Searching for the implicit amid the explicit in novice case presentations:
Implications for electronic records

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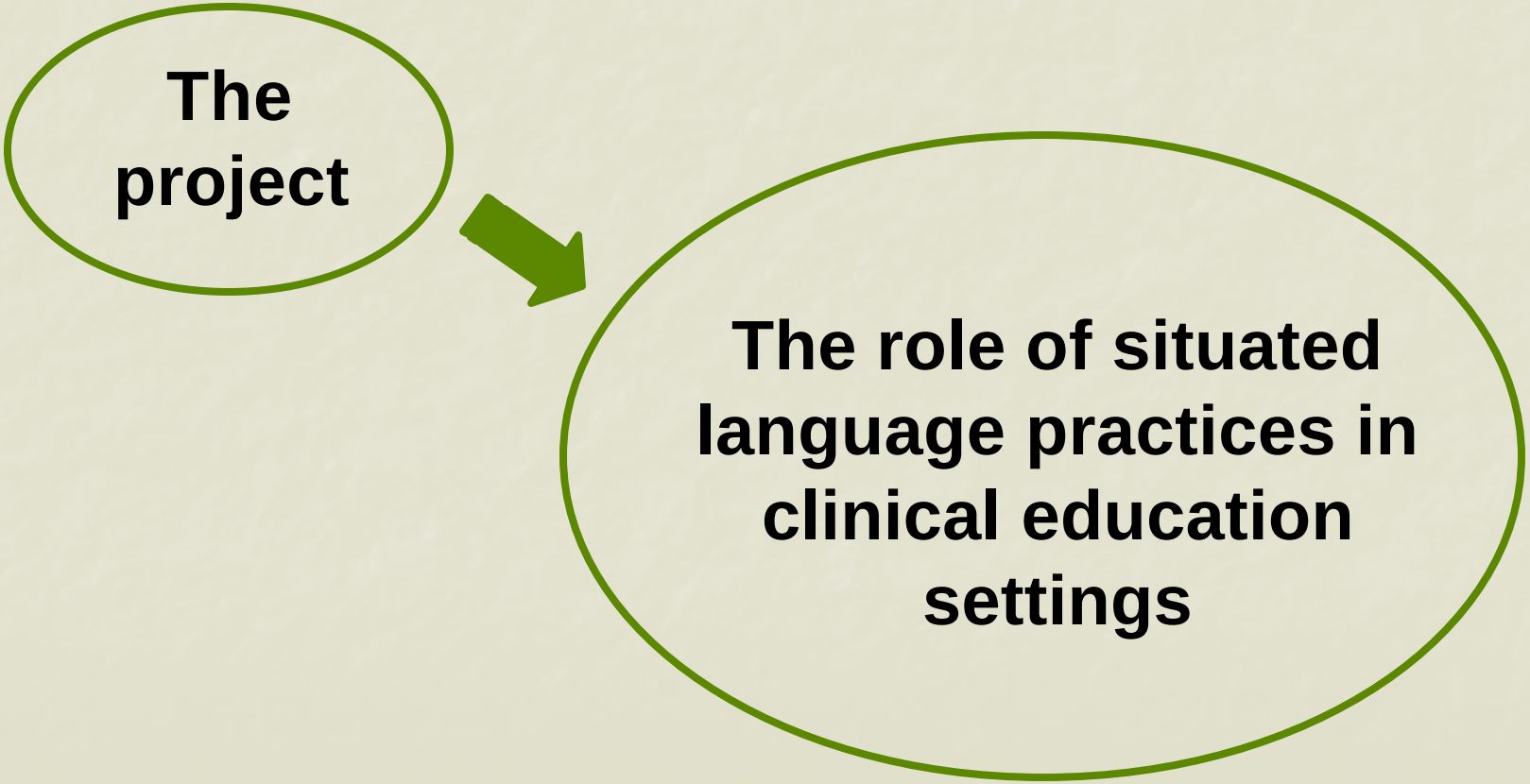
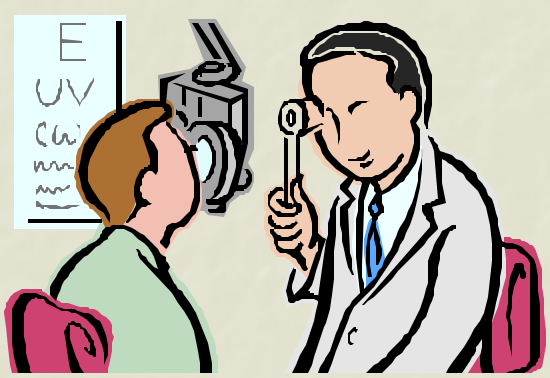
Creating the Healthcare Professional



Case Presentation

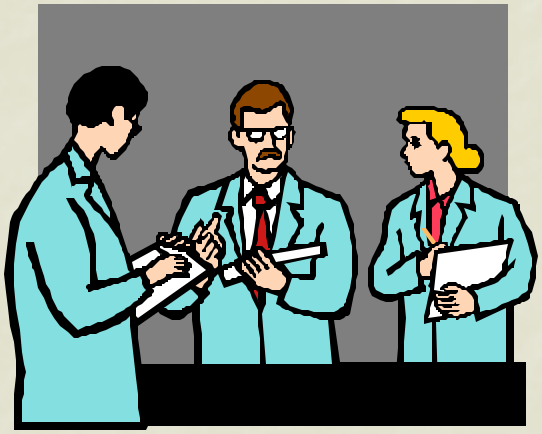
Communication tool of healthcare professionals for disseminating patient info



Patient Info

The Case Presentation

- Chief Complaint (CC)
- History of Present Illness (HPI)
- Past History
- Family History
- Social History
- Physical Exam
- Diagnostic Impression including Plan



The Role of the Case Presentation

- Communicate patient facts
- Influence listener attitudes/actions regarding:
  - the production & protection of scientific objectivity
  - professional socialization
  - regulatory reinforcement within professional communities

Novice Case Presentation

Participants

- Student Presenter (clinical novice)
- Instructor (clinical expert)
- Possibly ‘Others’ (students, residents, fellows)

Dual roles

- Patient care
- Student education

How does the CP…

- Affect the socialization of health professionals?
- Uniquely affect novice health professionals?
- Construct roles?
- Create tacit or contradictory messages?

Theoretical Framework

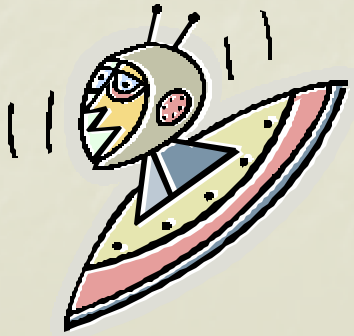
Some relevant theories:

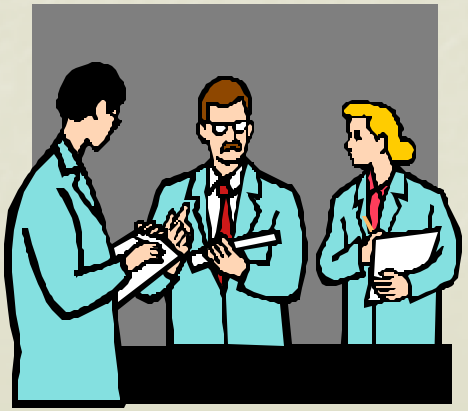
- Genre theory (e.g., Schryer; Bourdieu)
- Structuration theory (e.g., Bourdieu; Engeström)
- Rhetorical & discourse analysis (e.g., Burke)

Novice Case Presentation (nCP)

Genre

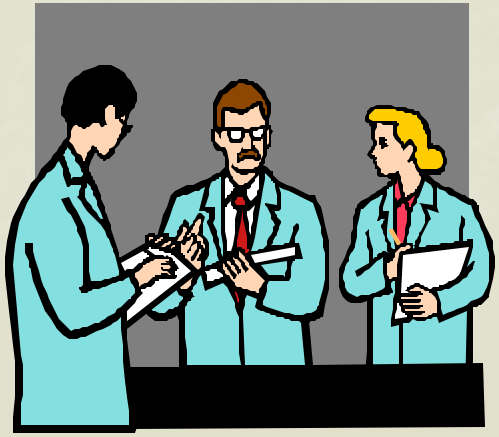
- A collection of improvisational strategies (flexible & organized) that emerge when individual socialization interacts with an organization or field





Novice Case Presentation (nCP)

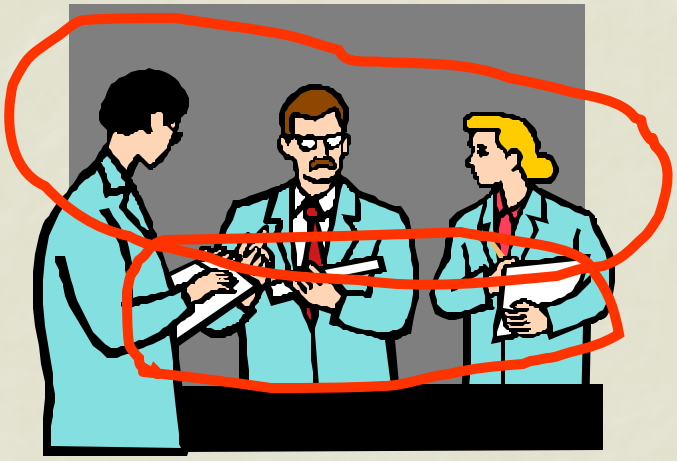
- nCP is a vehicle for:
  - patient care
  - student education
- These dual roles compete & contradict



