Healthcare then.

24% of all Canadian seniors report having 3 or more chronic conditions

These seniors report 13.3 million healthcare visits per year

(CIHI, 2011)
Healthcare is a team sport.
Or a maze of care episodes?
What is our responsibility for the MAZE?
Are we training for collective incompetence?

Common educational assumptions & their unintended consequences for healthcare teamwork

Lorelei Lingard, PhD

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Common educational assumptions & their unintended consequences for healthcare teamwork

A rhetorical approach to assumptions
Every way of seeing...
is a way of not seeing.

(Kenneth Burke 1965)
Dominant educational assumptions are ‘ways of seeing’.

They ‘select & deflect’ our attention.

They create areas of robust attention, and blind spots.
Objectives

• Consider 3 educational assumptions
• Explore their blind spots
• Discuss consequences for teamwork
• Point to ways forward – both comfortable & uncomfortable!
Every way of seeing is a way of not seeing
1. Competence
Assumption
Individualist way of seeing Competence

Competence is:

- a quality that individuals acquire and possess
- a state to be achieved
- context-free, untied to time and space
Individualist notion influences everything

- Candidate Selection
- Student Assessment
- Licensing and Evaluation
- Monitoring of Licensed Practitioners
- Remediation
Theoretical roots

In health professions education, “the dominant learning theories (adult learning, reflective learning, experiential learning) take the learner as ‘active agent’ at the center of the activity of learning.”

(Bleakley 2006)
Robust attention
Patient simulation for training basic and advanced clinical skills

M L Good

Development of a rating system for surgeons’ non-technical skills

S Yule, R Flin, S Paterson-Brown, N Maran & D Rowley

The use of reflection in medical education: AMEE Guide No. 44

John Sandars

To cite this article: John Sandars (2009) The use of reflection in medical education: AMEE Guide No. 44, Medical Teacher, 31:8, 685-695, DOI: 10.1080/01421590903050374

Effect of practice on standardised learning outcomes in simulation-based medical education

William C McGaghie, S Barry Issenberg, Emil R Petrusa & Ross J Scales

Medical competence: The interplay between individual ability and the health care environment

Th.J. Olle ten Cate PhD, Linda Snell & Carol Carraccio

To cite this article: Th.J. Olle ten Cate PhD, Linda Snell & Carol Carraccio (2010) Medical competence: The interplay between individual ability and the health care environment, Medical Teacher, 32:8, 669-675, DOI: 10.1111/j.1365-2923.2010.03089.x

Competency-based medical education: theory to practice

Eric S. Holmboe MD, Jonathan Sherbino, Donlin M. Long, Susan R. Swing, Jason R. Frank & for the International CBME Collaborators
Blind spot
Blind spot
Hospital physicians

Family doctor

Homecare case manager
Individual Competence
Individual Competence ≠ Good Healthcare
Collective Competence

Aspects of competence that are not reducible to the individual but emerge instead from social and organizational systems.

(Lingard 2009, 2012; Boreham 2000, 2004; Rogalski 2002; Weick & Roberts 1993; Kitto & Grant 2014)
Collective way of seeing Competence

Competence is

• a constantly evolving set of multiple, interconnected behaviors

• achieved through participation and enacted in time and space
Theoretical roots

Distributed cognition

Collaborative work as ‘joint cognitive accomplishment not attributable to any individual’.

(Hutchins 1991)
Theoretical roots

Situated learning theory

Competence emerges through social interaction, shared experience, development of tacit knowledge, and innovation in response to situated needs.

(Lave 1991; Eraut 2000; Mittendorf 2006)
We need both ‘ways of seeing’

- Individual possession
- Stable
- Context-free
- Distributed capacity
- Evolving
- Based in situations

NOT a simple binary opposition. Collective not a ‘solution’ to individual. Each ‘selects’ and ‘deflects’.
Ways forward
Two ‘ways of seeing’ competence

• Individual possession
• Stable
• Context-free

• Distributed capacity
• Evolving
• Based in situations
Two ‘ways of seeing’ competence

- Individual possession
- Stable
- Context-free
- Distributed capacity
- Evolving
- Based in situations

Is trainee a good communicator?
Does she demonstrate professionalism?
Two ‘ways of seeing’ competence

- Individual possession
- Stable
- Context-free

- Distributed capacity
- Evolving
- Based in situations

How well does trainee anticipate others’ actions?

Is trainee aware of what others know?

