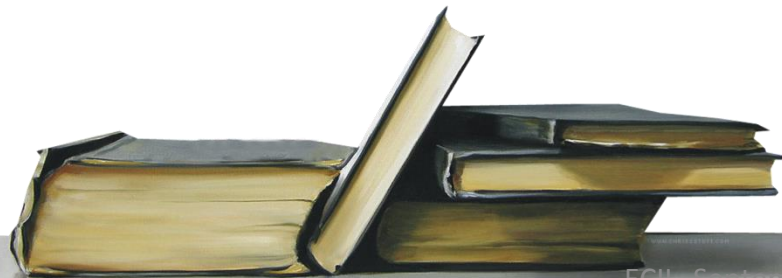




# Information horizons of Croatian physicians

**Kornelija Petr Balog and Ivana Turk**





# Workplace information literacy

- IL in educational context
  - Structured, organized, authorized bodies of knowledge
  - Canonical, objective and explicit knowledge
- IL at workplace
  - Information landscape – messy and complex
  - Canonical and non-canonical sources (e.g. experience, tacit knowledge)
  - Can be formal, but more often – informal and happens at the moment of practice



# Pilot-study

- Goal:
  - To investigate the information horizons of Croatian FM physicians and clinicians
- Sample:
  - 10 physicians:
    - 5 family medicine (FM) physicians and 5 clinicians
    - 5 respondents from 2015 and 5 from 2017
    - 5 respondents under age 40, 5 over 40

# Sample

Code	Age	Gender	Specialization	Graduation	Years of experience
C1	45	F	clinical and anatomic pathology	1996	15
C2	50	M	neuroradiology	1989	23
C3	36	F	radiology	2003	12
C4	36	F	gynecology and obstetrics	2003	12
C5	34	M	nuclear medicine	2007	10
FM1	59	F	family medicine	1982	31
FM2	34	F	family medicine	2008	9
FM3	32	F	family medicine	2008	7
FM4	51	F	family medicine	1991	25
FM5	54	F	family medicine	1982	25



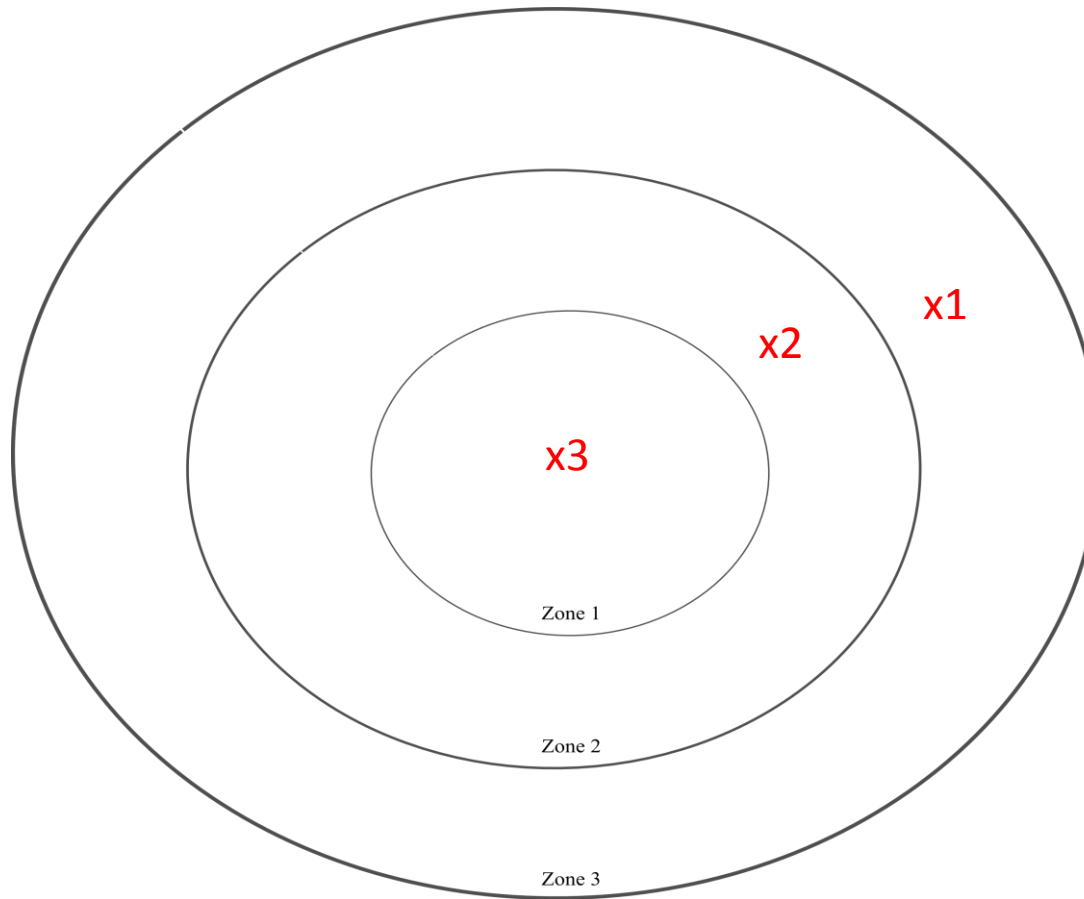
- Research questions
  - Is there a difference in the number of information sources used for the purposes of performing work tasks by our two respondent groups?
  - Is there a difference between the two groups in positioning information sources (i.e. printed and online) and interpersonal sources (e.g. colleagues) on their information horizon (IH) maps?
  - Which sources are more preferred by FM physicians and which by clinicians?
  - Is there a difference in the use of information sources between respondents investigated in 2015 and those investigated in 2017?