Novice Case Presentation (nCP)

- nCP provides opportunities to learn ways of knowing and behaving some of which are:
  - regulated
  - regularized
- nCP contains improvisational strategies that participants use to mutually negotiate their way through time and space

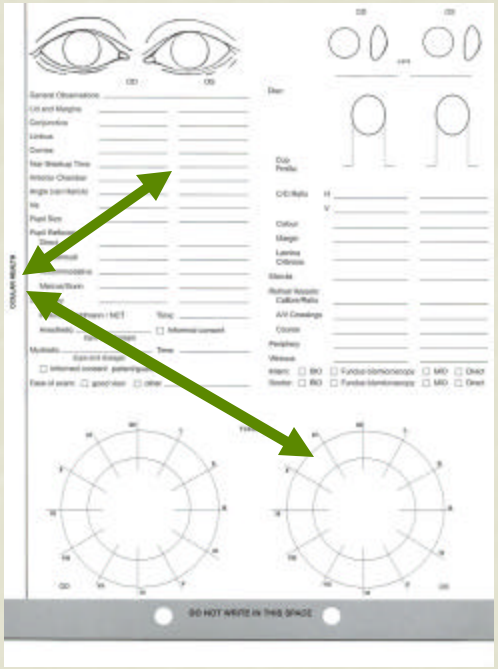
CPs & Patient Records



Optometry Record Observations

- Users don’t fill in the form ‘in order’
  - pg. 1, 3, 2, then 4
- Users don’t fill in the entire form
  - Data base (all patients)
  - Problem-specific data (based on patient’s needs)
- Record is front and center in optometry CPs

Record Interactions



Methodology: nCPs

- **3 case studies (nCPs in a clinical rotation):**
  - Medicine
  - Optometry
  - Social Work
- **Data collection:**
  - nCPs (audio-recorded & transcribed)
  - participant interviews (audio-recorded & transcribed)
  - document collection

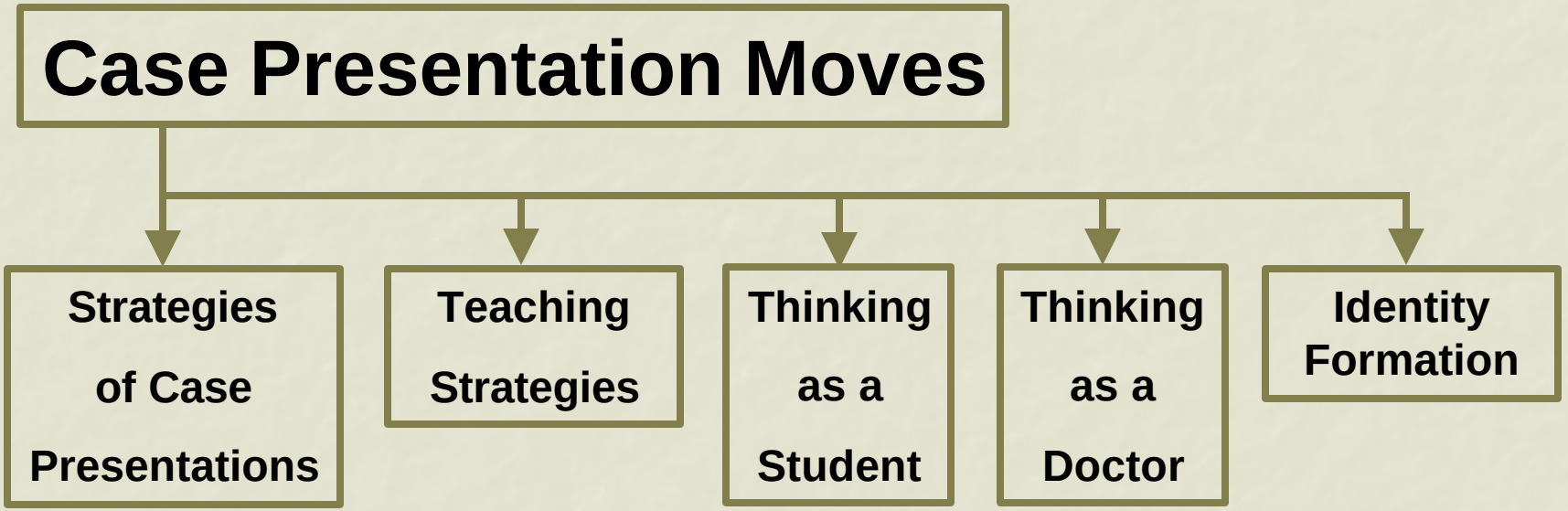
Methodology

- **Data analysis:**
  - **Quantitative methods**
    - Description statistics (e.g., frequencies)
    - Statistical analysis (e.g., Greenhouse-Geisser)
  - **Qualitative methods**
    - Grounded theory method

Grounded Theory

- Inductive method
  - Theory develops from data
- Read transcripts for emerging themes
- Apply, refine & confirm themes across data
- Iterative approach ensures that the constructs driving the analysis reflect the data

Results


Case Presentation Moves
Strategies of Case Presentations
Teaching Strategies
Thinking as a Student
Thinking as a Doctor
Identity Formation

Case Study Comparisons

Medical Site

- 3rd yr students (clerks) (paediatrics)
- In-patient care
- 16 CPs observed
- 21 interviews conducted (11 clerks; 10 MDs)
- 2 video clips

Optometry Site

- 4th year students (interns) (primary care)
- Out-patient care
- 31 CPs observed
- 8 interviews conducted (4 interns; 4 ODs)
- 2 audio clips

Case Presentation Comparisons

Medical Site

- CP structure taught
- CP without patient record
- Student practices CP
- 1:1 Instructor:student
- Patient data:
  - terminology
  - measurements

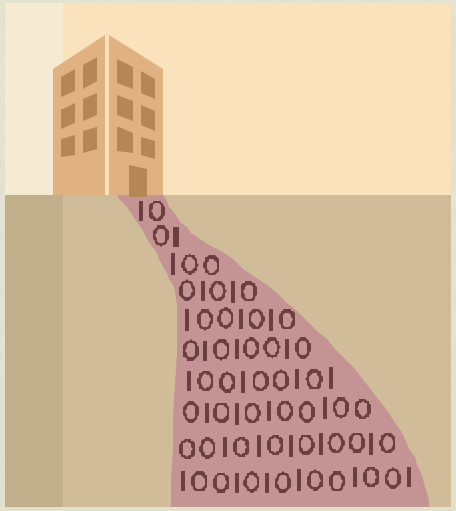
Optometry Site

- CP structure not taught
- CP with patient record
- Student can't practice CP
- 1:4 Instructor:student
- Patient data:
  - terminology
  - measurements
  - sketches

Explicit vs. Implicit

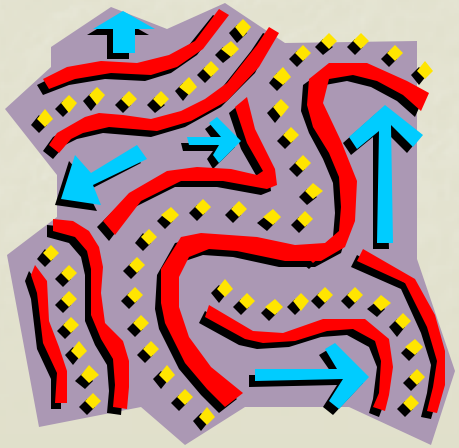
Explicit Messages

- Clear, detailed
- No room for confusion



Implicit Messages

- Implied
- Not directly expressed
- Misinterpret more likely



Searching for the Implicit…

- Optometry Case Study
  - Tensions in the field: Teaching standards of practice in optometry case presentations
  - Teaching the Balancing Act: Integrating Patient & Professional Agendas in Optometry
- Medical Case Study
  - Look who's talking: Teaching & learning using the genre of medical case presentations

Tensions in the field

(Optometry Case Study)

Official Way (14 instances)

- Optometrist teaches regulations & guidelines set outside the institution (e.g., profession, government)

Our Way (16 instances)

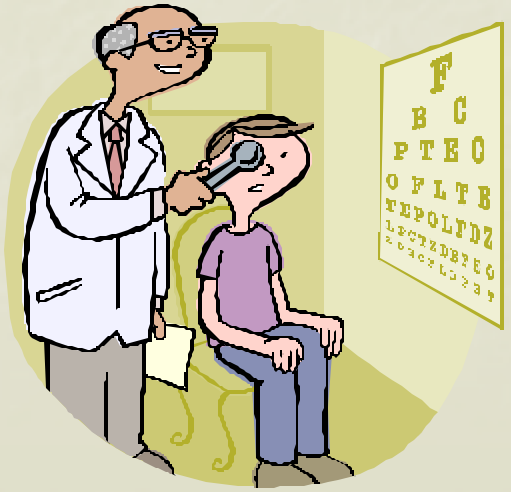
- Optometrist teaches institutional rules & approach

My Way (36 instances)

- Optometrist teaches personal approach

Official Way

O3: No, it's 6 weeks. That's what the textbooks say. If you get through the first 6 to 8 weeks, 6 weeks especially, without having a retinal break happening, you're probably OK....