Does trainee adjust to contextual constraints?
Two ‘ways of seeing’ competence

- Individual possession
- Stable
- Context-free

- Distributed capacity
- Evolving
- Based in situations

How well does trainee anticipate others’ actions?
Is trainee aware of what others know?
Does trainee adjust to contextual constraints?
Two ‘ways of seeing’ competence

- Individual possession
- Stable
- Context-free

- Distributed capacity
- Evolving
- Based in situations

What anticipatory strategies does *the team* enact?

How does *the team* manage differences in knowledge?

How does *the team* adjust to contextual constraints?
Two ‘ways of seeing’ competence

- Individual possession
- Stable
- Context-free

- Distributed capacity
- Evolving
- Based in situations

What anticipatory strategies does the team enact?

How does the team manage differences in knowledge?

How does the team adjust to contextual constraints?
Every way of seeing is a way of not seeing
2. Problem solving
Assumption
Assumption
Robust attention
The Dreyfus model of clinical problem-solving skills acquisition: a critical perspective
Adolfo Peña

Assessing the Process of Clinical Problem Solving
HORACIO J. A. RIMOLDI and ROBERTO RAIMONDO
CIPME, CONICET, Universidad del Salvador, Te. Gral. Perón 2158 – (1640), Buenos Aires, Argentina. E-mail: cipme@uchacs.com.ar

Clinical Problem Analysis (CPA): A Systematic Approach to Teaching Complex Medical Problem Solving
Eugène J. F. M. Custers, PhD, Paul M. J. Sneyt, MD, PhD, and Pieter F. De Vries Robbé, MD, PhD

Helping Students Learn to Think Like Experts When Solving Clinical Problems
Henry Mandal, MD, Allan Jones, MD, Wayne Wokoschuk, PhD, and Peter Harasym, PhD

Effects of Conventional and Problem-based Medical Curricula on Problem Solving
VIMLA L. PATEL, Ph.D., GUY J. GROEN, Ph.D., and GEOFFREY R. NORMAN, Ph.D.

Medical Education and Cognitive Continuum Theory: An Alternative Perspective on Medical Problem Solving and Clinical Reasoning
Eugène J.F.M. Custers, PhD

Medical problem-solving: an exploration of strategies
J. RIDDERIKHOFF
Department of Family Medicine, Erasmus University Rotterdam

Integrating Competencies: Exploring Complex Problem Solving Through Case Formulation in Developmental Pediatrics
Anne A. Kawamura, MD, Angela Orsino, MD, and Maria Mylopoulos, PhD

Reflective action assessment with a prospective clinical problem solving tool in the context of rehabilitation medicine: an illustrative case study
David Kellett, Elias Mpofu & Richard Madden
Blind spot
Blind spot
A Story
How problems are defined is as important as how they are solved.

*Sayra Cristancho, PhD*
In teams, problems are defined in multiple ways
Each definition prompts unique solution
Each attempt at solution changes the problem
Ways forward: Adaptive expertise

- Attends to how experts innovate in practice in response to non-routine problems
- Acknowledges situated-ness of problem solving
Ways forward: Adaptive expertise

• Attends to how experts innovate in practice in response to non-routine problems
• Acknowledges situated-ness of problem solving
Because...

• Adaptive expertise retains an emphasis on the individual

however, that implicit in these research approaches is the idea that the locus of knowledge lies inside the individual expert; that is, it is assumed that experts carry with them the entire set of knowledge and competencies necessary for exceptional performance in their domain.

(Mylopoulos & Regehr 2011)
Ways forward: Distributed cognition

• Treats problem solving as co-construction of individual & their environment

• Problem definition and solution are iterative, relational processes that no individual controls

(Orlikowski 1997; Bereiter 1999)
Ways forward: Distributed cognition

- Treats problem solving as co-construction of individual & their environment
- Problem definition and solution are iterative, relational processes that no individual controls (Orlikowski 1997; Bereiter 1999)
Every way of seeing is a way of not seeing
3. Teamwork
Assumptions
Teams pull together, not apart

There's us and the dead.
We survive this by pulling together, not apart.

-Rick Grimes, The Walking Dead
Learning outcomes for interprofessional education (IPE): Literature review and synthesis

JILL THISTLETHWAITE¹ & MONICA MORAN² ON BEHALF OF THE WORLD HEALTH ORGANIZATION STUDY GROUP ON INTERPROFESSIONAL EDUCATION AND COLLABORATIVE PRACTICE³

Teaching Collaboration Competencies to Healthcare Provider Students Through Simulation

Lori Fewster-Thuente, PhD, RN
Tamzin Batteson, BSc, PhD

A qualitative study of collaboration in general practice: Understanding the general practice nurse’s role

Susan McINNES RN BN(Hons)

The Daily Goals Communication Sheet: A Simple and Novel Tool for Improved Communication and Care

Jami M. Schwartz, M.D.; Kristen L. Nelson, M.D.; Mary Saltski, F.N.P; Elizabeth A. Hunt, M.D., M.P.H.; Peter F. Pronovost, M.D., Ph.D.

