department shall establish benchmarks for hospitals to measure and align payments to reduce potentially preventable hospital readmissions, inpatient complications, and unnecessary emergency room visits. In doing so, the Department shall consider items, including, but not limited to, historic and current acuity of care and historic and current trends in readmission. The Department shall publish provider-specific historical readmission data and anticipated potentially preventable targets 60 days prior to the start of the program. In the instance of readmissions, the Department shall adopt policies and rates of reimbursement for services and other payments provided under this Code to ensure that, **by June 30, 2013, expenditures to hospitals are reduced by, at a minimum, $40,000,000.”**

Healthcare Acquired Conditions

- Trend from Medicare and Medicaid to reduce or deny payments for hospitalizations that include Healthcare Acquired Conditions (HACs)
- Targeted Healthcare Acquired Conditions (HACs):[11]
  - Foreign object retained after surgery
  - Air embolism
  - Blood incompatibility
  - Pressure Ulcer Stages 3 or 4
  - Falls and Trauma (includes: fracture dislocation, intracranial injury, crushing injury, burn, electric shock)
  - Vascular catheter associated infection
  - Catheter associated urinary tract infection
  - **Manifestations of poor glycemic control**

Obtaining Hospital Administration Buy-in

PPMI:

Do hospital leaders support (philosophically and with resources) pharmacy models that maximize use of pharmacist roles in patient care?

IL	National	Leadership Support
54.17%	43.21%	**Strong**
33.33%	47.27%	Partial
12.50%	8.74%	Limited
0%	0.78%	None

Obtaining Hospital Administration Buy-in

Messaging

- Value of pharmacists as medication expert
- Relate to upcoming healthcare reform programs and measures
- Pharmacy profession’s role in the transitions of care

It’s the right thing to do for our patients!

Implementation of Medication-related Continuity of Care Services:

Project RED, a Targeted Approach

Sinai Health System

- **Mount Sinai Hospital**
  - 319-bed, major teaching hospital
  - Level I Trauma Center with ~60,000 patients seen annually
  - Accredited Stroke & Chest Pain Center
- **Sinai Children's Hospital**
  - Level III NICU; Pediatric ICU
  - Pediatric trauma care, surgery & anesthesiology
- **Schwab Rehabilitation Hospital**
  - 102-bed, teaching hospital
  - Extensive inpatient & outpatient rehabilitation services and specialties: traumatic brain injury, stroke, spinal cord injury, sub-acute care
- **Sinai Community Institute**
- **Sinai Urban Health Institute**

Payer Mix

- 60% Medicaid
- 20% Medicare
- 15% Self Pay
- 5% Commercial Insurance

Project RED

- Project RED
  - **R**e-**E**ngineered Hospital **D**ischarge
- AHRQ research grant[14]:
  - Brian Jack, M.D., Boston University & Medical Center
  - Timothy Bickmore, Ph.D., Northeastern University
- Purpose:
  - Re-engineer the hospital workflow/process
  - Improve patient safety by using a discharge lead/advocate who utilizes specific, reinforcing action steps
    - **Improve the discharge process**
    - **Decrease hospital readmissions**
  - Patient benefit
    - **Clear after-hospital care plan**

Continuity of Care

Definition [PPMI]:

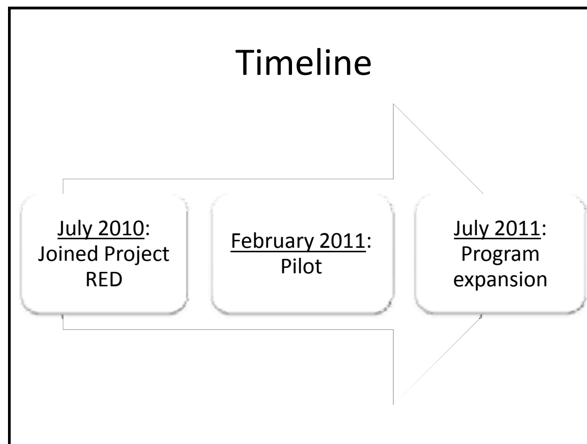
*Continuity of Care provides for the **safe** and **seamless transition** of patients within the health care continuum, such as when patients are **discharged** from an acute care setting to an outpatient community environment, and includes the communication of their medication list and **treatment plan**.*

