A KNOWLEDGE MANAGEMENT SYSTEM FOR GENERAL PRACTICE / FAMILY MEDICINE

HOW DOES IT WORK PRACTICALLY?

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Objectives of workshop:

To find methods to facilitate indexing and to improve performance in information storage and retrieval of unpublished GP/FM scientific work

• Have a reflexion about possible tools:

  1. What tools could you use to make this possible (existing or fantasized tool)

  2. Why this is difficult
Method (groups 30 mn)

• Brief presentation of the topic
• Participants will exchange in small groups and they must focus on 2 things:

1. **What tools could you use to make this possible (existing or fantasized tool)**

2. **Why this is difficult**

• Restitution in large group will follow, and experts will presents
We are using an abstract of a work presented at WONCA VDGM 2018

Ana Luisa Marcelino, Cátia Barão, Ana Isabel Silva, Candida Teixeira, Mariana Carvalho, Sara Santos. Quality improvement in antibiotic prescription for uncomplicated lower urinary tract infections. WONCA VDGM Porto, 2018

Easy to find back on the Internet enough to type VDGM and the title

But how gather similar presentations in Family medicine?

• First step: try with usual tool to find back the same issues
• Second step: learn to identify concepts at stake (indexing)
• Third step: try to identify concepts in one example using the two sheets and the HeTOP web site
• Fourth step: back to the whole group to show the indexing
• Fifth step: demonstration of the power of the search using Q-codes on HeTOP
First step: usual tools

- Google: input VDGM + Title =
- Google scholar: input title in
- MeSH thesaurus: 95 citations but not relevant to GP/FM
- Adding general practice: 0 citations
Identification of the concepts at stake

What are they talking about?

Focus on objective, population and methods, not on results
Title: Overdoing in community medicine: a case report coping with a renal incidentaloma.

Keywords: overdoing; overdiagnosis; overtreatment; renal incidentaloma.

Abstract: Case presentation: A 71 years-old lady with a 4 years history of NIDDM discovered on routine lab tests and a well-balanced hypothyroidism. No other findings on history, anamnesis or physical examination. Laboratory exam was normal except for HbA1c and glucose values. After 2 years of balanced diabetes using oral medications only, her HbA1c starts to rise. She was put on insulin, but remained unbalanced. Upon her request, she was referred to an endocrinologist who suggested performing an abdominal CT to rule out pancreatic involvement that might explain the new-onset treatment-resistant diabetes. Her abdominal CT showed no pancreatic or other abdominal organs pathologies, apart from a 1.5mm non homogenous, irregular solid process on the cortex of the right kidney.

Source: Tom Axelrod. Overdoing in community medicine: a case report coping with a renal incidentaloma. VDGM Congress, Porto, 2018
Third step: Exercise: Try to identify concepts

To understand the principle of indexing
To identify concepts at stake
To have a first contact with 3CGP and indexing process

**Core Content Classification in GP/FM**

3CGP = ICPC + Q-Codes = clinical and contextual issues

[https://www.hetop.eu/3CGP](https://www.hetop.eu/3CGP)

Using two abstracts
Using the two double A4 pages
Try also the web site using the code found in the double sheet
Title: Quality improvement in antibiotic prescription for uncomplicated lower urinary tract infections.

Keywords: low urinary tract infections.

Introduction: Lower urinary tract infections (LUTIs) are the 2nd most common bacterial infection in the community and the most common bacterial agent is Escherichia coli which has a high resistance rate to quinolones and sulfamethoxazole/trimethoprim. Portuguese national guidelines for primary healthcare are: nitrofurantoin, fosfomycin and amoxicillin/clavulanic acid.

Objective: Assess guideline adherence for the empirical treatment of uncomplicated LUTI in primary care and the impact in prescription quality after local intervention.

Methods: We establish 3 groups to study, group A before intervention, group B studied 10 days after intervention (awareness and information of primary care doctors) and group C was study 3 months after intervention. The sample included patients from 5 primary healthcare units in the westcoast region of Portugal diagnosed with uncomplicated LUTI. The search was made based on the electronic medical record system on ICPC-2 (International Classification of Primary Care).