The use of trauma interprofessional simulated education (TIPSE) to enhance role awareness in the emergency department setting

Craig William Brown, Morag Howard & Jerry Morse
Robust attention: IPC/IPE

Goal: Interprofessional Collaboration

A partnership between a team of health providers and a client in a participatory, collaborative and coordinated approach to shared decision-making around health and social issues.
Blind spot
A Story
“There was anesthesia, cardiology and us. And ourselves and anesthesia felt that the patient needed a left-sided heart cath prior to listing for transplant, and cardiology disagreed with that.”

(Transplant Nurse Practitioner)
“Cardiology was ordering a CAT scan and it was coronary arteries, and anaesthesiology said, ‘I don’t care what the result is, that isn’t good enough, we want a cath.’ And the cath guy says, ‘well I’m not doing a cath because you don’t need a cath’, and anaesthesiology says, ‘well, we’re not doing a transplant then’. And we’re stuck in the middle going, ‘guys, figure this out’.”

(Transplant Staff)
“Sometimes the comment is made by cardiology that anaesthesia is being overly cautious, and anaesthesia’s saying, ‘well cardiology’s not in the O.R. and they don’t know everything that we have to deal with.’”

(Transplant surgeon)
The compromise between all 3 services is to order a CT angiogram, which is performed in radiology. But then the radiologists wanted the heart-rate to be much better controlled prior to doing a CT coronary angiogram because they felt that the false-positive rating would be too high with a high heart-rate, and so they didn’t want to do the scan.”

(Transplant Fellow)
What makes teamwork so complex?
What makes teamwork so complex?

• 3 contributing factors
What makes teamwork so complex?

- Roles are overlapping
What makes teamwork so complex?

• Roles are overlapping
• Authority is negotiated
What makes teamwork so complex?

• Roles are overlapping
• Authority is negotiated
• Competing goals exist
Ways forward
Ways forward

Goal: Interprofessional Collaboration

A partnership between a team of health providers and a client in a participatory, collaborative and coordinated approach to shared decision-making around health and social issues.

Role Clarification

Learners/practitioners understand their own role and the roles of those in other professions, and use this knowledge appropriately to establish and meet patient/client/family and community goals.

Interprofessional Conflict Resolution

Learners/practitioners actively engage self and others, including the patient/client/family, in dealing effectively with interprofessional conflict.

Team Functioning

Learners/practitioners understand the principles of team dynamics and group processes to enable effective interprofessional team collaboration.

Collaborative Leadership

Learners and practitioners work together with all participants, including patients/clients/families, to formulate, implement and evaluate care/services to enhance health outcomes.

Quality Improvement

Contextual Issues

Complex

Interprofessional Communication

Learners/practitioners from varying professions communicate with each other in a collaborative, responsive and responsible manner.

Patient/Client/Family/Community-Centred Care

Learners/practitioners seek out, integrate and value, as a partner, the input and the engagement of patient/client/family/community in designing and implementing care/services.
Ways forward

Understand one’s own and others’ roles on the healthcare team.
Ways forward

Understand one's own and others' roles on the healthcare team.
Machine metaphor
Complex system metaphor
Uncomfortable?
We must challenge the myths that...

- If we just understood each other’s roles...
- If we just had a clear leader...
- If we just all put the patient’s needs first...

...then we would have effective teamwork.
Ways forward: challenge the myths

• Clear roles, leadership, patient-centeredness are all ‘goods’
• But they are oversimplifications, and can become ends in themselves
• They cannot ‘fix’ teamwork, because they draw our focus back to individuals: roles, leaders, patients
Ways forward

• Build role fluidity/conflict into training initiatives such as IPE
• Move training as much as possible into practice settings
• Challenge the ‘machine metaphor’ and the myths of teamwork
Summary
We are contributing to the MAZE
Because our common educational assumptions are fundamentally individualist.

1. Competence is in individuals.
2. Problem solving happens in heads.
3. Teams are machines.
Shifting from an exclusive focus on individual competence
To a recognition of collective competence as system property
Shifting from problem solving in individual’s heads
To a recognition that multiple perspectives continuously reconstitute the problem.
Shifting from a machine metaphor of team highlighting stable parts/roles
To a recognition of teamwork as a negotiation among fluid positions
Let’s. Get. Uncomfortable.
Let’s challenge & expand our dominant, individualist ‘ways of seeing’

So that we can start training for collective competence.
Thank you

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