

CANADIAN PARTNERSHIP  
AGAINST CANCER



PARTENARIAT CANADIEN  
CONTRE LE CANCER

# **The influence of structure of collaborative groups in cancer control on knowledge translation**

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3rd International Cancer Control Congress

Cernobbio, Italy

November 10, 2009

# Knowledge Translation

***Knowledge translation*** (aka Implementation Research/Mode 2 Research) is about:

- ❑ Closing the gap between what we know and what we do (moving knowledge into action)

***Knowledge translation research*** (aka KT Science) is about:

- ❑ Studying the determinants of knowledge use and effective methods of promoting the uptake of knowledge

# Challenge of KT in Cancer Control in Canada

## □ KT Challenge in general:

- ▣ 17 years for 14% of new scientific advances that actually improve outcomes to be implemented population wide (Balas 1998)

## □ Specific Canadian Challenges

- ▣ Really BIG country - not many people, 6 time zones
- ▣ Health care is a provincial jurisdiction
  - Provinces of different size/access to resources

# Knowledge Translation

- Social context important in knowledge translation (Rycroft-Malone and Kitson 2007)
- New models for integrating explicit knowledge from research with tacit knowledge from experience may be more effective for knowledge translation. (Kerner 2006)

Communities of practice (CoP)  
are one such model

# Communities of Practice

- Communities of practice (CoPs) are **informal social networks** that involve learning from peers and through practice.
- CoPs form when people, who have a common interest in a subject or problem, collaborate over time to share ideas, find solutions, and build knowledge.

(Etienne Wenger 2002)