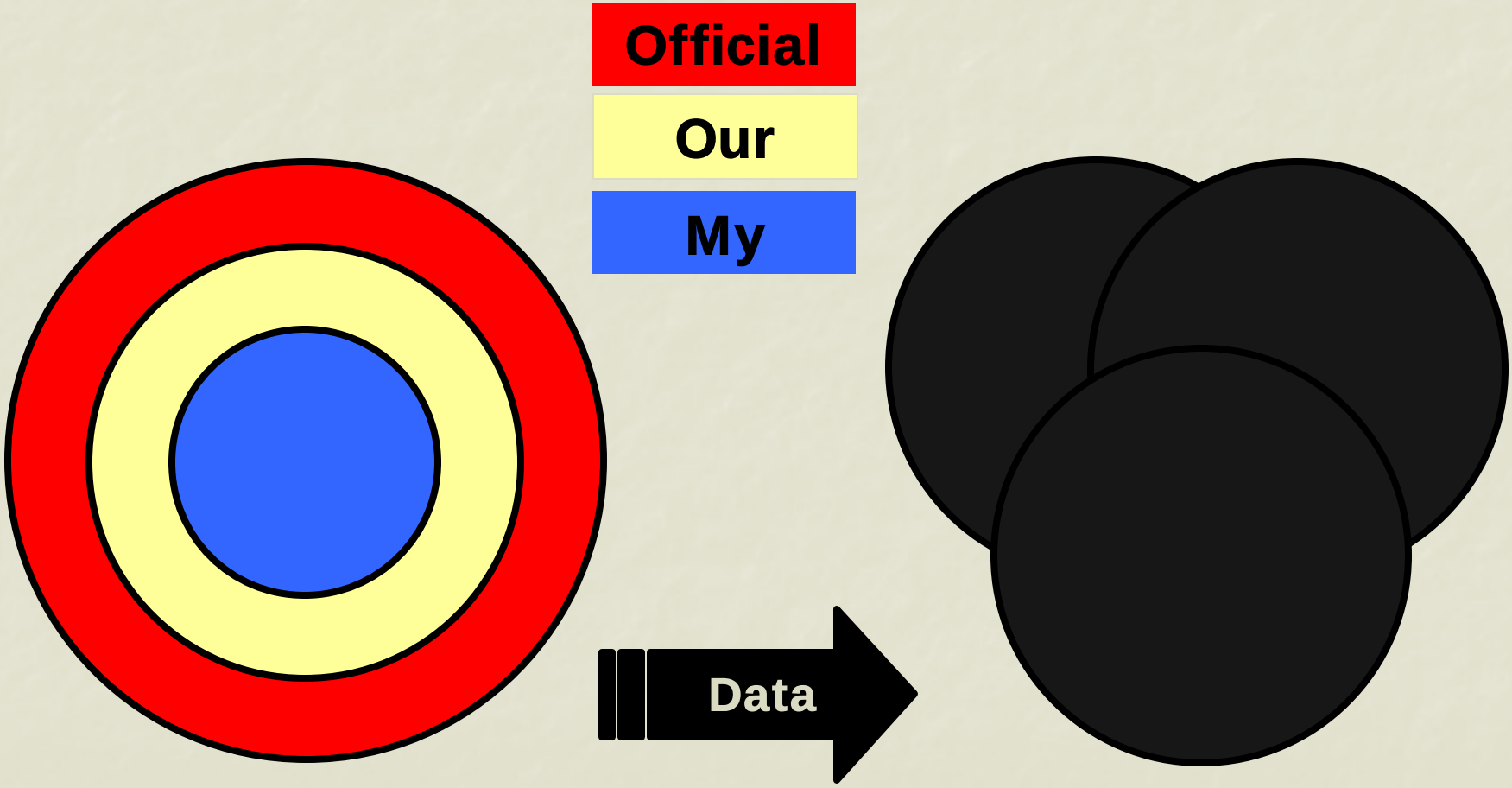
Our Way

O1: "...So there are a list of indications, ah, of specific indications for [pupil] dilation in your procedures manual...."

My Way

O3: I base that judgment on how definite it seemed to be when you were testing. You know, with the cross cyl...if it seemed wishy washy, so that you're not sure if the cylinder's there or not, then I'm inclined to take it out...

Teaching Standards of Practice



During nCPs…

Students must:

- Balance 3 standards of practice
- Make responsible decisions from options
- Develop a professional position for their practice

Teachers must:

- Juggle patient care and student education

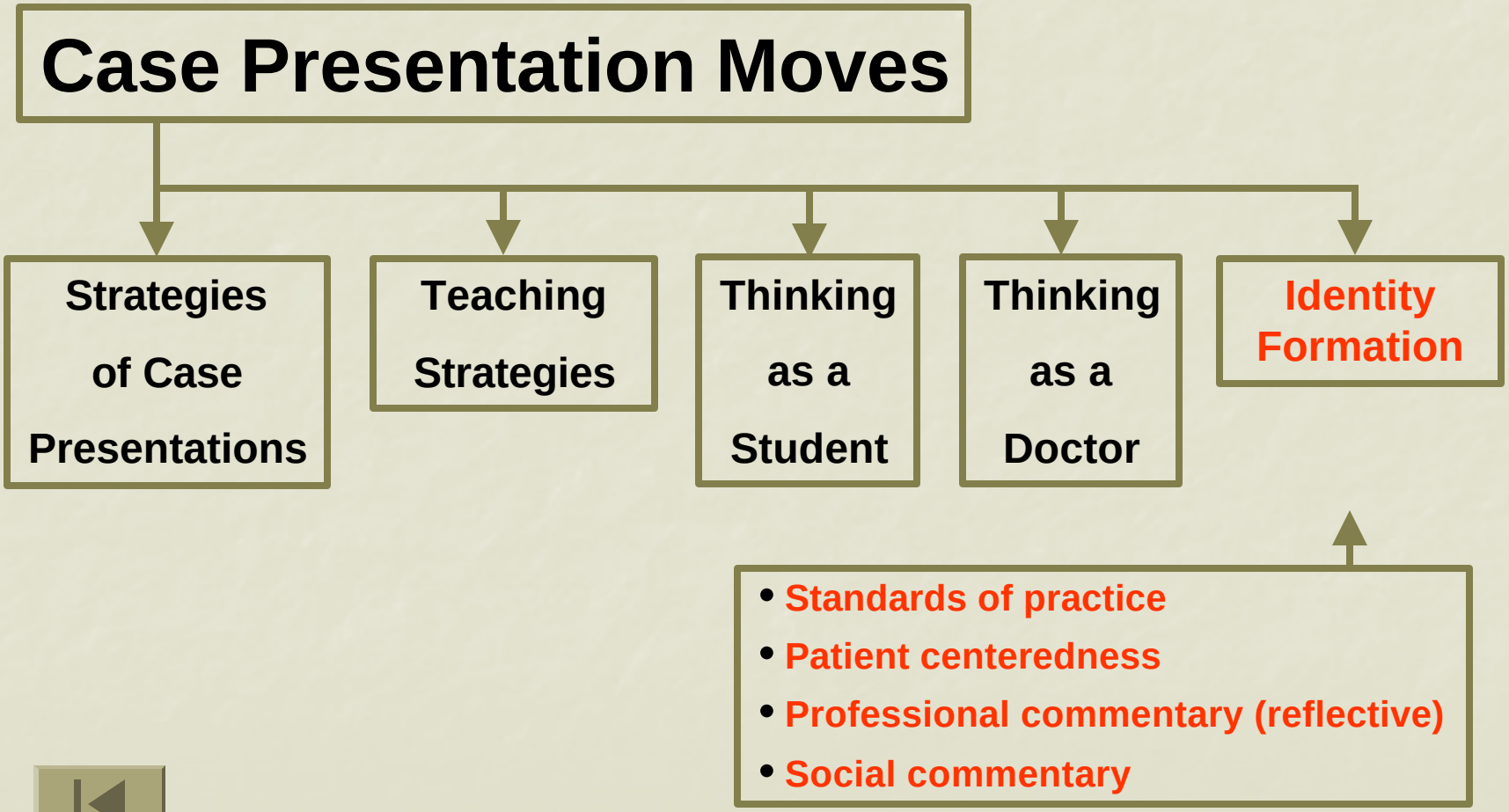
(time constraints, multiple goals)

During nCPs…

Thus…

- Much of the teacher's reasoning around standards of practice is **implicit** (tacit)
- Students may misinterpret the teacher's practice as **idiosyncratic**