Project RED at Sinai Health System

Joint Commission Resources

- **Heart Failure**
- Baseline Readmission rate = 16.47%
- Pilot
  - Patients admitted with Primary Diagnosis of Heart Failure
  - Limitations:
    - English-speaking patients
    - Opt-in
    - Monday - Friday
- Members
  - Medical Staff
  - Nursing
  - **Pharmacy**
  - Social Work
  - Nutrition
  - Therapies
  - Senior Services
  - Disease Management

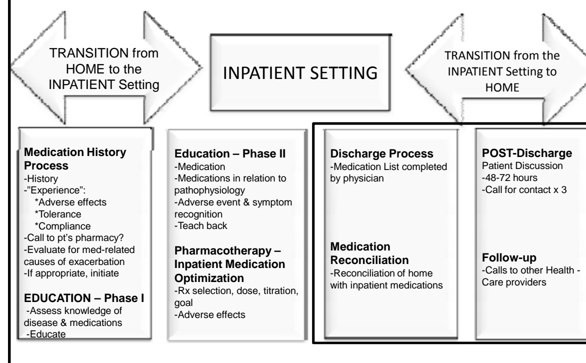
Timeline



Project RED process

- Identification of Heart Failure Patients
- ***Assessments by all involved Project RED Disciplines***
- ***Coaching/education of the patients throughout hospitalization***
- Assignment of Primary Care Physicians if a current relationship does not exist
- ***Ongoing medication reconciliation***
- Arrangement of post-hospitalization visits at a time convenient to the patient
- Completion of the After Hospital Care Plan
- ***Post discharge contact with the patient by Pharmacy*** and Disease Management
  - ***Knowledge and understanding of disease and personal care plan***
  - ***Medication availability***
  - Attendance at scheduled appointments
  - Admission to other hospitals or ED visits
  - Transportation or Home Health needs
  - Reinforcement of individualized care plan

Medication Therapy Interventions



Transition from Inpatient to Home

Prior to & at Discharge	Post-discharge
•Review medication plan and recommend changes •Optimize medication therapy for specific disease state •Complete medication reconciliation •Provide medication education during hospital stay & at discharge	•Contact patient after discharge (48-72 hours) •To reinforce understanding of medications •Identify availability of medications •Answer questions •Address any unmet needs •Interface with physicians, pharmacies •Continue patient follow-up

Pharmacist Interventions

	Pilot **Feb 2011 – Aug 2011**	**Resident-based** **Sep 2011 – Apr 2012**	**Hybrid** **May 2012 – June 2012**
Admissions Covered by Pharmacists	**62 Admissions 51 Patients**	**115 Admissions 110 Patients**	**32 Admissions 27 Patients**
Medication History/Reconciliation	58	67	26
Patient Education	42	63	27
Medication Reconciliation at Discharge	22	97	18
Post Discharge Calls to Patient	38	98	29
Pharmacotherapy Optimization of Inpatient Medication Regimen	46	28	11
Avg. # of Interventions per Patient	**3.3**	**3.2**	**4.1**

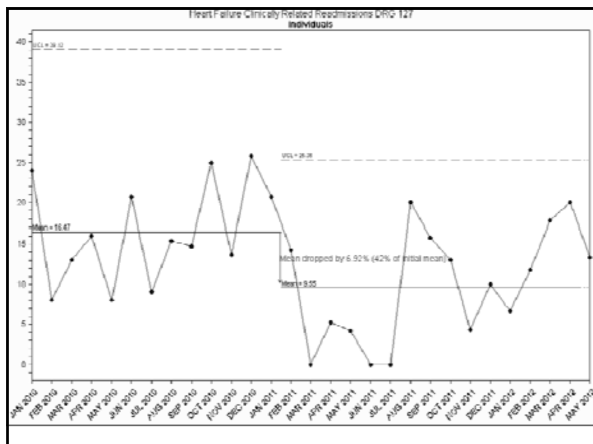
Challenges/Barriers – Real & Perceived

- Program perception by patient
  - Intrusion on personal life
  - New method of bill collection
- Phone calls post-discharge
  - Timing
  - Phone number incorrect
- Filling of Discharge/home medications
  - Patients uninsured
  - Medicaid Formulary
- Other issues present: social, nutrition, transportation, housing

Impact

HF-related 30 day related readmission rate
- Same DRG with admission/readmission at MSH
- Mean of 16.47% for the 11 month period prior to implementation
- Dropped to an average of 9.55% post-implementation