# The CoP Project

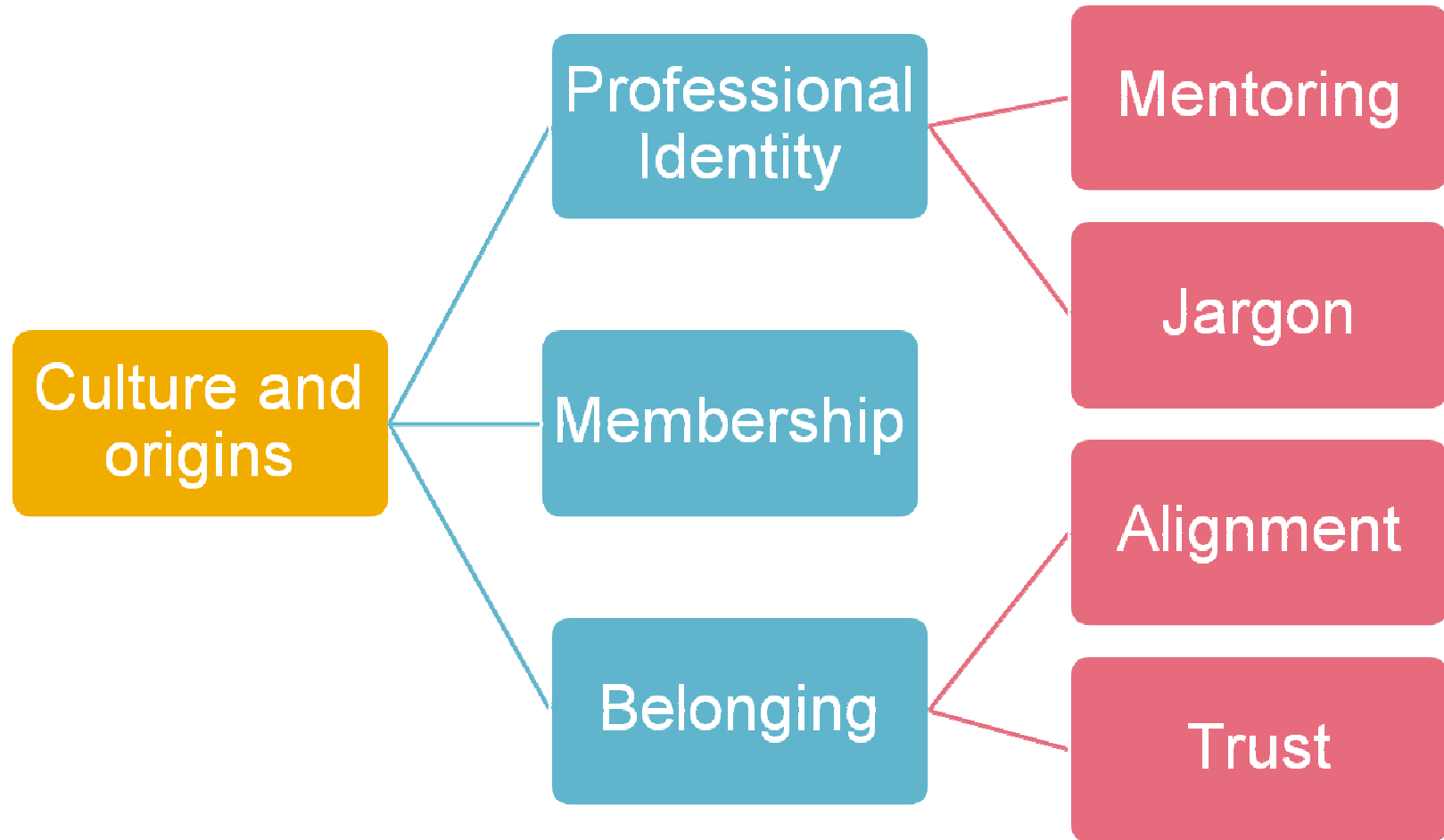
## **Objective**

- ▣ To understand CoPs or other similar types of collaborative initiatives and their role in KD and KT in cancer guideline development in Canada
- ▣ To develop and validate a tool to measure the performance of CoPs/informal networks

# CoP Project: Measurement

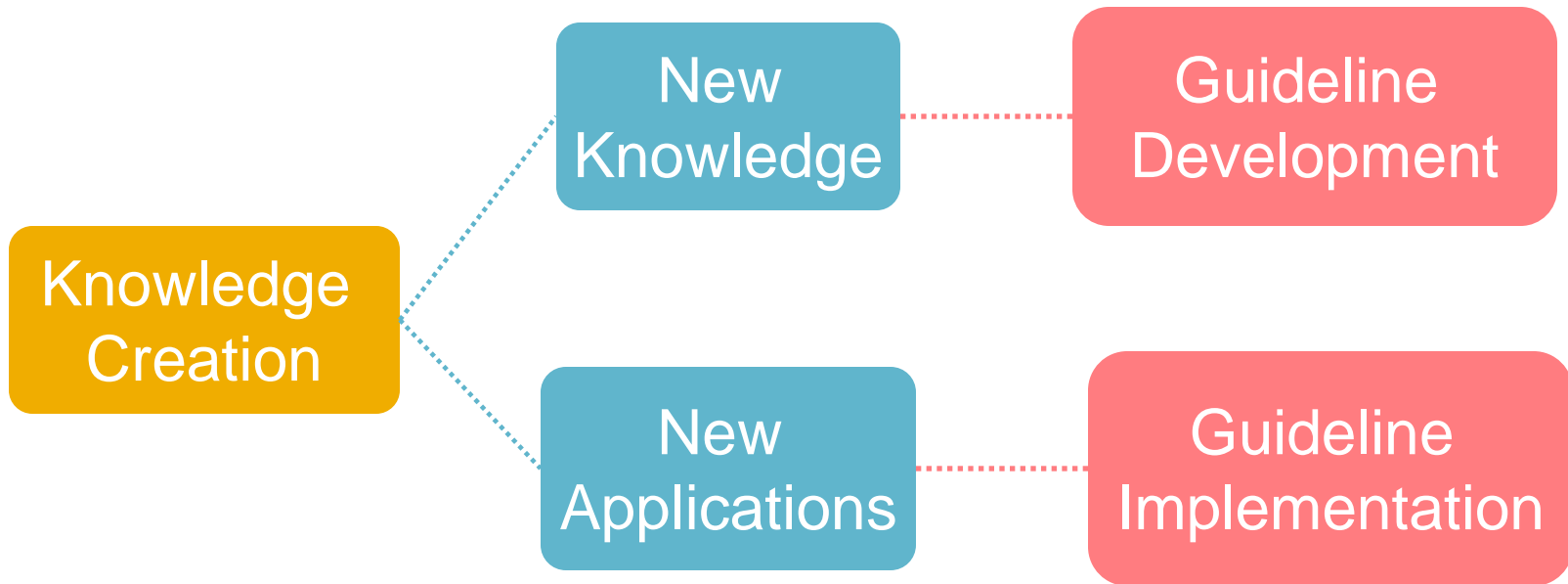
- **Domains: Descriptive and Evaluative**
  - Culture and origins
  - Knowledge creation
  - Knowledge sharing
  - Decision-making processes
  - Accountability relationships