Discussion: The sample size was similar between the three groups. Fosfomycin was the most prescribed antibiotic drug. The rate of guideline adherence for the empirical treatment of uncomplicated LUTI was high in all 3 groups (Group A: 81.8%; Group B: 79.1%; Group C: 76.4%). After the intervention, the prescription rate of ciprofloxacin decreased, and this effect was maintained after 3 months. On the other hand, the prescription rate of other antibiotics (other than the first line drugs) increased. The study had some limitations, such as: was not possible to determine with certainty if the treatment prescribed was in fact empirical or either directed by results of antimicrobial susceptibility testing; study period might have been short; we were not able to assess the efficacy of the antibiotic treatment.

Conclusion: Guideline adherence for the empirical treatment of uncomplicated LUTI is high and our results were superior to those described by similar national studies. The local intervention had no impact toward a higher guideline adherence. Ciprofloxacin and other antibiotics continue to be significantly prescribed.
Title: Discovering polygamy through infertility - a case report.

Keywords: polygamy; infertility; family medicine.

Introduction: Foreign patients present many challenges in our daily clinical practice. The religious, cultural and social contexts often differ from our reality and the language barrier is one of the biggest struggles. The project of parenthood is held by many people and the importance that each individual attributes to parenthood may be influenced by many factors, including cultural ones. Infertility is defined by the World Health Organization as a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after twelve months or more of unprotected sexual intercourse.

Goals: With this case-report of a couple with infertility the authors aim to highlight difficulties in the clinical practice with foreign patients, particularly with patients from different cultural contexts and when there is a language barrier; to evidence the role of the family doctor in the foundation of a relationship of clinical proximity; and to contextualize polygamy in the Portuguese law.

Case description: This is a couple from an African country: T., female, 37 years old (now 45) and M., male, 42 years old (now 50). Muslim religion. They began their follow up at our health unit in 2009. Since the first consultations there were communication difficulties: T. did not speak Portuguese (only an African dialect) and M. spoke some Portuguese and translated. In the first appointment with the couple, they intended to continue the infertility study they initiated in private practice. They were married for 20 years, had no children of their own and denied having children with other partners. They had no medical history other than infertility (reported 10 years before) and obesity. With the years, the language barrier diminished. Eight years and many myths, treatments, negative pregnancy tests, appointments and a perimenopausal amenorrhea later, T. continues to pursue the idea of getting pregnant and having a child. And at this stage, digging deeper, we discover that M. practices polygamy and has married two other women, with one of whom he has a child.

Quality improvement in antibiotic prescription for uncomplicated lower urinary tract infections

Discovering polygamy through infertility - a case report

Imagine you have assisted to those presentations. Now a friend is asking you; what they have talked about?

You will attempt to answer by addressing those points

1. Who is the target population?
2. What is the health problem if any?
3. What is the research domain?
4. How the answer has been searched for?

Concentrate on the essential, skip discussion and conclusion
You receive a sheet of paper with the texts to analyse

• You are the indexers.

• You are in charge to describe the content as precisely as possible, preferably with a term found in the two A4 pages distributed

• First look to the main concepts at stake

• Then search on the two tables you have received
  • A list of clinical issues: ICPC
  • A list of contextual issues: Q-Codes
Please split in groups of 4 to 5 people

- You have received a sheet with two exercises
- Use the two-fold sheet with Q-Codes and ICPC
- and https://hetop.eu/Q
- Try to answer to the four questions

Twenty minutes

Listening to the proposals

1. Who is the target population?
2. What is the health problem if any?
3. What is the research domain?
4. How the answer has been searched for?
• **Title**: Quality improvement in antibiotic prescription for uncomplicated lower urinary tract infections.

• **Keywords**: low urinary tract infections.

• **Introduction**: Lower urinary tract infections (LUTIs) are the 2nd most common bacterial infection in the community and the most common bacterial agent is Escherichia coli which has a high resistance rate to quinolones and sulfamethoxazole/trimethoprim. Portuguese national guidelines for primary healthcare are: nitrofurantoin, fosfomycin and amoxicillin/clavulanic acid.

• **Objective**: Assess guideline adherence for the empirical treatment of uncomplicated LUTI in primary care and the impact in prescription quality after local intervention.

• **Methods**: We established 3 groups to study, group A before intervention, group B studied 10 days after intervention (awareness and information of primary care doctors) and group C was studied 3 months after intervention. The sample included patients from 5 primary healthcare units in the west coast region of Portugal diagnosed with uncomplicated LUTI. The search was made based on the electronic medical record system on ICPC-2 (International Classification of Primary Care).

