

# Using team mental models and transactive memory to deliver coordinated cancer care

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# Learning Objectives

After reading and reviewing this material, the participant should be able to:

- Describe the principle of Transactive Memory Systems
- Identify the components of Transactive Memory Systems
- Apply the principle of Transactive Memory to a multi-team system in oncology care
- Determine strategies for developing team mental models and evaluate clinical implications

# Care Path: Mr. Mason

A 67 y/o Veteran with prostate cancer who obtains primary care from the VA, and private urology care closer to his home since his initial cancer diagnosis in 2005. In early 2015 found to have progression to metastatic, castrate-resistant prostate cancer.

Day 1

- Told cancer had progressed by his private urologist (Dr. Lloyd)

Days  
2-10

- Finds out about high co-pay
- Contacts VA PCP (Dr. Evans) who refers him to oncology (Dr. James)

Day 15

- Pre-treatment education given (Oncology nurse specialist)

Day 16

- Prescriptions filled through VA (2 pharmacies)

Days  
16-58

- On treatment with AA and prednisone
- Monitored by Dr. James (VA)

Day 65

- Prednisone discontinued by Mr. Mason
- Refills not ordered

Day 70

- Symptoms of muscle aches and fatigue develop
- VA RN triage called overnight, Dr. Evans is electronically alerted

Day 74

- AA discontinued by Mr. Mason
- Dr. Lloyd notified

Day 86

- VA oncology visit with Dr. James, medication issues detected
- Therapy resumed with no further toxicity

# Teamwork Principle: Team Mental Models

- Cancer care typically reliant on multiple care teams
- Multiteam Systems
  - Essentially a team of teams
  - Functions best when a point team coordinates
  - Transactive Memory applied to Multiteam System



**Fig. 1** A Multiteam System demonstrating interplay between multiple healthcare teams in the delivery of cancer care

# Teamwork Principle: Team Mental Models

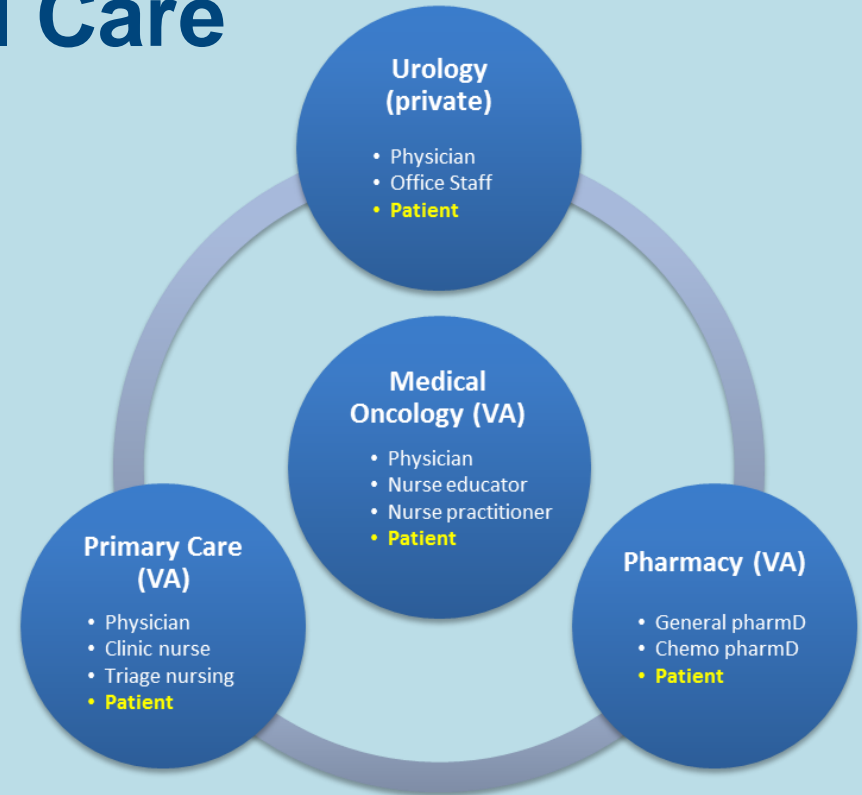
- Transactive Memory Systems
  - Team members do not individually have all information
  - Each team member specializes in areas of knowledge and expertise
  - The key is for team members to know who has what specialized knowledge
- Focus is not on the information team members share but on combining divergent expertise and knowledge
  - Teams are more effective when they understand the collective knowledge held by the overarching team system

# Practical Implications

- Case exemplifies challenges of a Multiteam System
- Two major themes emphasized
  - Cross-system use
    - Requires increased effort to align cognitive framework of the team
    - Shared cognition in teams that are both in direct and indirect contact
  - Oral anticancer therapy
    - Patient plays a much more active role in medication administration
- Teams must be adept at recognizing and leveraging the unique cognitive expertise of component teams

# Implications for Clinical Care

- “Boundary Spanning” Team
  - Designated centralized team
  - Informed about expertise of component teams
  - Orients team to shared goals and collective knowledge
  - Limits informal knowledge exchange
- Patient may be only unifying member of MTS



**Fig. 2** A Multiteam System with Medical Oncology as boundary-spanning point team

# Implications for Clinical Care

- Training interventions
- Point-of-care aids to assist in knowledge sharing
  - For providers
  - For patients
- Build on design of Patient-Centered care models
  - PCMH, VA PACT
  - Incorporate a specialty liaison
    - Responsible for bi-directional communication and education
    - Assist with coordination



# Implications for Research

- Further explore application of Transactive Memory Systems in a Multiteam System
  - What are the characteristics of a high-functioning MTS in oncology?
  - How can an oncology MTS effectively identify and achieve system-level goals?
  - What are the specific activities that a boundary-spanning team must perform to ensure coordination?
- How should technology be integrated to optimize results?
- Does a focus on team cognition directly influence patient care or outcomes?

# Discussion Question

How can we successfully integrate our patients into the cognitive framework of an Oncology Multiteam System?