# Domain 1: Theme Nodes

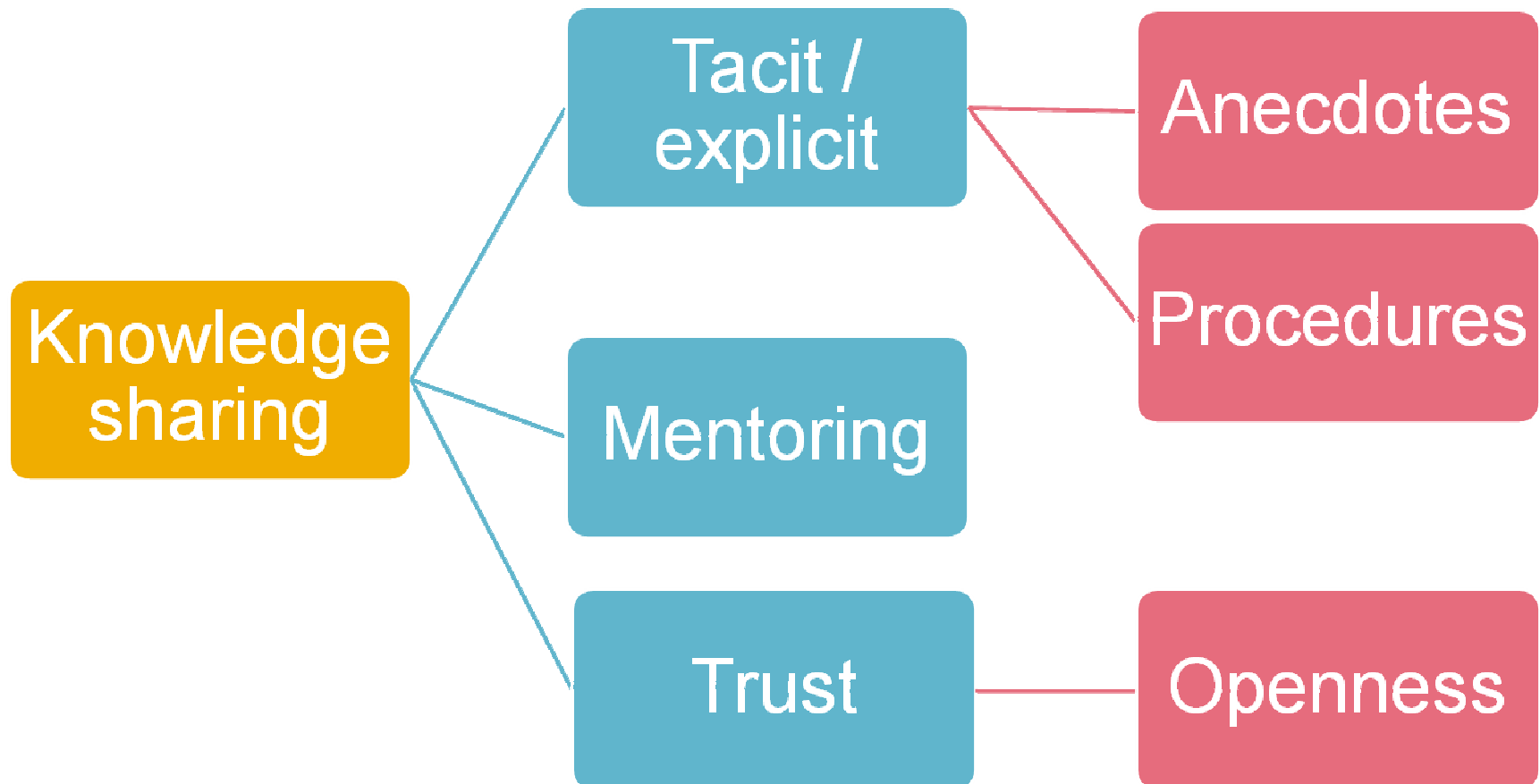




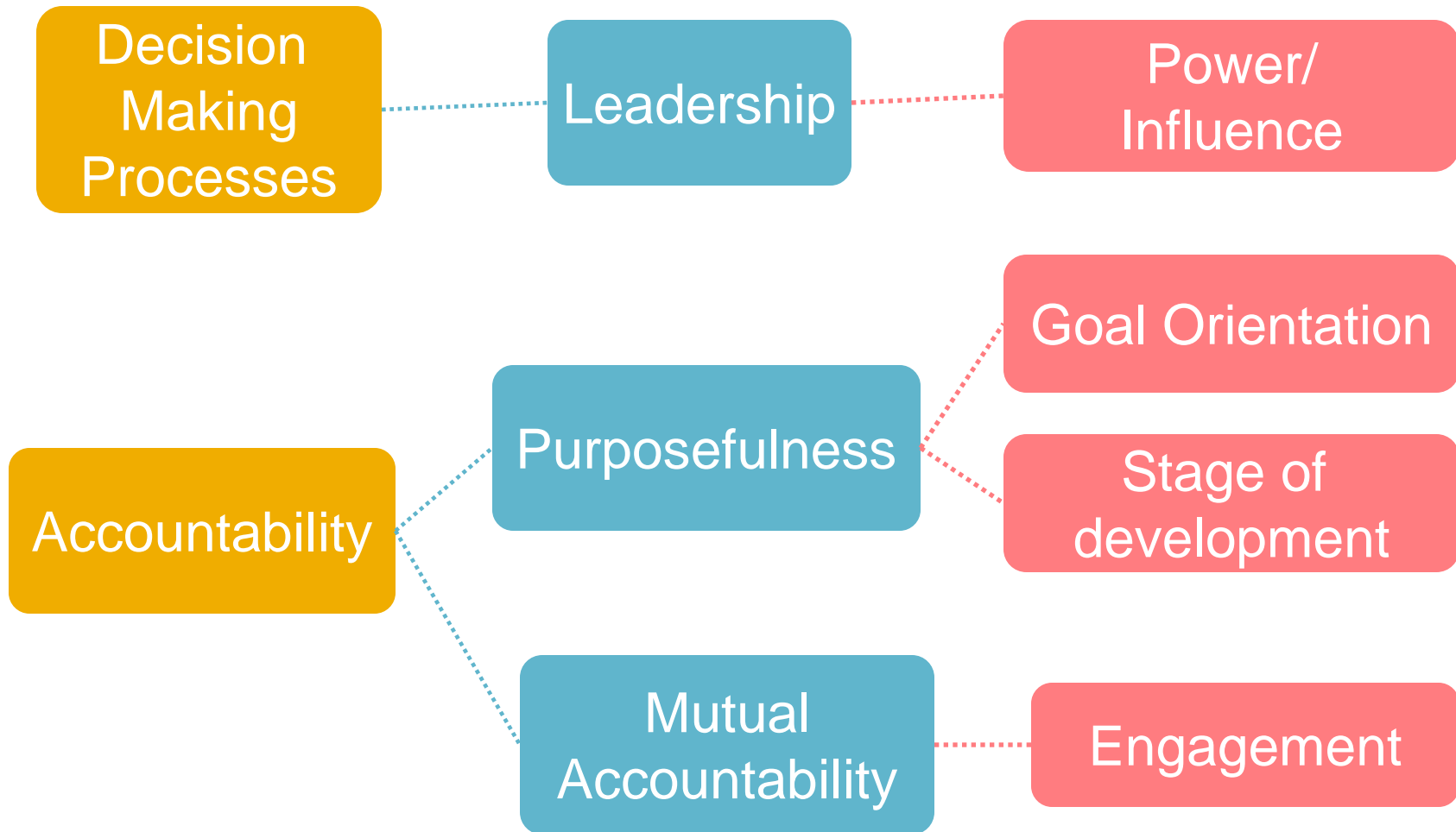
# Domain 2: Theme Nodes



# Domain 3: Theme Nodes



# Domains 4+5: Theme Nodes



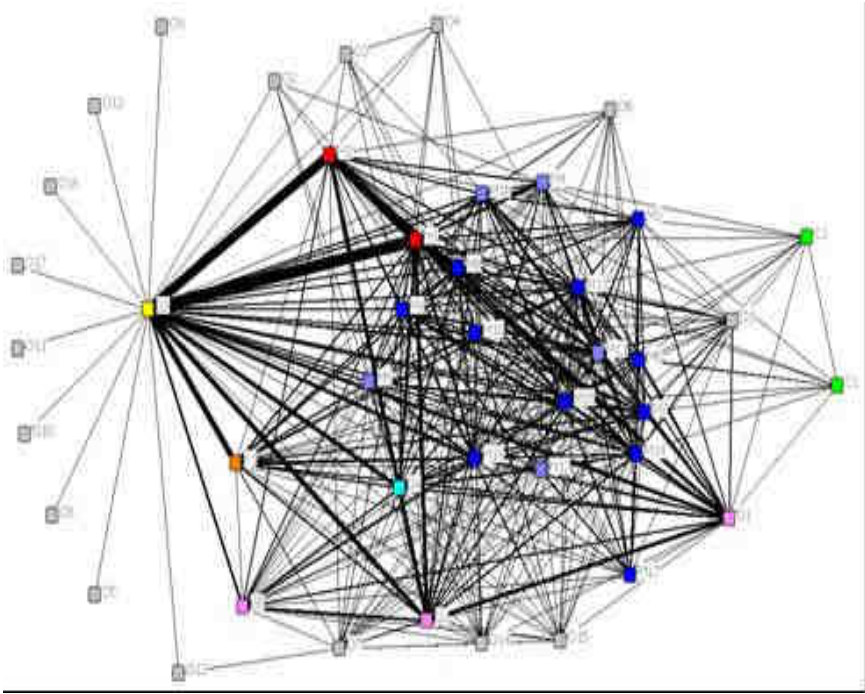
# Measurement Tools

- Member Reported Process and Outcome Indicators