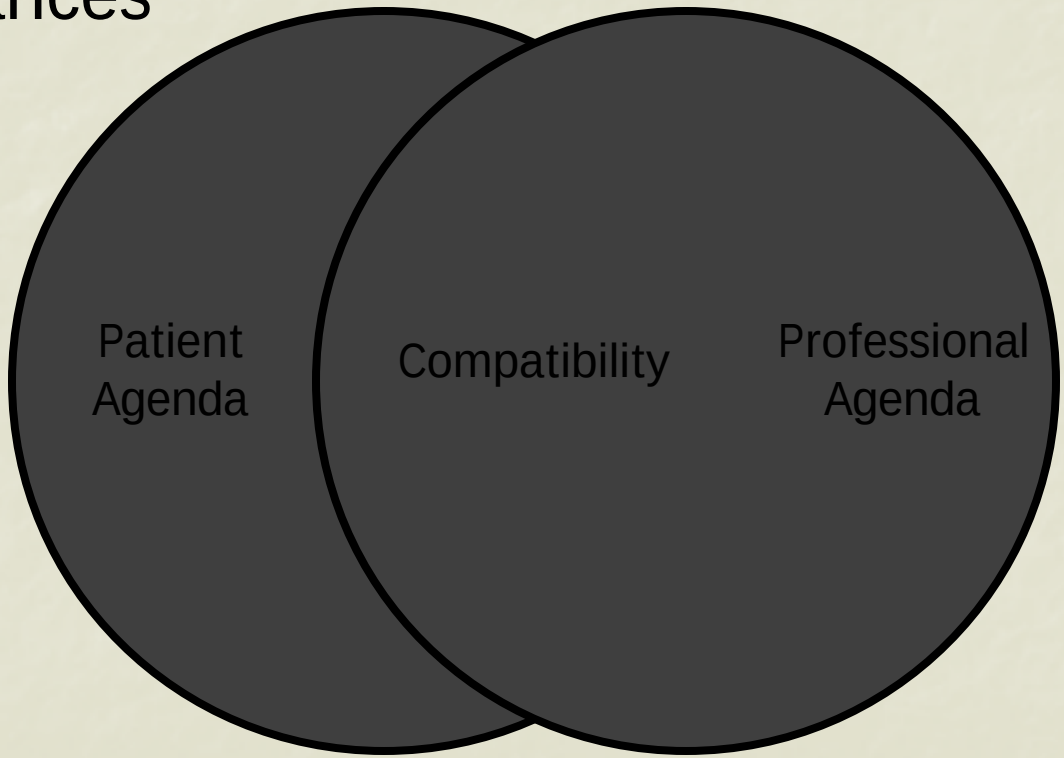
Teaching Standards of Practice



Teaching the Balancing Act

(Optometry Case Study)

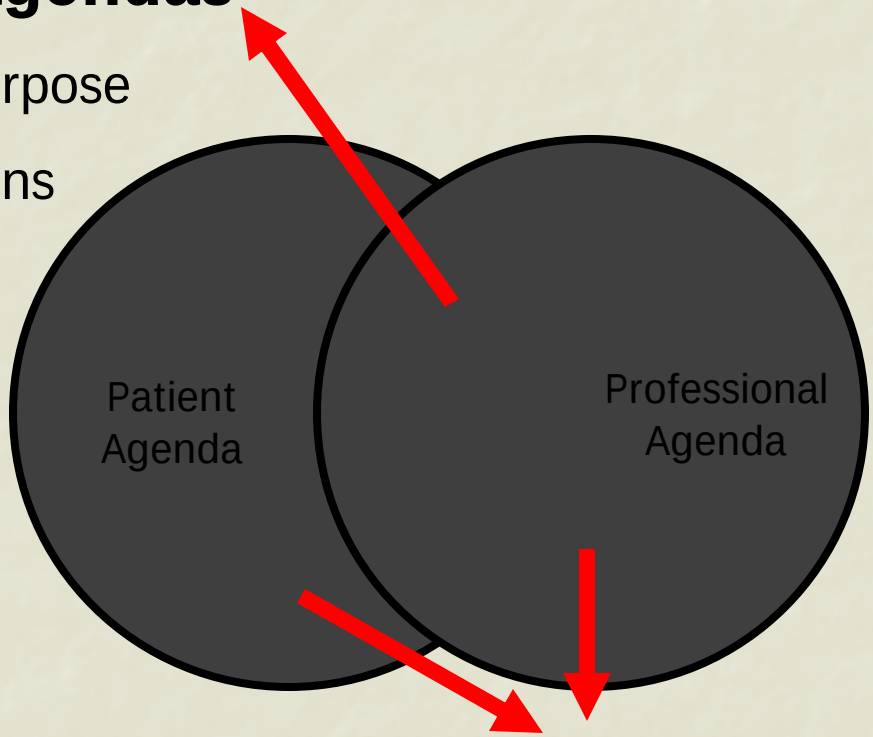
57 instances



Teaching the Balancing Act

Compatible agendas

- Appointment purpose
- Treatment options



Incompatible agendas

- Patient consent
- Guideline adherence

Strategies regarding Incompatibility

Persuade patients to shift their agenda to be more compatible with the professional agenda

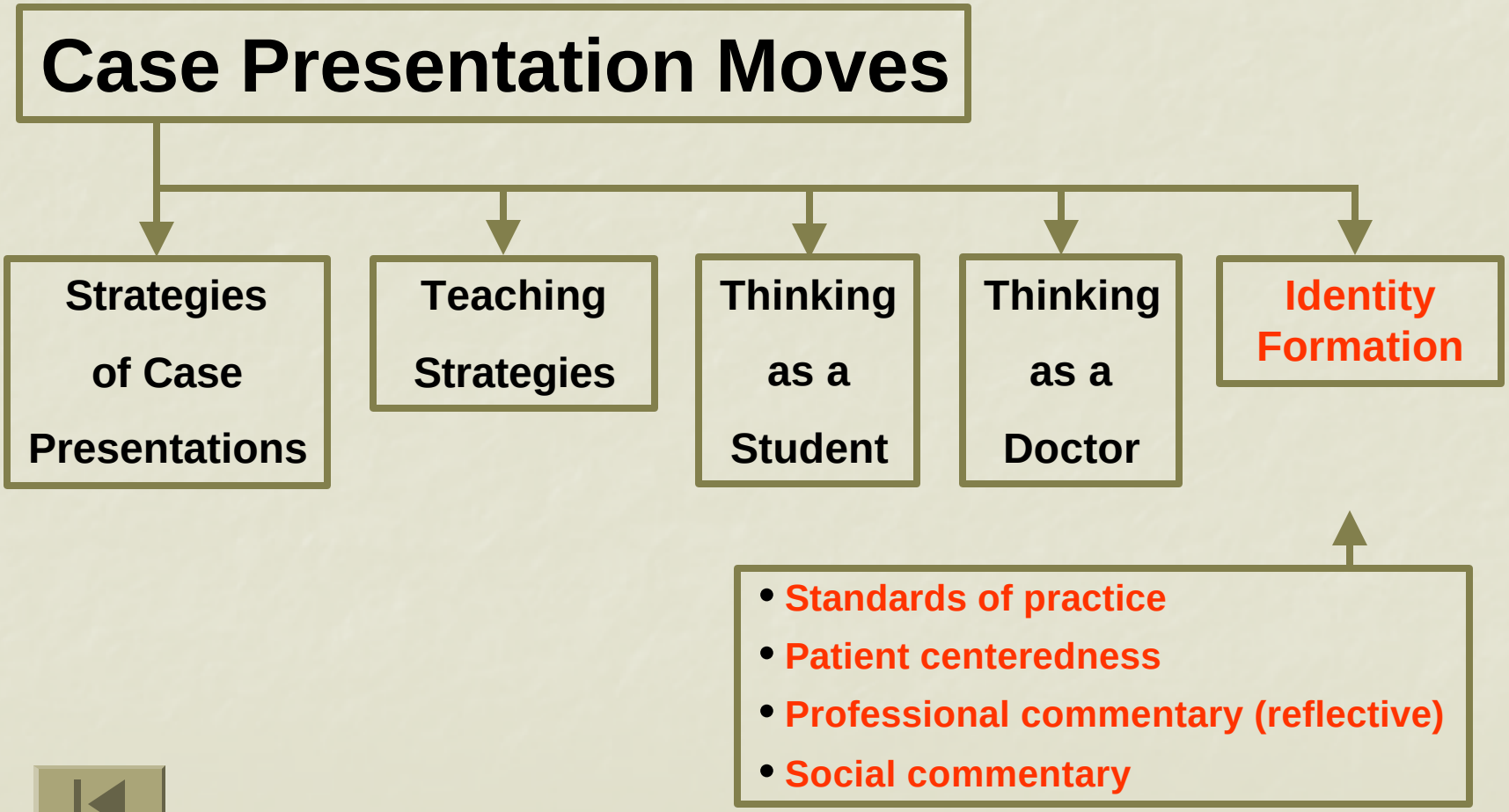
Lack of Explicit Teaching

S5: Sometimes they'll give you like a puzzled look like, "What are you talking about?" And then you know you're...barking up the wrong tree... And it's interesting 'cause some clinicians – they know you're going down the wrong path and they'll let you keep going and going and going and they'll go with you even though they know you're wrong... You don't know it...'til you're right at the end and then you're like, "Oh!!". It's brutal!

