



# Medical Writing in the Era of Medicine 2.0: Case Reporting

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# OUTLINE OF THE PRESENTATION

## 1. Introduction:

- medical case reports
- review of research

## 2. Methods:

- corpus linguistics
- ESP and Medicine 2.0

## 3. Findings:

- structure and language
- context

## 4. Conclusion:

- pedagogical applications
- further research

# Introduction: Medical Case Report

- description of a pathology/trauma in a single patient
- unusual, interesting, or unique aspects of a case
- regarded somewhat inferior to the research article
- inductive reasoning, from particular facts to a general conclusion





# Introduction: Review of Research

## **Medical sociology:**

Anspach (1988) – medical case presentation (delivered orally by physicians-in-training during hospital rounds):

- influence of the biomedical world view
- part of the enculturation into the community of doctors
- objectifying rhetorical features:
  - depersonalization
  - omission of agents
  - metonymic expressions
  - factive and non-factive predicates

# Introduction: Review of Research

## Objectifying rhetorical features:

- **depersonalization:** absence of reference to the patient, the use of impersonal vocabulary and conventionalized collocations – the focus on the patient is backgrounded

categories: *A 19-year-old Thai primigravida...*

disease/organ: *The abdomen was not distended...*





# Introduction: Review of Research

- **omission of agents:** via the use of passives and existential constructions – agents are de-emphasized, focus is on the action

existential constructions: *There was no abnormality...*

passives: *MRI of the pelvis was performed...*

- **metonymy:** technology as the agent – regarded as objective despite being subject to interpretation

*Histopathology revealed ....*

*Skin biopsy demonstrated...*

# Introduction: Review of Research

- **factive and non-factive predicates:** factive verbs (used with doctors/authors) presuppose the truth of what follows, while non-factive verbs (used with patients) may not do so:

factive verb: *It was **found** that the patient had a tumor.*

non-factive verb: *She **denied** recent weight loss.*







# Introduction: Review of Research

- the use of biomedical rhetoric indicates a **bias** towards patients
- “categorizing what the patient says as ‘subjective’ stigmatizes the patient’s testimony as untrustworthy... calling physical findings and laboratory studies ‘objective data’ gives an air of infallibility to the quite fallible observations of doctor and laboratory”

(Donnelly cited in Fleischman 2008: 478)



# Introduction: Review of Research

## Literary theory:

Charon, Montgomery Hunter (1992) – medical case history:

- exclusion of the patient's voice
- language depersonalizing the patient
- biomedical discourse





# Introduction: Review of Research

## Linguistics:

Taavitsainen and Pahta (2000), Atkinson (1992) – evolution of the genre:

- change in the language due to the development of scientific methods
- 19<sup>th</sup>-century reports – personal tone of narration
- present-day reports – neutral/factual language

# Methods: Corpus Linguistics

## Primary Corpus (46,160 words)

- 40 on-line medical case reports (2007 – 2010) from:  
*Journal of Medical Case Reports* and *Cases Journal*
- criteria:  
peer-review, open access, representativeness

## Secondary Corpus (ca. 2 million words)

- same sources and time period
- validation or refutation of findings





# Methods: Corpus Linguistics

## **Concordancer:**

- searches corpus (or group of texts) for words/phrases
- can clarify usage and terminology
- can reveal fine-tuned grammatical norms, e.g. a/the/-

## **TextSTAT 2.5**

concordance software tool used for generating:

- word/phrase frequencies
- concordances: alphabetical list of principal words with their immediate contexts

TextSTAT downloaded from:

<http://neon.niederlandistik.fu-berlin.de/en/textstat/>

# Concordances with co-text as displayed in TextSTAT

The screenshot displays the TextSTAT interface for a corpus named '93 CASE PRESENTATIONS - CORPUS.crp'. The search term 'presented' is entered in the search box, and the results are shown in a concordance table. The table has a header 'Concordance' and a column for the search term. The first row is highlighted in blue, showing the word 'presented' in a blue box. The rest of the text in that row is in black. The concordance table lists various medical cases, each starting with the word 'PRESENTED' followed by a description of the patient's condition and history.

Options:

- search whole words only
- search case insensitive
- mark search string

90 context left  
90 context right

alphabetically  
 sort context right  
 sort context left

Refresh

26 hits | 1 files | 119416 bytes

# Methods: ESP

## Structural Move Analysis

CARS model for research article introductions  
(Swales 2004):

MOVE 1: Establishing a territory

MOVE 2: Establishing a niche

MOVE 3: Presenting the present work





# Methods: Medicine 2.0

“**Medicine 2.0** applications, services and tools are Web-based services for health care consumers, caregivers, patients, health professionals, and biomedical researchers, that use Web 2.0 technologies and/or semantic web and virtual-reality tools, to enable and facilitate specifically

- social networking,
- participation,
- apomediation,
- collaboration, and
- openness

within and between these user groups” (Eysenbach 2008).