  - ▣ Survey
- Qualitative Analysis
  - ▣ Semi structured interviews
  - ▣ Documentary Review
- Social Network Analysis – Structural aspects of interaction
  - ▣ Documentary Review
  - ▣ Survey

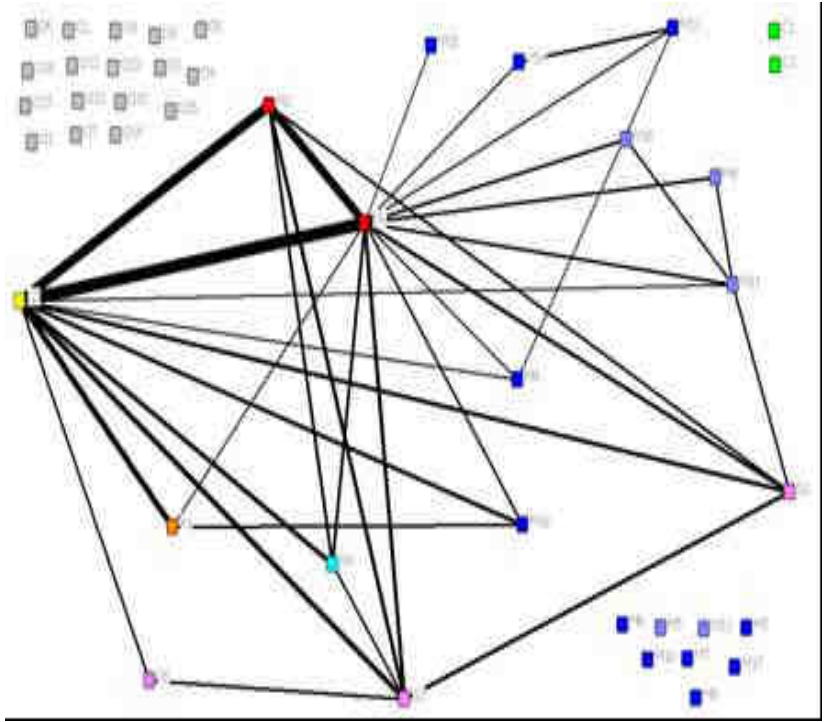
- Leader
- Member
- Facilitator
- Project Staff
- Other

# Basic Structure - Case A

Any Interaction



10 or more interactions



# Core/Periphery Interaction

## Case A

Core Members: M1 M2 G3

Periphery Members: M3 M4 M5 M6 M7 M8 M9 M10 M11 M12  
M13 M14 M15 M16 M17 M18 G1 G2 O1 C1 C2 G4 O2 G5 O3  
O4 O5 O6 X1 O7 O8 O9 O10 O11 O12 O13 O14 O15 O16  
O17

