

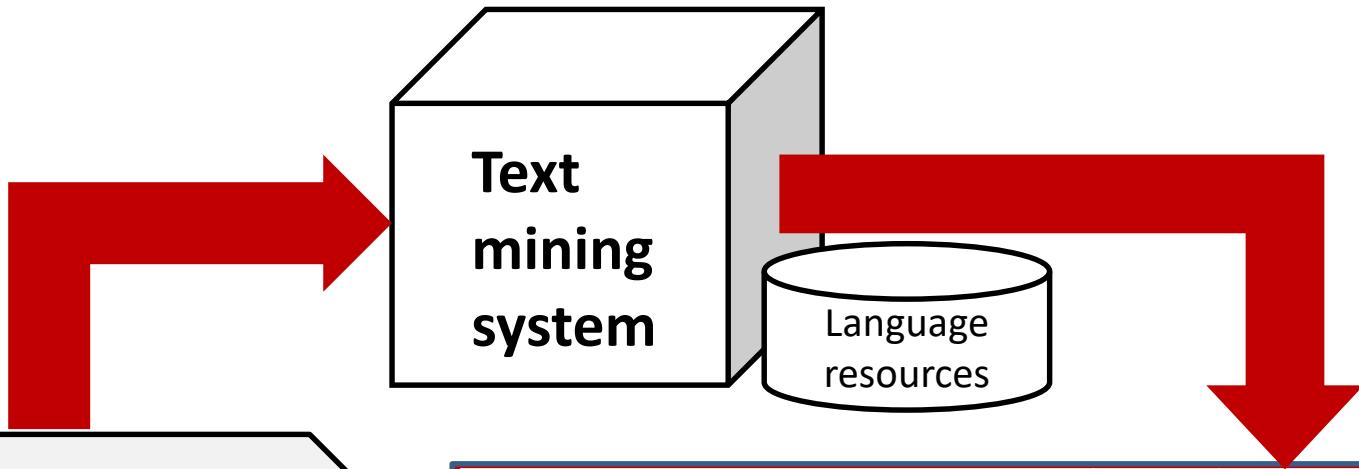
Panel: Social Media as catalyst for  
Connected Health, hype or hope?  
June 27, 2016

# Perspectives from IMIA Working Group "LaMB – Language and Meaning in Biomedicine"

**Stefan Schulz**  
Medical University of Graz, Austria  
co-chair LaMB WG

# Working Group LaMB

- Topic: Language and Meaning in Biomedicine
- Founded in the 80ies as "Medical Concept Representation"
- Focus
  - Use and interpretation of language in
    - clinical documentation
    - biomedical research
  - Systems that provide standardised meaning
    - terminologies
    - classifications
    - ontologies



*St.p. TE eines exulc.  
sek.knot.SSM li US  
dors. Level IV, 2,4mm  
Tumordurchm.  
Sentinnel LK ing. li.  
tumorfr.*

Code (e.g. SNOMED CT)	Value	Context
254730000  Superficial spreading malignant melanoma of skin		392521001  History of
301889008  Excision of malignant skin tumor		392521001  History of
47224004  Skin of posterior surface of lower leg	7771000  Left	
81827009  Diameter	2.41	
258673006  millimeter		
258403002  Lymph node level IV		
94339008  Secondary malignant neoplasm of inguinal lymph nodes		15240007  Current 2667000  Absent

# Barriers in interpreting clinical language

- Telegram style
  - "*St.p. TE eines exulc. sek.knot.SSM li US dors. Level IV, 2,4mm Tumordurchm. Sentinel LK ing. li. tumorfr.*"
- Spelling / typing errors
  - Simvastatin Simvastat Sinvastatin Simvastastin Simvastain Simvastad Simbastatin Simavstatin Simavastatin Simastatin Symvastatin Simvastation Simvaststin Simvatatin Simvatin Simvatstain Simvstatin (drug names in discharge summaries)
- Synonyms, Variants:
  - *MI, Myocardial infarction, Heart attack*
- Ambiguities
  - RTA = *renal tubular acidosis*
  - RTA = *road traffic accident*

# Barriers in interpreting patients' language in social networks

Wassereinlagerungen, **Trombose**,  
Verdacht daruf das ich vielleicht **etwas**  
**mit der Bandscheibe** habe, Verdacht auf  
**Herzinsufisienz (Herzschwäsche)**.

stoy tomando **zolof**  
para ataques de  
**anciedad** y  
miedo.puedo  
combinarla con **st**  
**jonh work?**

la dernier fois que j'ai  
manger un morceaux  
de Durian j'ai été  
**malade à crevé 3j**  
**(crise de fois et**  
méchante **nosé** avec  
de la fièvre)

Ontem denoite e hoje  
demantha **fui aos pes** e  
fiz fezes verde-  
musgo...isso e muto  
grave??ou e normal??

I have been to a clinic  
3 times and they've  
ruled out various **stds**  
**(clamydia, gonnorea,**  
**Hep B+C, Hiv)** and  
bladder and tract  
infections.

# Barriers in interpreting patients' language in social networks

- Misspellings of key language elements
  - expert terms: diseases, drugs, labs, organisms
- Mistyping / misspelling of common language terms, especially when
  - low literacy
  - writing in second language
- Simplified writing
  - no diacritics
  - no capitalization
- Colloquial speech / slang
- Use of regional dialects

# LaMB WG: Challenges for connecting patient and clinicians' discourse

- Building of large corpora of patient language (postings and queries)
  - Automated term acquisition
  - Study of language phenomena
- Consumer health vocabularies
  - linkage with standard terminologies
- Improved user interfaces
  - spelling support
- Cooperation with patient associations

# Contact

- Stefan Schulz  
Institut für Medizinische  
Informatik, Statistik und  
Dokumentation  
[stefan.schulz@medunigraz.at](mailto:stefan.schulz@medunigraz.at)