► Decrease of 42%



Program Expansion

Pharmacy

- **Pharmacist**
  - **Additional 1 FTE – Inpatient (July 2011)**
  - **Additional 0.5 FTE – Ambulatory Care (July 2012)**
- **Resident**
  - **Longitudinal rotation (July 2011)**
- **Student**
  - **Integrating into APPEs:**
    - **Hospital (2011)**
    - **General Medicine (2012)**
    - **Clinical Specialty (2012)**
- **Future:**
  - **Technicians**

Ambulatory Care Staff

Additional Targeted Diseases
- **Diabetes**
- **COPD**
- AMI
- Pneumonia

Question #1

Within which programs are there opportunities for the pharmacy profession to provide medication-related interventions and direct impact on patient care?

A. Healthcare Acquired Conditions
B. Value-Based Purchasing
C. Readmission Reduction
D. Medicare
E. Medicaid
F. HCAHPS
G. All of the Above

Question #2

For Federal FY2013, _____ of the total Value-Based Purchasing Calculation is related to HCAHPS domains?

A. 45%
B. 30%
C. 70%
D. None of the above

Citations

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Questions?

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Solving the PPMI Puzzle-Here are Some Pearls

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No conflicts of interest to declare

Global Objectives

- Describe individual components of the Pharmacy Practice Model Initiative (PPMI) where achievement in Illinois is less than optimal.
- Provide recommendations for implementation of specific aspects of the PPMI including obtaining hospital administration buy-in.
- Discuss solutions to implementation of the PPMI in specifically identified areas.

Topics to Address

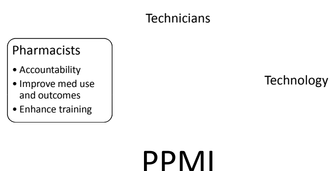
- Medication related continuity of care providing for safe and seamless transitions
- Other clinical services our department provides which reflect our commitment to PPMI

Poll the audience!

How large (or small) is the hospital at which you primarily work?

a) < 50 beds
b) 50-150 beds
c) 151-300 beds
d) 301-500 beds
e) > 500 beds

What is PPMI?



PPMI

Sources: 1 & 2

St. Francis Hospital Litchfield, IL

- Catholic not-for-profit hospital established in 1875
- 1 of 13 Hospital Sisters Health System (HSHS) hospitals throughout Illinois and Wisconsin
- Admissions (FY 2011): 1,508
- ED Visits (FY 2011): 11,936
- Pharmacy Requisitions (FY 2011): 187, 515
- Critical access
  - Max of 24 patients
  - Average patient load = 14
- High turn over rates
- 1 pharmacist and 1 technician on duty each day

Sources: 3 & 4

A day in the life of a pharmacist at a critical assess hospital…

- Daily interdisciplinary care rounds
- Medication reconciliation within 24-48 hours of admission
- Discharge education/medication reconciliation
- Core measures review
- Daily anticoagulant and kinetics monitoring
- Patient counseling—all warfarin patients, new medications
- Antibiotic streamlining (cultures, IV to PO)
- Renal adjustment of all medications
- Pain score evaluations

Interdisciplinary Care Rounds

- Started rounding about 1.5 years ago to improve our HCAHPS scores
- Members on the team: nurse manager, pharmacist, case management nurse
- Our focus is to make sure the patient is getting the absolute best care

Source: 5

Medication Reconciliation

What? Best possible medication list which is to be compared to medications ordered at all transitions of care.

Why? Joint commission requirement meant to reduce errors
Study results vary, but over 50% of patients commonly have at least one error in the medical admission history.

Who? PharmD vs. MD: Home medications correctly recorded ($p < 0.001$) (Cornu 2012)
MD: 891 (4 drugs per patient)
PharmD: 1404 (7 drugs per patient)

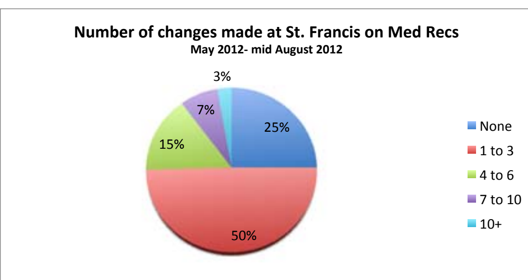
How? Patient/family interview, patient med list, pharmacy, previous admission/discharge records, nursing home records, PCP records, prescription bottles, etc.

Sources: 6 - 10

What do we do at St. Francis?