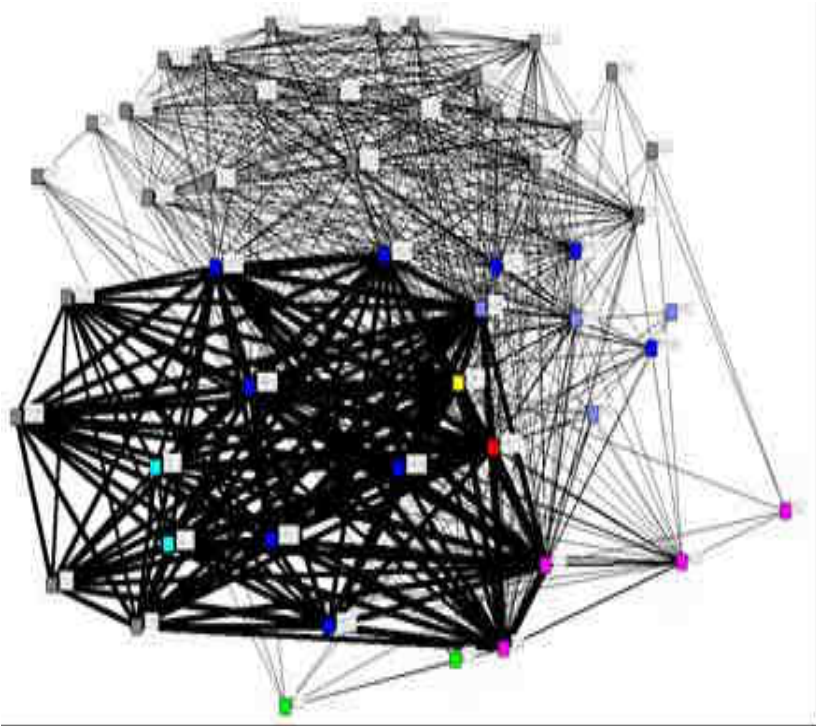
Density matrix:	Core	Periphery
Core	74.000	6.242
Periphery	6.242	1.638

Interpretation: Vast majority of interactions between the core group members themselves, much more than between core and periphery; very little interaction between only periphery itself.

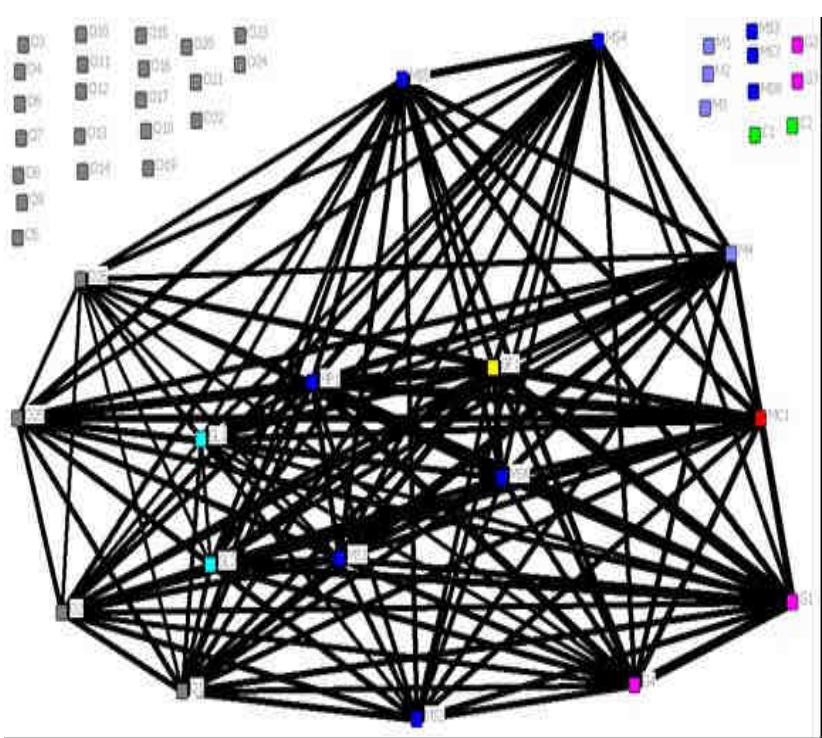
- Leader
- Member
- Facilitator
- Project Staff
- Other