Example of answer; exercise 1

- **Title**: Quality improvement in antibiotic prescription for uncomplicated lower urinary tract infections.
- **Keywords**: low urinary tract infections.

1. Who is the target population?
2. What is the health problem if any? lower urinary tract infection
3. What is the research domain? Quality / Prescription
4. How the answer has been searched for?
Answer follow.

• **Introduction**: Lower urinary tract infections (LUTIs) are the 2nd most common bacterial infection in the community and the most common bacterial agent is Escherichia coli which has a high resistance rate to quinolones and sulfamethoxazole/trimethoprim. Portuguese national guidelines for primary healthcare are: nitrofurantoin, fosfomycin and amoxicillin/clavulanic acid.

• **Objective**: Assess guideline adherence for the empirical treatment of uncomplicated LUTI in primary care and the impact in prescription quality after local intervention

1. Who is the target population? *primary healthcare*
2. What is the health problem if any? *lower urinary tract infection*
3. What is the research domain? *Quality / Prescription / guidelines*
4. How the answer has been searched for? *after local intervention*
• **Methods**: we establish 3 groups to study, group A before intervention, group B studied 10 days after intervention (awareness and information of primary care doctors) and group C was studied 3 months after intervention. The sample included patients from 5 primary healthcare units in the west coast region of Portugal diagnosed with uncomplicated LUTI. The search was made based on the electronic medical record system on ICPC-2 (International Classification of Primary Care).

1. Who is the target population of the study? primary healthcare / primary care doctors
2. What is the health problem if any? lower urinary tract infection
3. What is the research domain? Quality / Prescription / guidelines
4. How the answer has been searched for? before-after local intervention / EMRs / ICPC
Looking for coded answers

1. Who is the target population of the study? 
   primary healthcare

2. What is the health problem if any? 
   lower urinary tract infection

3. What is the research domain? 
   Quality / Prescription / guidelines

4. How the answer has been searched for? before-after local intervention / EMRs / ICPC

QS1 Primary care setting
ICPC : U71 lower urinary tract infection
QP3 quality of health care
QD325 prescribing behaviour
QT32 guideline
QR325 intervention study
QS13 health information management
QR51 taxonomy
Introduction: Foreign patients present many challenges in our daily clinical practice. The religious, cultural and social contexts often differ from our reality and the language barrier is one of the biggest struggles. The project of parenthood is held by many people and the importance that each individual attributes to parenthood may be influenced by many factors, including cultural ones. Infertility is defined by the World Health Organization as a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after twelve months or more of unprotected sexual intercourse.

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Case description: This is a couple from an African country: T., female, 37 years old (now 45) and M., male, 42 years old (now 50). Muslim religion. They began their follow up at our health unit in 2009. Since the first consultations there were communication difficulties: T. did not speak Portuguese (only an African dialect) and M. spoke some Portuguese and translated. In the first appointment with the couple, they intended to continue the infertility study they initiated in private practice. They were married for 20 years, had no children of their own and denied having children with other partners. They had no medical history other than infertility (reported 10 years before) and obesity. With the years, the language barrier diminished. Eight years and many myths, treatments, negative pregnancy tests, appointments and a perimenopausal amenorrhea later, T. continues to pursue the idea of getting pregnant and having a child. And at this stage, digging deeper, we discover that M. practices polygamy and has married two other women, with one of whom he has a child.

Source; Tatiana Macedo Pinto, Margarida Pereira, Mariana Moura Relvas, Maria do Carmo Gonçalves. Discovering polygamy through infertility - a case report. WONCA VDGM, Porto 2018.
Example of answer; exercise 2

**Title**: Discovering polygamy through infertility - a case report

**Keywords**: polygamy; infertility; family medicine

1. Who is the target population?
2. What is the health problem if any? Infertility female
3. What is the research domain? Family medicine/ Patient culture
4. How the answer has been searched for? case report
**Introduction**: Foreign patients present many challenges in our daily clinical practice. The religious, cultural and social contexts often differ from our reality and the language barrier is one of the biggest struggles. The project of parenthood is held by many people and the importance that each individual attributes to parenthood may be influenced by many factors, including cultural ones. Infertility is defined by the World Health Organization as a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after twelve months or more of unprotected sexual intercourse.

