Core Coordinating Mechanisms of Teamwork in Adolescent and Young Adult (AYA) Oncology

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Learning Objectives

• Define three core coordinating mechanisms of teamwork:
  1. Closed loop communication
  2. Shared mental models
  3. Mutual trust

• **List ways in which effective use** of core coordinating mechanisms can optimize interactions within an AYA multidisciplinary oncology team (MDT)
AYA Oncology

• Emerging discipline
• Targets >70,000 patients aged 15 to 39 diagnosed with cancer annually
• **Distinctive issues for AYA patients**
  – Lack of survival improvement
  – Risk for suboptimal therapy, infertility, financial burden
  – Disruption of normative developmental tasks
  – Negative sequelae such as post-traumatic stress
• **Challenges for providers**
  – Age-specific needs can complicate cancer care delivery (e.g. fertility preservation)
  – Patients often:
    • Juggle work, school and childcare
    • Lack health insurance
Multidisciplinary Teams (MDT) in AYA Oncology

• May be either dedicated or ad hoc

• AYA Guidelines (NCCN, IOM and ASCO) aim to improve service delivery by encouraging:
  – Clinical trial participation
  – Fertility preservation
  – Provision of psychosocial support services

• Effective team communication is required for high value care
  – AYA care involves collaboration between disparate groups of clinicians that do not traditionally interact
<table>
<thead>
<tr>
<th><strong>Closed Loop Communication (CLC)</strong></th>
<th><strong>Definition</strong></th>
<th><strong>Considerations for Utilizing</strong></th>
<th><strong>Effects</strong></th>
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</thead>
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|                                   | Simple three-step verbal procedure to ensure team members communicate effectively during a task: 1) team member **calls out** observation about patient or task, making all team members aware 2) second team member **verifies** message has been received 3) first team member **acknowledges** communication and verifies it was interpreted as he/she intended | - Occurs in front of all team members present → any member may speak up to correct an error  
- Most effective when **directive**, addressing team member by name  
- May be initiated by any member (most often **team leader**) | - Interchange is verbal and public; all team members present may benefit  
- **Assumed effective** for medical MDTs but **no empirical tests reported** |
<table>
<thead>
<tr>
<th>Definition</th>
<th>Barriers and Facilitators</th>
<th>Effects</th>
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</thead>
<tbody>
<tr>
<td><strong>Shared Mental Models (SMM)</strong></td>
<td><strong>Barriers:</strong></td>
<td>- Help team members understand events, draw inferences, make predictions in similar ways → anticipate needs of colleagues, adjust clinical strategies</td>
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<td>- Provide a basic, common framework for communication</td>
<td>1) <strong>Rigid</strong> hierarchical role structure</td>
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<td>- Help team members to “describe, explain, and predict events” that occur in the team environment</td>
<td>2) <strong>Differing views</strong> of MDT roles and responsibilities</td>
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<td>- Based on knowledge of facts and/or tasks</td>
<td>3) <strong>Role duplication</strong>, especially among team leaders</td>
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<td>- Are about tasks, but may <strong>facilitate implicit coordination</strong> without explicit discussion → minimizing task stress</td>
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<td>- <strong>Accrue</strong> as team members share information over time</td>
<td><strong>Facilitators:</strong></td>
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<td>- <strong>May change quickly</strong> in the setting of dynamic, ambiguous or emergency situations</td>
<td>1) <strong>Regular interactions</strong> of MDT</td>
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<td>2) <strong>Modeling</strong> of effective processing and communication by team leader</td>
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<td>3) <strong>Empowering all team members</strong> to question, comment on ideas, and help team members move to new SMM</td>
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<td>4) <strong>Formal training</strong> or practice</td>
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| **Mutual Trust (MT)** | “The shared belief that team members will perform their roles and protect the interest of their teammates” | **Barriers:**  
1) Healthcare professionals place more trust in colleagues who share **similar roles**
2) **Divergent understanding** between different professional roles (who is getting work done) |
| - Present in effective MDTs but not automatically triggered by role-oriented behavior or through routine professional interaction;  
- Based on specific, positive interpersonal relationships | **Facilitators:**  
1) Common understanding between different professional roles  
2) **Belief that all members perform their roles for the highest good** of group and patient  
3) **Presence of strong SMM** in the MDT | Team members feel valued and acknowledged when each individual contributes to group’s decision-making |