- Conduct admission medication history services
  - Double check the "home" medication list
  - Clarify allergies/adverse reactions
  - Vaccine history if unclear
  - Medication education
  - Assess medication adherence
- Nurse-pharmacist collaboration

Have we made an impact?



Key Reminders

- Time consuming process
  - High risk or ED admissions
- Don't forget the nursing home residents
- Use several information sources
- Be sure to involve the patient
- Ask about vaccines and clarify allergies
- Preparation
  - Bring the most recent list
  - Open ended questions
  - Match meds to disease states to find gaps in therapy
  - Ask specifically about multivitamins, OTC drugs, creams, eye drops, inhalers, herbal/supplements

Sources: 10 & 11

Discharge Education/Med Rec

- Newest project (August 2012)
- Discharge Team-spearheaded by nursing
- Discharge planning checklist and patient folder
- Pharmacy's current role
  - Be available for patient counseling and med education if questions are not answered by nurse
  - Can call patient at home

Core Measure Review

- Created a binder with inclusion/exclusion and measure criteria
- Data mining system helps "locate" the patients
  - Hospital generated reports (vaccine/pneumonia)
  - Admission reason on census list
- Follow up with prescriber as needed. If not a time sensitive measure—leave a note in the chart.

Pneumonia	Vaccinations	Stroke	Heart Failure	Myocardial Infarction

• Correct ABX within 24 hours
• Appropriate ABX
  • Psuedomonas risk?
  • Excluded?
	• All patients need to be screened
	• Pneumococcal
	• influenza
		• tPA -3hr window
		• VTE prophylaxis
		• Antithrombotic therapy
		• Statin
		• Anticoagulation (if cardioembolic)
			• ACE-I/ARB	• Aspirin
				• ACE-I/ARB if LVSD
				• Beta Blocker
				• Statin

Sources: 6 & 7

Daily Anticoagulant and Kinetic Monitoring & Patient Counseling

- Daily anticoagulant monitoring
  - Electronic "follow"
  - Worksheet with full details-INR, bridging, interactions
- Kinetics: ~ 95% of vancomycin and aminoglycosides ordered are managed by pharmacy
- Counseling:
  - During rounds, med rec admission session, discharge, etc.
  - All warfarin patients
    - www.ahrq.gov/consumer/btpills.htm
    - highlights of medication
  - New medications

Source: 12

Antibiotic streamlining

- Make sure you know who is on what antibiotics for which infection
  - Cultures?
  - Clinical improvement?
  - Does the drug appear appropriate per most likely bugs?
  - IV to PO?
- Clinical electronic programs can help capture these patients

Renal adjustments for all drugs

- We have a Pharmacy and Therapeutics committee approved policy that allows us to adjust all medications for renal function
- Home medications:
  - Write a pharmacist to physician memo making them aware of the adjustment so that they can consider making the change permanent
  - Metformin-electronic monitoring system facilitates Scr monitoring/possible reinitiating of therapy

Challenges

- Gaining support (nursing, pharmacy, physician, administration)
- Resistance to change
- Understanding of the purpose behind the "pestering"
- Gaining confidence to talk to patients, doctors, etc.
- Knowledge deficits
- Time constraints
- Staffing issues
- Flexibility

Source: 13

Goals

- Continually evolving
- Many more ideas
  - Specific disease state education
  - Enhance education for pharmacists/technicians
- Room for improvement
- Work on realistic and achievable goals—continue to enhance and add goals
- Overcoming challenges

Case Question

- JM, a 66 yof, was just admitted due to a fall which resulted in a broken shoulder. JM considers herself to be fairly familiar with her medications typically, however, she has been so busy entertaining an out of town family member, she has not had much free time. You are performing a medication history to obtain her current medication list. She tells you she just recently saw her PCP for high blood pressure. She knows that her doctor added a new medication that she takes twice daily, but she can't remember what the drug name or dose is. What would likely be the quickest reliable source to find out this info?
  A. Get a hold of her physician's office
  B. Call her pharmacy
  C. Look at the medication list which she brought in
  D. Interview her out of town family member
  E. Look at her previous hospital discharge medication list

Question

What would be an appropriate way to overcome resistance to change on your quest to implement PPMI?

A. Educate nurses and physicians about your goals and the purpose behind the changes
B. Wait another year or two before making adjustments
C. Let pharmacy staff participate and take ownership in developing new PPMI processes
D. Both A and C
E. All of the above

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