# Findings: Structure and Language

## Titles

- A with B in C: a case report/a case series  
*Jejunal atresia presenting with mesenteric cyst in a neonate: a case report (CJ 1/1/57)*
- indication of exceptionality  
*rare association, unusual cause, severe hepatitis*
- complex condensation  
*Thumb reconstruction by grafting skeletonized amputated phalanges and soft tissue cover – A new technique: A case report (CJ 1/1/22)*





# Findings: Structure and Language

## **Introductions** (CARS model by Swales 2004 )

**Move 1:** Establishing a territory

*usually associated with, widely used for...*

**Move 2:** Establishing a niche

*a rare condition, an uncommon location*

**Move 3:** Presenting the present work (optional)

*Here we report a case of...*

# Findings: Structure and Language

## Case Presentations (Problem-Solution Pattern by Hoey 2001)

### **Move 4:** Presenting a problem

*A 5 month old infant...; Patient denied...*

### **Move 5:** Investigating the problem

*A CT scan revealed...; An MRI scan was performed...*

### **Move 6:** Addressing the problem

*The patient was treated with...*

### **Move 7:** Evaluating the outcome

*He made a full recovery...; Patient died...*



# Findings: Structure and Language

## Sample Move Analysis: Case Presentation (CJ 2/1/7176)

### MOVE 4: Presenting a problem

A **30-year-old** otherwise fit and healthy **white British male was referred to** our clinic by his general practitioner with an ingrowing toenail of his right hallux from which he had suffered since childhood.

### MOVE 5: Investigating the problem

**Examination** of the foot **revealed no evidence** of infection or cellulitis. The hallux nail was in-growing on both its edges, and there was firm granulation tissue palpable at the lateral nail fold. The adjacent interphalangeal joint **was normal** to examination. A **radiograph** of the foot **revealed no evidence** of osteomyelitis.

### MOVE 6: Addressing the problem

**The patient underwent** a total excision of the toe nail. At operation a small bony cutaneous lump underlying the nail bed **was excised** in toto and **sent for** histopathological examination. This **revealed** a well circumscribed dermal nodule of mature lamellar bone containing marrow spaces, which represents osteoma cutis (Figure 1).

### MOVE 7: Evaluating the outcome

At four week follow up the nail bed **was healing well** and **there was no evidence** of any residual cutaneous lesions.





# Findings: Structure and Language

## Discussions

**Move 8:** Presenting background information  
*a common feature of this syndrome*

**Move 9:** Reviewing literature pertinent to the case  
*no reported cases*

**Move 10:** Summarizing the case  
*This case appears to be...*

**Move 11:** Drawing implications  
*The case demonstrates the importance...*

# Findings: Structure and Language

## Conclusions (optional)

**Move 12:** Summarizing the case report  
*a newly-established therapy*

**Move 13:** Summarizing implications of the case report  
*This case highlights the need...*





# Findings: Structure and Language

The use of conventionalized and formulaic language especially in the case presentation sections (biomedical rhetoric):

- *on examination*
- *CT scan revealed/demonstrated/showed*
- *patient denied*
- *within normal limits*
- *was positive for/negative for/unremarkable*
- *a 50-year-old man/woman*



# Findings: Context

## Impact of Medicine 2.0

on patients:

- social networking – personal experience with treatment, e.g. *PatientsLikeMe*
- participation – active involvement of patients
- apomediation – online sources of medical information, not only from doctors
- collaboration – different groups working together
- openness – open-access publishing





# Findings: Context

## Impact of Medicine 2.0

on the genre of medical case reports:

- the *Patient's Perspective* section
- information is open-access (not only experts)
- different modes of communication (audio/video)
- online published report can be commented on and updated
- collaboration of doctors with other health-care professionals, family members, etc.
- databases and networks as important tools for clinical decision-making

# Findings: Context

## Patient as a Co-Author (JMCR 4/1/181)

### Patient's perspective

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I write the following to provide assistance to the case report written about my operation. I have no medical knowledge or background so I only write from my own perspective and experience.

Before the morning I was taken to hospital I had never experienced abdominal pains, either related to my menstrual cycle or other. I had never been submitted to hospital for any previous health concerns. It was the summer after my first year at University, I was working as a full time Assistant Director, working long hours, the job was very active and predominantly outdoors (it was an outdoor production). I was 19 years old. At the time of being submitted to hospital I was on the third day of my period, at this age I experienced regular monthly periods lasting seven days. I awoke very early on that morning with no pain. I then went back to sleep but was awoken with a severe pain in my abdomen. I also felt very hot, dizzy and clammy. I tried to recover by taking a cool bath, drinking water and then lying flat on the floor breathing deeply. This did not help and the pain began to increase to an unbearable level. An ambulance was called for, whilst waiting for them I continued to lie flat on the cool bathroom floor with the windows open.

When the ambulance arrived the ambulance woman asked if I was possibly pregnant. I said no, there was no possibility of this. They then made the presumption that it was due to drug or

# Conclusion

## MCRs of 21st century

- the conventionalized language persists: bio-medical rhetoric (depersonalization, omission of agents, factive and non-factive predicators, metonymic expressions)

### **HOWEVER**

- Medicine 2.0: empowers patients, opens information, encourages collaboration, improves communication → all of these lead to better health-care



# Conclusion: Pedagogical Applications

## Pedagogical Applications in:

- English for Medical Purposes
- academic writing (publishing case reports)
- professional writing (case histories)
- professional speaking (oral case presentations)

**Do we teach conventionalized language or do we criticize it and offer alternatives?**

- in EFL: students must first learn the rules to be able to break them later.

# Conclusion: Pedagogical Applications

- analyzing case reports or sections (e.g., introductions) using move analysis
- encouraging students to include moves in their writing that they would not make by themselves
- matching moves with the corresponding parts of a text
- putting a text together based on the most appropriate sequence of moves (problem-solution)



# Conclusions

## Areas for Further Research:

- cross-specialty differences  
(case reports in radiography vs. surgery)
- cross-disciplinary differences  
(medical vs. legal case reports)
- cross-cultural differences  
(case reports in English vs. Czech)
- the use of ethnographic methods  
(almost impossible for EFL applied linguists)



# Thank you for your attention.

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"I'M THE ONE WITH THE MEDICAL DEGREE, I'LL DETERMINE  
IF YOUR BACK IS BOTHERING YOU, OR NOT..."