Patient & Professional Agendas

- Students need help:
  - Identifying patient & professional agendas
  - Balancing these agendas
  - Developing strategies for managing incompatible agendas
- More explicit instruction may be helpful

Teaching Standards of Practice



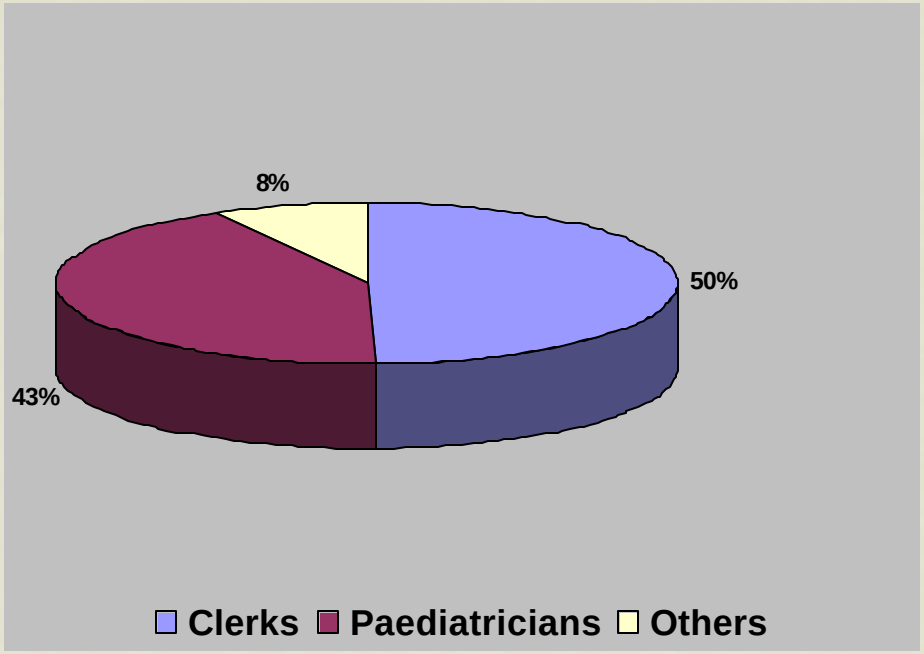
Look who's talking
(Medical Case Study)

- How much time is devoted to student practice & expert teaching?
- Do overlapping activity systems create difficulties for participants in terms of the balance between patient care & educational objectives?
- Were any tacit values being conveyed that a more overt teaching method might identify?

Methods

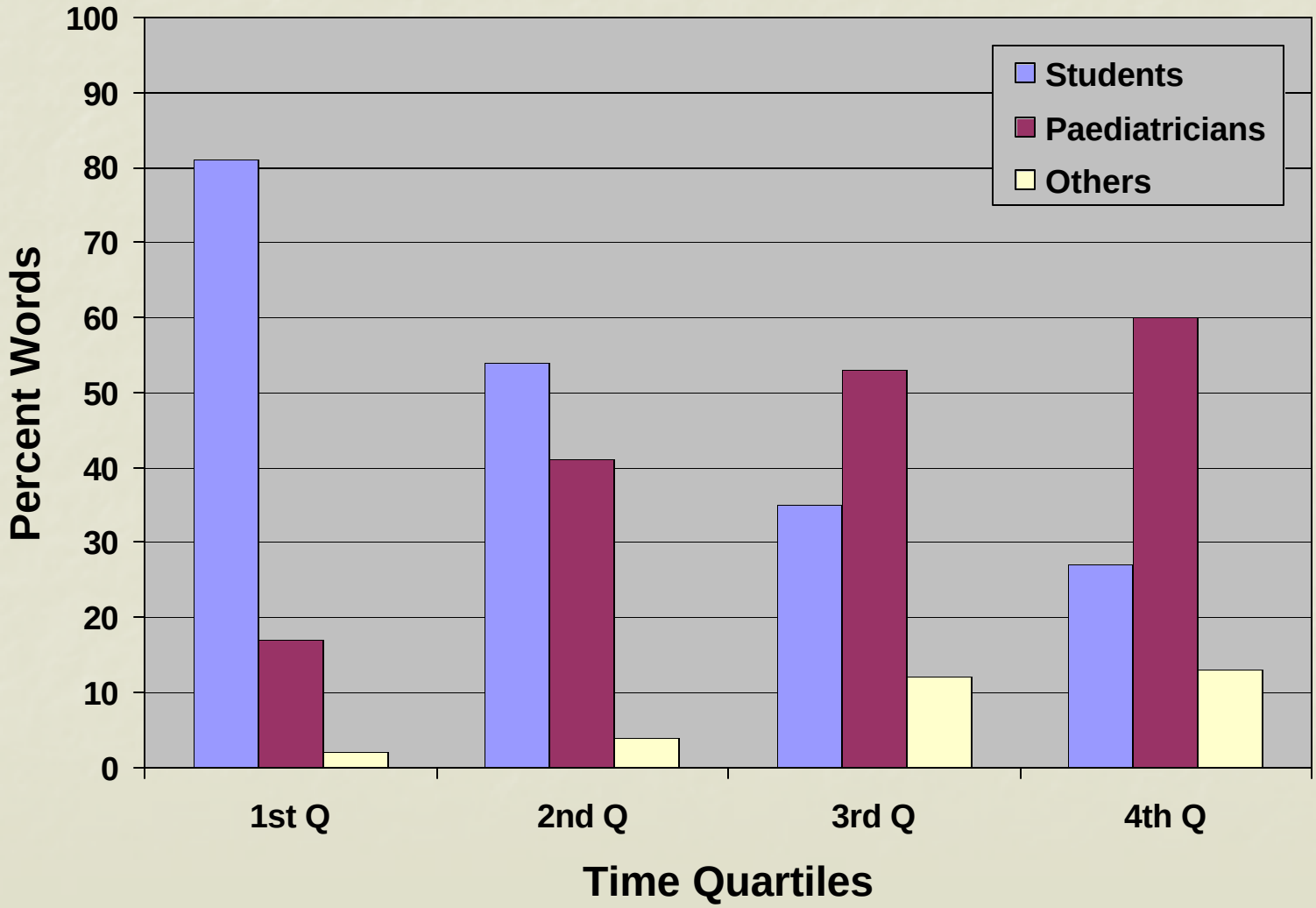
- **Quantitative:**
  - Number of words spoken per:
    - **participant:** clerk, doctor, others (total & per quartile)
    - **topic:** diagnosis, management, communication
    - **educational objective**
  - Kruskal-Wallis Test & Wilcoxin Test (p=0.05)
  - Greenhouse-Geisser (p=0.05)
- **Qualitative:**
  - Grounded theory method

Mean Air Time



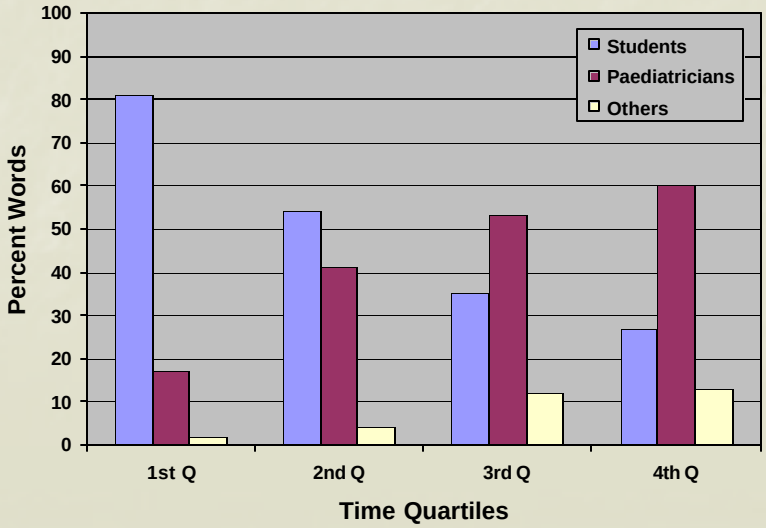
- Significant group difference (Kruskal-Wallis: $?_{(2)} = 30.25$; $p = 0.00$)
- 'Others' speak significantly less (Wilcoxin: $?_{(1)} = 21.15$; $p = 0.00$)
- Clerks & MDs equally share time (Wilcoxin: $?_{(1)} = 1.11$; $p = 0.29$)

Words spoken by time quartiles



Patterns of Practice & Teaching

- Group air times changed significantly across nCP (Greenhouse-Geisser: $F_{(=1.5)}=5.39$; $p=0.02$)
- Group air time profiles differed significantly from each other (Greenhouse-Geisser: $F_{(3.0)}=31.96$; $p=0.00$)