**Presented by:** Rebecca Johnson
Climbing the hill: core coordinating mechanisms at work within a multidisciplinary team

Measurable outcomes:

1) AYA-related:
   fertility preservation, clinical trial enrollment, utilization of satisfaction with psychosocial supportive care services

2) Professional-related:
satisfaction with process of providing care, engagement, effectiveness

Closed loop communication

Behavioral

Outcome-oriented teamwork (60%)

Process-oriented teamwork (40%)

Cognitive

Affective

Mutual trust

Shared mental models
Case Summary

Day 1, evening: 27 year-old Steve presents community hospital with pancytopenia and peripheral lymphoblasts

Day 2: Bone marrow aspiration shows pre-B ALL
- Steve is transferred to county hospital because he is uninsured

Day 3, morning:
- Steve’s mother flies in form out of state. She is surprised discover Steve is gay and meet his boyfriend, creating need to establish who will be Steve’s primary caregiver
- Medical oncologist offers HyperCVAD induction
- Steve reads online about superior outcomes using high-intensity pediatric protocols
- Steve’s oncologist calls around and contacts a pediatric oncologist, who recommends a pediatric-inspired protocol
Case Summary (2)

Day 3, afternoon:
- Oncologist mentions **infertility** as potential adverse effect of therapy
- **Sperm banking initially not offered**
- Steve expresses wish to father children
- **Chemotherapy put on hold** for sperm banking
- Nurse questions safety of delay
- Oncologist doesn’t know how to arrange sperm banking; calls pediatric oncologist; directed to pediatric social worker who shares sperm bank contact information
- Sperm bank says next available appointment is 2 days hence. **Oncologist convinces fertility clinic to facilitate urgent sperm banking** as an inpatient
- Steve’s **oncologist finds an open pediatric-inspired clinical trial for young adults** with ALL on the Cancer Trials Support Unit (CTSU) website, contacts the principal investigator for the county hospital, and enrolls Steve

Day 4, morning: Steve successfully completes sperm banking and **starts chemotherapy**
Analysis: focus on fertility preservation

Oncologist’s interactions with…

- **Patient:** initial failure to offer sperm banking $\rightarrow$ absence of SMM
- **Nurse:** questioning safety of treatment delay $\rightarrow$ lack of SMM or trust in oncologist
  - Empowerment to disagree shows some degree of MT
  - Conversation creates a “teachable moment;” Oncologist may apply CLC and bolster MT and SMM by discussing importance of fertility preservation
- **Social worker:** request for information re: sperm bank is both direct and effective due to CLC
- **Sperm bank coordinator:** lack of SMM regarding timely fertility preservation prior to cancer therapy
- **Patient:** oncologist’s advocacy for urgent sperm banking
  - Draws upon SMM with patient
  - Enhances MT
Conclusions

Implications for Practice

- MDTs must manage interdependent tasks
  - Within and across groups
  - Despite time constraints and competing commitments
- Can’t presume that MDTs will spontaneously or deliberately utilize the concepts of CLC, SMM, and MT
- CLC is not a natural type of conversation; the team must practice
- SMMs
  - May exist for some issues but not others → Call out SMMs verbally and publicly
  - Focused on tasks, but may positively influence relational quality
  - We propose that MT represents one critically important type of SMM in MDTs

Future Directions

- Can specific training, to improve communication within the AYA MDT, influence outcomes? (clinical trial accrual, rates of fertility preservation and patient satisfaction)
- Data generated can be used to create evidence-based standards to streamline the teamwork of AYA MDTs