# Basic Structure - Case B

Any Interaction



10 or more interactions



# Core/Periphery Interaction

## Case B

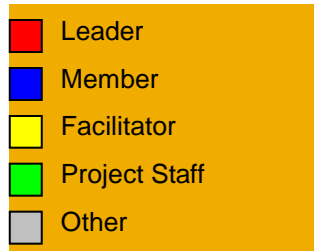
Core Members: M1 MC1 M4 MP1 MS1 MS2 MS4 MS5 MS6 O1 O2  
G1 GF1 G4 GL1 GL2 O25

Periphery Members: M2 M3 MS3 MS7 MS8 MS9 MS10 O3 O4 G2  
G3 C1 C2 O5 O6 O7 O8 O9 O10 O11 O12 O13 O14 O15  
O16 O17 O18 O19 O20 O21 O22 O23 O24 O26

Density matrix:	Core	Periphery
Core	25.199	1.422
Periphery	1.422	0.725

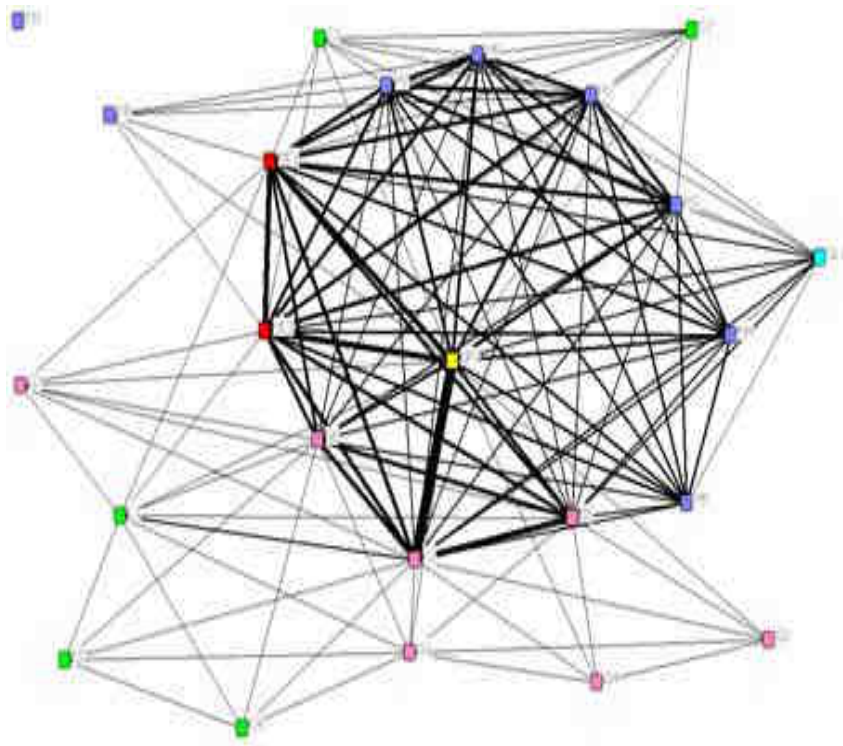
Interpretation: Very large core group (17 people) of which **only half are formally recognized members** of this group