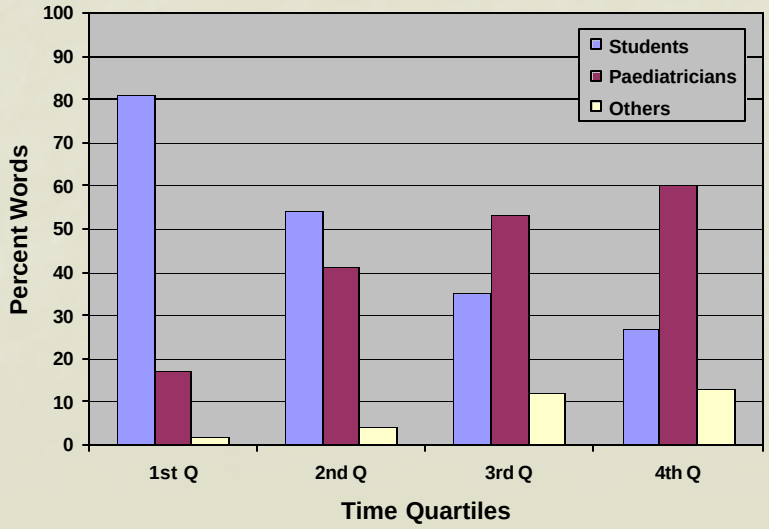
1st Quartile Features

Medical Student

- Student dominates air time
- Presents patient info

Paediatrician

- Teacher injects clarification questions
- Scaffolds the nCP



1st Quartile Excerpt

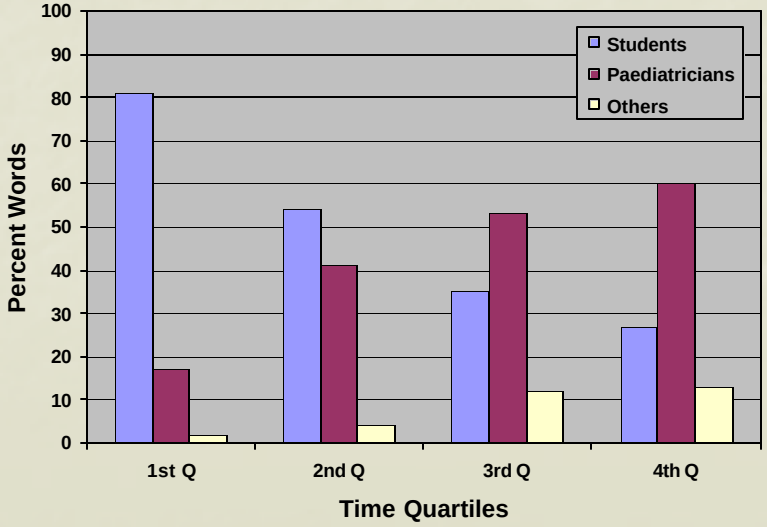
S7: "I don't know what antibiotic it was. No. Now, associated with this...illness..."

P8: "Do we know what antibiotic it was?"

2nd/3rd Quartile Features

Medical Student

- Decreasing air time
- Transmission of patient information decreases



Paediatrician

- Increasing air time
- Questioning & teaching strategies increase
- Scaffolding thoughts of diagnosis & treatment

2nd/3rd Quartile Excerpt

P7: White cell count was 35.8. That was from Emerg?

S8: It was from Emerg.

P7: What do you think about that?

S8: Uh, well the...greater majority were poly 32.6.

P7: Um hmm.

S8: Uh, so that would point more to a bacterial infection rather than a...viral infection.

P7: Any other possibilities...of what it might represent?

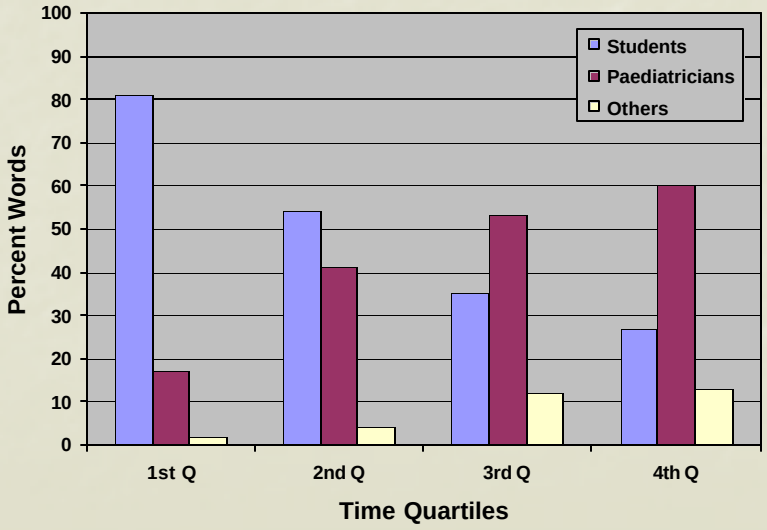
S8: Um...well, you would see increased white blood cell count in...a lymphoma...in an inflammatory state...

P7: Uh hmm. What else could give you a high white count?

4th Quartile Features

Medical Student

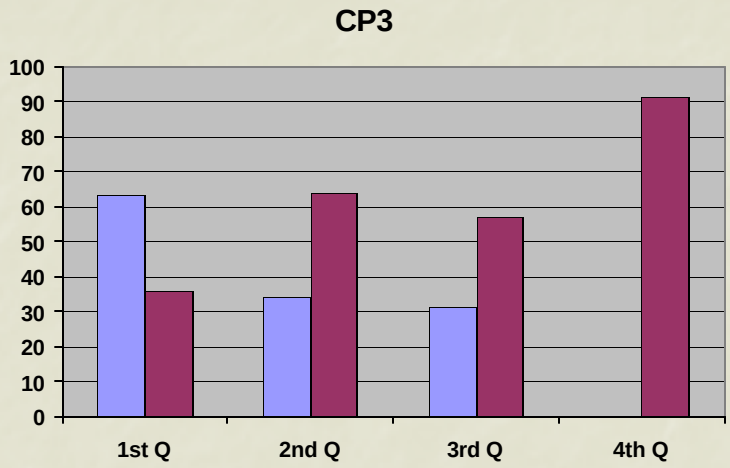
- Role shifts from care giver to learner

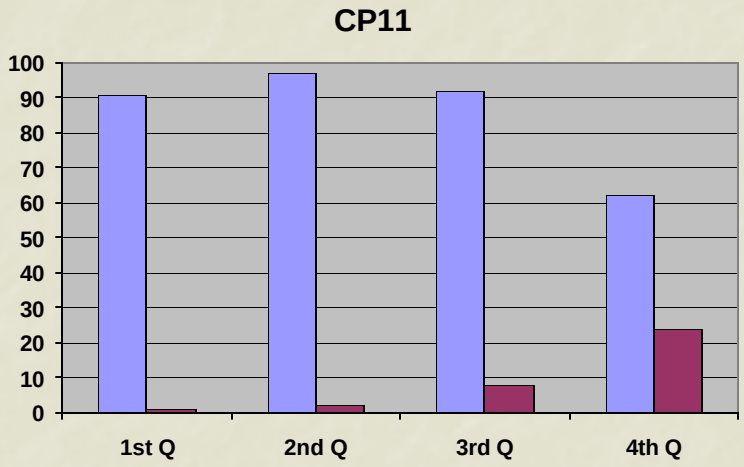


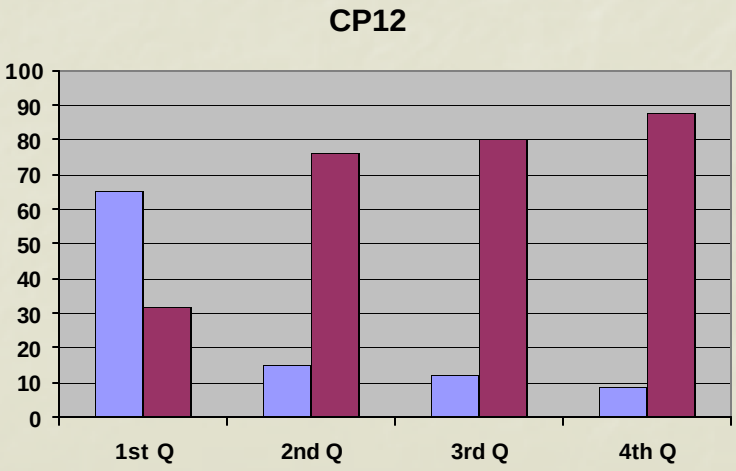
Paediatrician

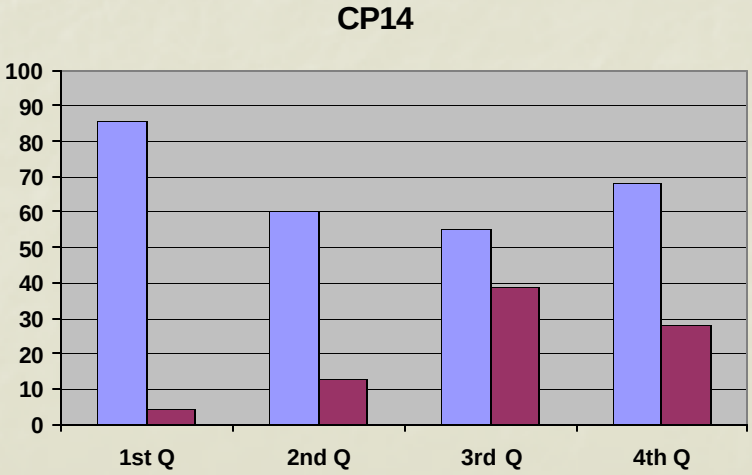
- Teacher dominates air time
- Juggles patient care & student education
- 'Doc talk' occurs: student excluded