**Objective**: With this case-report of a couple with infertility the authors aim to highlight difficulties in the clinical practice with foreign patients, particularly with patients from different cultural contexts and when there is a language barrier; to evidence the role of the family doctor in the foundation of a relationship of clinical proximity; and to contextualize polygamy in the Portuguese law.

1. Who is the target population? patients from different cultural contexts /primary healthcare
2. What is the health problem if any? Infertility
3. What is the research domain? Patient culture / relationships
4. How the answer has been searched for? Case report
Case description: This is a couple from an African country: T., female, 37 years old (now 45) and M., male, 42 years old (now 50). Muslim religion. They began their follow up at our health unit in 2009. Since the first consultations there were communication difficulties: T. did not speak Portuguese (only an African dialect) and M. spoke some Portuguese and translated. In the first appointment with the couple, they intended to continue the infertility study they initiated in private practice. They were married for 20 years, had no children of their own and denied having children with other partners. They had no medical history other than infertility (reported 10 years before) and obesity. With the years, the language barrier diminished. Eight years and many myths, treatments, negative pregnancy tests, appointments and a perimenopausal amenorrhea later, T. continues to pursue the idea of getting pregnant and having a child. And at this stage, digging deeper, we discover that M. practices polygamy and has married two other women, with one of whom he has a child.

1. Who is the target population? patients from different cultural context / primary healthcare
2. What is the health problem if any? Infertility
3. What is the research domain? Patient culture / relationship / communication
4. How the answer has been searched for? Case report
Looking for coded answers

1. Who is the target population of the study?
   patients from different cultural context /primary healthcare

2. What is the health problem if any?
   infertility

3. What is the research domain?
   Patient culture / Relationship / communication

4. How the answer has been searched for?
   Case report

QS1  Primary care setting
QC32 Refugees & migrants

ICPC : W15 Infertility/Subfertility female

QP44 Patient cultural background
ICPC: Z04 Social-cultural problem
QP23 Cultural competency
QD12 Doctor-patient relationships
QD123 Communication

QR 36 Case report
Now using those keywords to look for literature

access to a complex terminological record for each concept with an access to PubMed

Using the multiterminological server of the University hospital of Rouen, France
Exploring HeTOP:

- HeTOP is a multilingual multiterminological resource
- HeTOP could be used as a search tool for bibliography on PubMed and LiSSa
- Each item of knowledge in HeTOP is expressed in OWL and fit for automatic computer processing (Natural Language Processing)
- Knowledge in HeTOP is used to automatically to explore resources in text or document of EMRs or Hospital based data, only in French
- Automatic analysis of content of congress will be possible (in French so far)

Final step: using HeTOP to find information

Exploring HeTOP: https://hetop.eu/3CGP
Example of use of 3CGP

Some slides from the full analysis of the whole VDGM 2018 congress (97 communications) available at:

https://orbi.uliege.be/handle/2268/217828
VDGM 2018  7 communications addressing ethical issues

Atlas.ti software
VDGM 2018  10 communications addressing Quality Assurance

Atlas.ti software
Figure 5 Clinical concepts addressed in the VDGM 2018 communications. 102 coding for 79 codes. (Expressed in % of ICPC-2 chapter)
Figure 6 Contextual concepts (380 coding) addressed in the 97 VDGM 2018 communications. Number of coding and % of Q-Codes domains.
Figure 1.73: Distribution of 755 ICPC codes in 1746 abstracts accepted (384 oral presentations and 1,362 posters) (SBMFC – Curitiba – 2017) Importance of A (prevention), P (psychological), T (metabolic and nutritional) & Z (social problems) in the themes discussed.
(Data: courtesy of Daniel Knupp, SBMFC)
Figure 1.74: Distribution of 3,424 Q-Codes in 1746 abstracts accepted (384 oral presentations and 1362 posters) (SBMFC – Curitiba – 2017). Scarcity of ethical themes (QE) and Environmental problems (QH).
(Data: courtesy of Daniel Knupp, SBMFC)
On sait que la médecine de famille et les soins de santé primaires (SSP) partagent les concepts de continuité, globalité et accessibilité des soins. Toutefois on a montré que les SSP concernent la structure des pratiques tandis que la médecine de famille concerne la gestion d’un métier bien qu’ils prônent tous deux la prise de décision partagée dans la relation médecin patient.
All the material of this workshop is available on

• http://3cgp.docpatient.net/

Thank you!

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Core content classification in General practice / Family Medicine