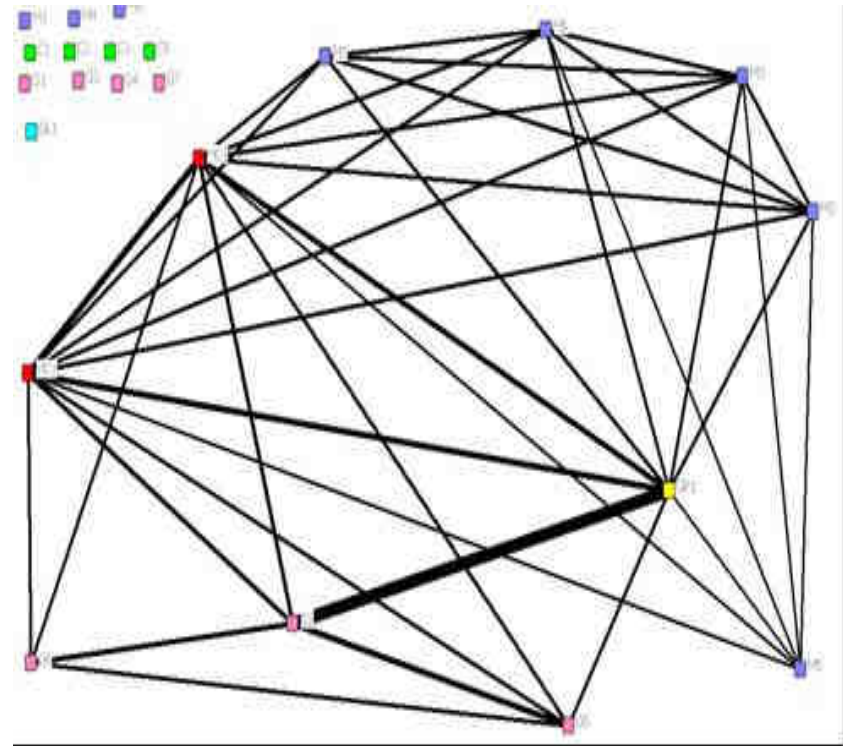


# Basic Structure - Case C

Any Interaction



10 or more interactions



# Core/Periphery Interaction

## Case C

Core Members: MC1 MC2 M2 M3 M4 M5 M6 M7 GF1 G2 G5 G6

Periphery Members: M1 M8 G1 G3 G4 G7 C1 GL1 C2 C3 C4 C5

Density matrix

	Core	Periphery
Core	12.076	0.778
Periphery	0.778	0.197

# Findings: Overview

## Case A

<b>Synchronous</b>	<b>30</b>	<b>14.5%</b>
Meeting	9	4.3%
Teleconference	16	7.7%
Web Conference	5	2.4%
<b>Asynchronous</b>	<b>177</b>	<b>85.5%</b>
Email	173	83.6%
Other	4	1.9%
<b>Total</b>	<b>207</b>	

## Case B

<b>Synchronous</b>	<b>38</b>	<b>40.9%</b>
Meeting	5	5.4%
Teleconference	33	35.5%
Web Conference	0	0.0%
<b>Asynchronous</b>	<b>55</b>	<b>59.1%</b>
Email	54	58.1%
Other	1	1.1%
<b>Total</b>	<b>93</b>	

## Case C

<b>Synchronous</b>	<b>39</b>	<b>51.3%</b>
Face to Face	9	11.8%
Teleconference	30	39.5%
Webconference	0	0.0%
<b>Asynchronous</b>	<b>37</b>	<b>48.7%</b>
Correspondence	32	42.1%
Other	5	6.6%
<b>Total</b>	<b>76</b>	<b>100.0%</b>

# Style of Interaction by Phase of Work

**Case A**

	<b>Synch</b>	<b>Asynch</b>
<b>Problem solving</b>	22	134
<b>Knowledge Sharing</b>	7	43

**OR = 1.01** (0.40, 2.52)

**Case B**

	<b>Synch</b>	<b>Asynch</b>
<b>Problem solving</b>	35	47
<b>Knowledge Sharing</b>	3	8

**OR = 1.99** (0.49, 8.03)

**Case C**

	<b>Synch</b>	<b>Asynch</b>
<b>Problem solving</b>	28	17
<b>Knowledge Sharing</b>	11	20

**OR = 2.99** (1.16, 7.75)

# Summary

## What we found

### Case A

- Tightly controlled by co leaders and facilitator
- Style of interaction not related to task at hand
- This group demonstrated the slowest progress
- This group is no longer together

### Case B

- This case had a fairly amorphous task, but is making progress
- Large number of active participation by people who are not formal members of the group

### Case C

- Broad core group
- Style of interaction significantly associated with task at hand
- This group achieved its goals and continues to exist

## Summary

### What we expected but didn't find



- Geographic distance not associated with participation (including face to face meetings) – All Cases
- Single discipline not associated with facilitating communications (Case A was one profession, Cases B and C were multidisciplinary group)

# Acknowledgements



## Co - Investigators

- ▣ Dr George Browman, British Columbia Cancer Agency
- ▣ Dr Andrew Gemino, Simon Fraser University
- ▣ Dr Margaret Harrison, Queens University
- ▣ Dr Linda Li , University of British Columbia
- ▣ Dr Verna Mai, U of Toronto, Cancer Care Ontario
- ▣ Dr Nilesh Saref, Simon Fraser University

## Project Coordinator

- ▣ Dr Colene Bentley, British Columbia Cancer Agency

Thanks!

- To our Funding Agency:
  - Canadian Partnership Against to Cancer
  
- To you for attending

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