Different CP Time Profiles







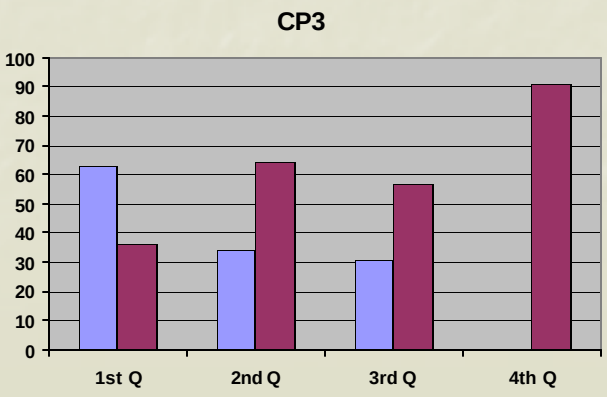


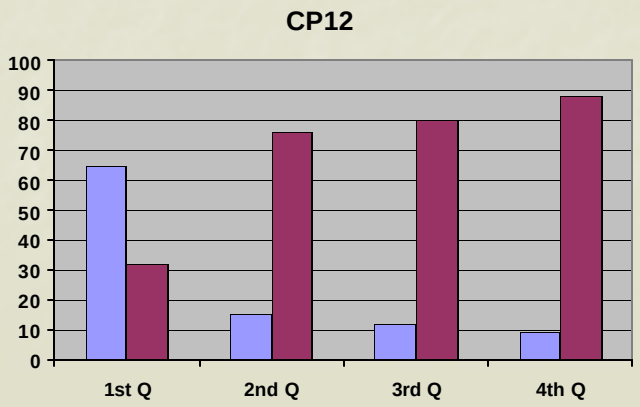
Students Paediatricians

Paediatricians dominate air time

Medical complexity plays a role

- CP3 & CP12: low complexity
- Paediatricians tactics:
  - Use case to teach & test more broadly (general knowledge; newborn reflexes)
  - Provide supportive commentary





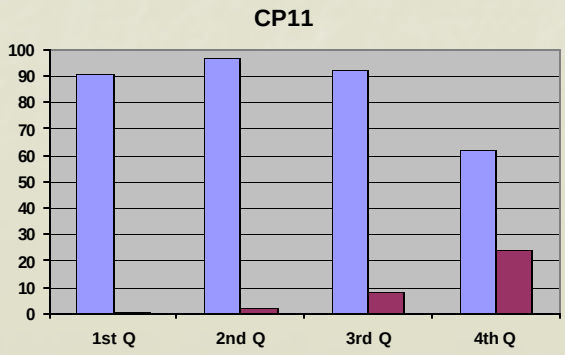
Supportive Commentary

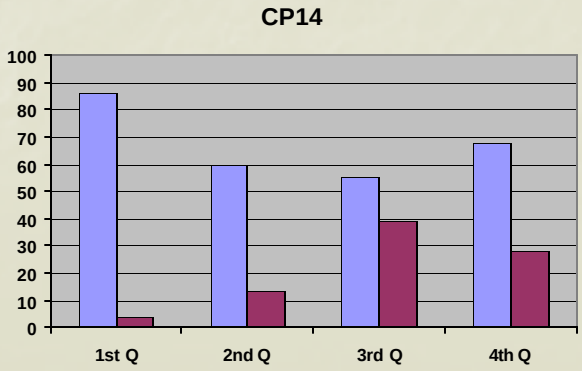
P8: I'd just like to make a comment about that because it's a really excellent question [you've asked].

Students dominate air time

Medical complexity plays a role

- CP11 complex
  - Lots of information presented without filtering
  - Rich descriptions
- Paediatrician response: clarify only; too much to teach
- CP14 not complex
  - Less information presented
  - List-like presentation
- Paeditrician response: too little to teach





Enriched Mode

S5: She has shallow breathing to minimize the pain. She was extremely short of breath climbing even one staircase in their home and was finishing the stairs on her hands and knees.

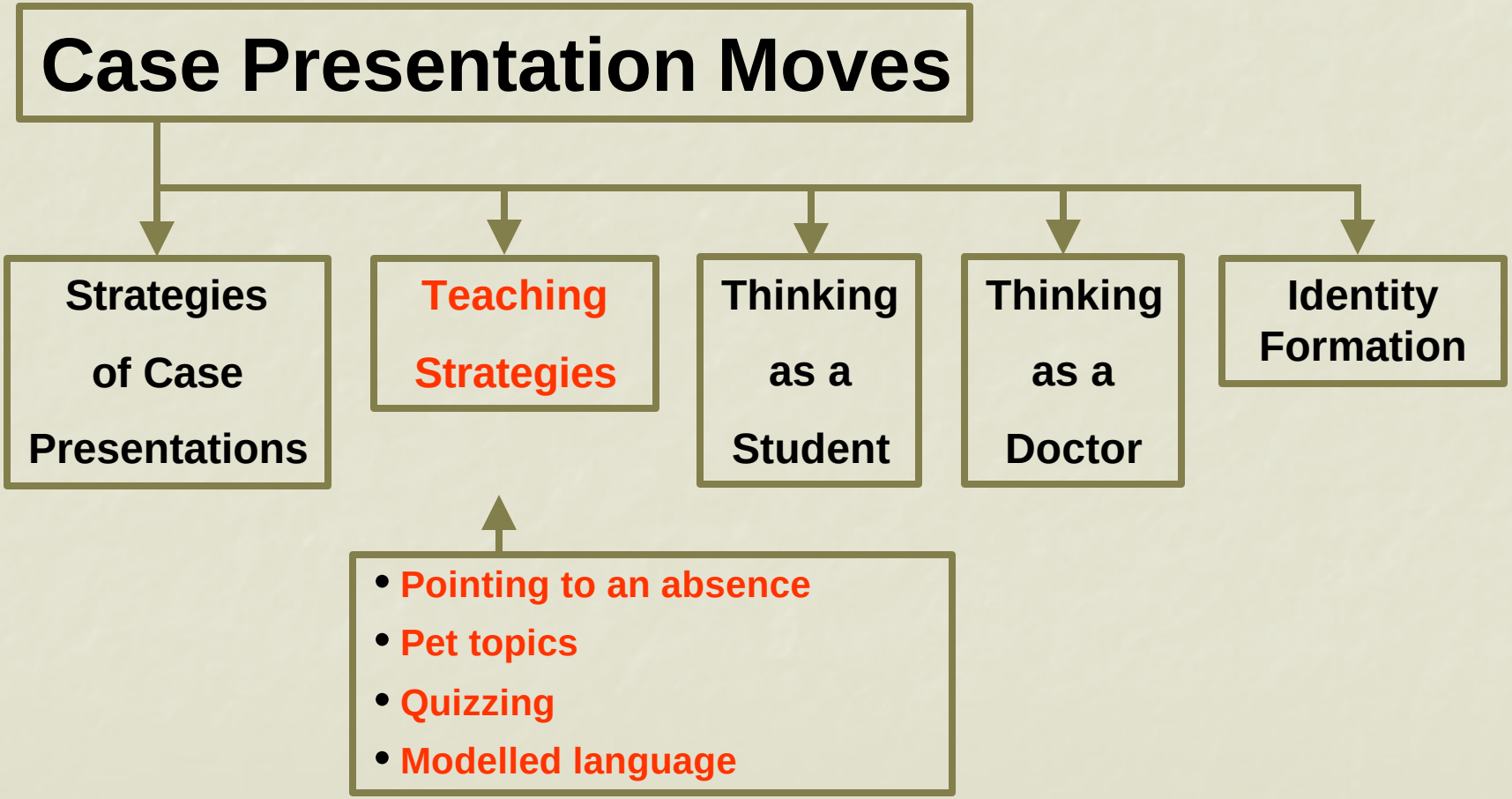
List-like Mode

S12: Nasal flaring. Trachea tight. Intercostal indrawing.