# Methodology

- Information horizons
  - Evolving theoretical framework (D. Sonnenwald, 1999)
  - Positioning of information sources (according to their significance and preference) on individual mental maps
- Map-drawing technique (Savolainen and Kari, 2004)
- Follow-up interview
  - (explanation of mental maps and sources used/not used, preferred/avoided, in which situations, etc.)

# Mental map and 3 zones



Weighting of  
sources



# Results

- 59 unique sources and channels
  - FM – 27; clinicians – 32
- Zones:
  - Z1 – 27 sources (weight 81)
    - FM – 13; clinicians - 14
  - Z2 – 16 sources (weight 32)
    - FM – 7; clinicians - 9
  - Z3 – 16 sources (weight 16)
    - FM – 7; clinicians - 9



# Categories of information sources

## Categories of information sources in actors' mental maps

Group	Sources
<b>Interpersonal sources</b>	Yahoo (colleagues); colleagues – peers; subject specialists; colleagues not connected to work; congresses and meetings; e-mail communication with patients; Viber (communication with colleagues)
<b>Library</b>	Librarians
<b>Reviewed online sources</b>	PubMed; Pathology Outlines; Medscape; Medline/PubMed; radiopaedia.org; Royal College of Obstetricians and Gynaecologists; UpToDate; journal Gynaecologia et Perinatologia; Portal of the Croatian Society for Gynecology and Obstetrics; ATA [American Thyroid Association] guidelines; EMedicine (Medscape); Internet – professional online sources and peer-reviewed journals; Internet – education; HALMED [Agency of Medicinal Product and Medical Devices of Croatia]; Cochrane; Collegium Antropologicum; Medicus (Croatian medical journal)
<b>Non-reviewed online sources</b>	Google; Internet – other sources; Internet – popular sources; Croatian Health Insurance Fund (CHIF)
<b>Professional literature</b>	books (other publications); scientific articles; older professional literature; medical textbooks (especially MSD manual); medical journals
<b>Pharmaceutical sources</b>	leaflets, pharmaceutical companies and brochures, pharmaceutical representatives



# Most frequently mentioned sources by zones

- Z1
  - PubMed (6x), the Internet (6x), **colleagues** (5x), books/professional literature (2x), HALMED (Agency of Medicinal Product and Medical Devices of Croatia) (2x), the Croatian Health Insurance Fund (CHIF)
- Z2
  - books/professional literature (3x), Medscape (2x), UpToDate database (2x)
- Z3
  - **colleagues** (4x), pharmaceutical materials (3x), books/professional literature (2x)

# Summary table of weighted sources per respondent group

Category	Clinicians				FM physicians				No	Total weight
	Z1	Z2	Z3	Weight	Z1	Z2	Z3	Weight		
Professional literature	1	3		9	1	1	3	8	9	17
Reviewed online sources	8	6	1	37	5	3	2	23	25	60
Interpersonal sources	4		5	17	3	2		13	14	30
Non-reviewed online sources	2		1	7	3			9	6	16
Library			1	1					1	1
Pharmaceutical sources			1	1		1	2	4	4	5
<b>Total:</b>	15	9	9	72	12	6	7	57	59	129



# Follow-up interviews

- FM physicians
  - Sources that meet their most frequent professional needs (Z1): communication with patients, checking on drugs (HALMED), administrative regulations, relicencing
- Clinicians
  - Z1: sources required for diagnosing and solving medical problems → mostly reviewed online medical sources and colleagues; validity of results/medical solutions of utmost importance



# Difference 2015 vs 2017

- 2017
  - FM utilized a new communication channel → Viber messaging
  - Purpose: consultation with peers (mostly regarding administrative regulations and patient rights)



# Conclusions

- Research questions:
  - Clinicians used more sources (33) than FM (25)
  - Clinicians – mostly focused on reviewed online sources (w37), interpersonal sources (w17)
  - FM – also mostly reviewed online sources (w23) and interpersonal sources (w13), but also non-reviewed online (w9) and pharmaceutical sources (w4)
  - Professional literature (mostly textbooks) – equally clinicians (4 sources, w9) and FM (5 sources, w8)
- (medical) libraries – not a part of IH of our respondents (!)
  - Z3, junior physician



- Junior physicians
  - more information sources in general (36 vs 24), consult more often colleagues (w16 vs w5), rely more heavily on textbooks (w11 vs w3)
- Senior physicians
  - use the Internet more often (w12 vs w6)
- Workplace information gathering and workplace knowledge of Croatian physicians from Osijek (Eastern Croatia)
  - Sometimes use of canonical (e.g. textbooks) but more often non-canonical sources (e.g. experience, colleagues)
  - Information seeking – mostly at work, rarely at home, almost never in the library



Thank you for your attention!