Paeditricians & nCP Medical Complexity

- High Complexity
  - Little input (too much to address)
- Low Complexity
  - Little input (little to address or poor teaching case)
  - Substantial input (teach more broadly)

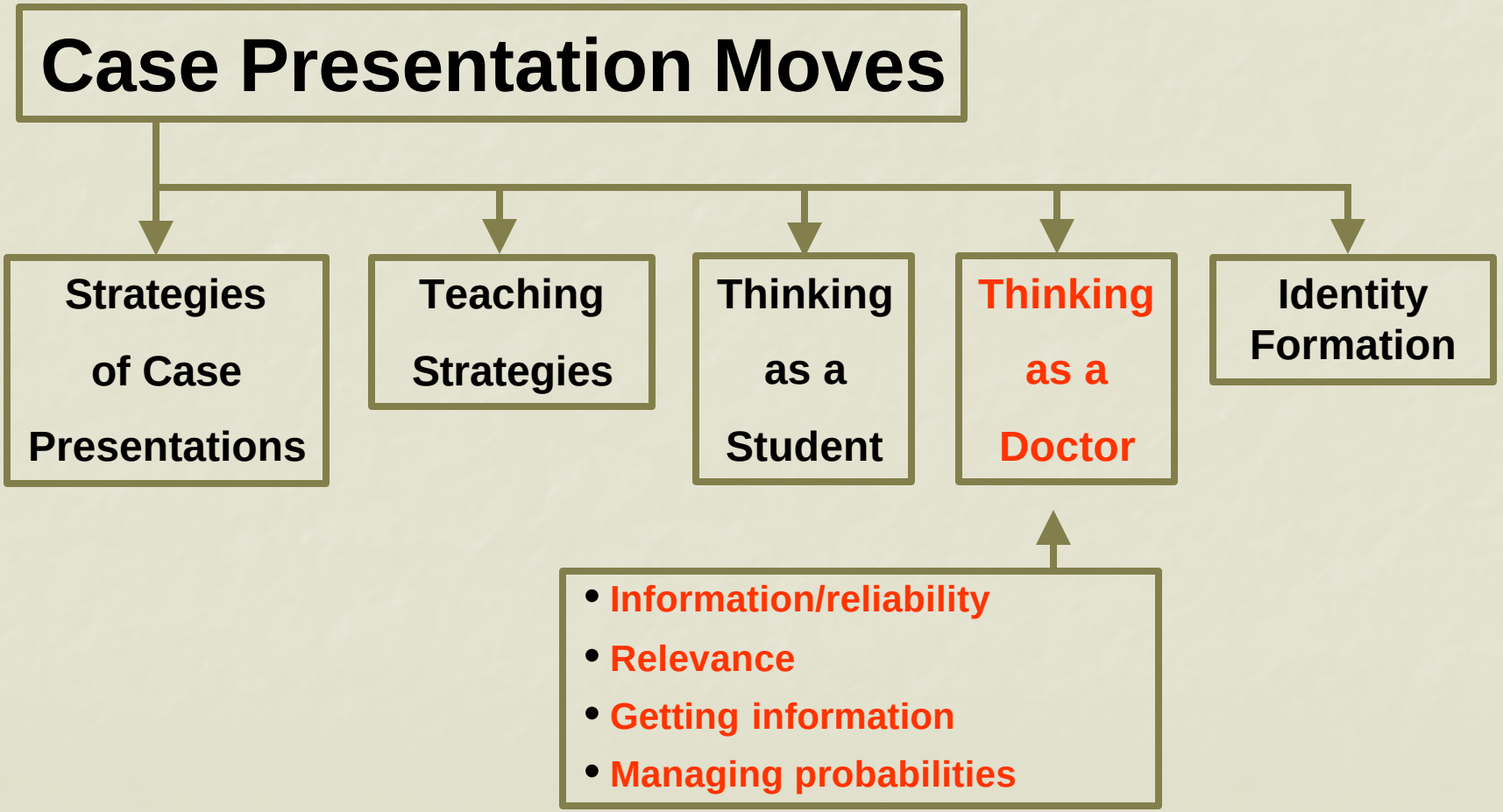
Paediatrician Strategies: Teaching



Modeling language

P5: No, we call that an upper respiratory tract infection. That's what we call it.

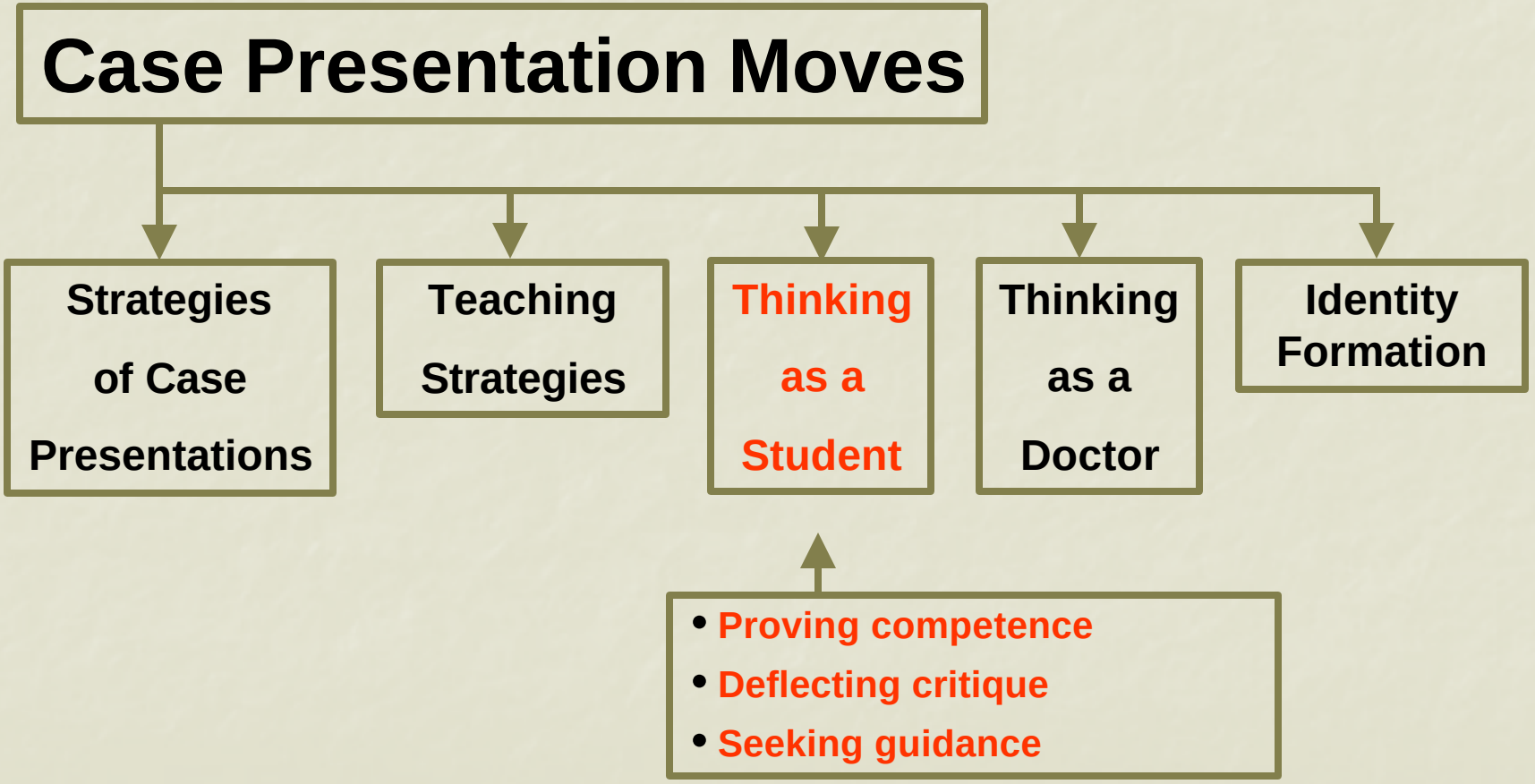
Paediatrician Strategies: Thinking



Accessing Information

P: And it's really important to get the old chart and look at it and see what happened.

Student Strategies



Deflecting Criticism

S5: She had acute respiratory distress. I didn't mean adult [respiratory distress] -

Tacit Messages

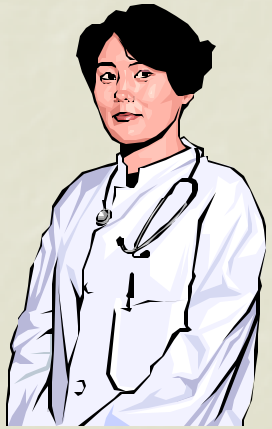
- Packaging the CP for the appropriate target audience
  - Paediatricians:
    - ‘Thinking like a Doctor’ perspective
  - Medical students:
    - ‘Thinking like a Student’ perspective

Instructors: Packaging CPs

P2: If you're presenting to a surgeon...or a surgical resident, they're going to cut you off after 2 sentences. But if you're presenting to an internist or a paediatrician, we're going to listen to the whole story. Psychiatrists are going to listen to more than the whole story.

Students: Packaging CPs

S9: It's just you have to cater your presentation to who you're presenting to.



nCP Focus

- Diagnostic focus (89%)
  - Limited attention to treatment & communication
  - What implicit message regarding importance?
- Limited attention to educational objectives
  - Only 4 of 9 objectives routinely addressed
  - Where are other objectives met?
  - What implicit message regarding importance?

Look who's talking: Summary

- Patient care & student education agendas co-exist & compete
- Implicit messages are sent regarding:
  - Care priorities
    - Importance of diagnosis or treatment
    - Importance of patient agenda
    - Importance of educational objectives
  - Physician rationale
    - We do, say, & believe

Implications for Electronic Records

Developers of electronic records may want to reflect on the:

- Socializing effects of the patient record
- Implicit messages provided by the patient record
- Interplay of CP & patient record
- Alignment of CP & patient record (e.g., patient centeredness)