Q-Codes
From Dunedin 2007 to Hyderabad 2015

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I speak here only of the Q-Codes

- The full project is called 3CGP (for Core Content Classification in GP/FM)
- A mix of ICPC and Q-Codes
- ICPC for clinical issues
- Q-Codes for GP/FM main issue in management
- Gaetan Kerdelhue (Terminologist - Rouen) has worked on MeSH / ICPC mapping
- Please see http://docpatient.net/3CGP
Discovering 3CGP (ICPC + Q-Codes) / Q-Codes story

Q-Codes story

In memoriam Prof. Dr. H. Lamberts († 27 December 2008)

Core Content Classification in General Practice Family medicine is a system of classification mixing the International Classification of Primary Care and the Q-Codes.

At the Department of General Practice, directed by the late Prof. Dr. Henk Lamberts, University of Amsterdam, in the 80’s, the burden of reading medical journals specific to general practice was devoted to teachers and assistants in the department. Articles relevant to symptoms, process and diagnoses (ie clinical items) were indexed by ICPC, the International classification of Primary Care and non-clinical subjects were by Q-Codes. Using the letter Q, available in ICPC, Prof. Henk Lamberts had opened this new category. This was before the Internet, before Medline become available on CD Rom. To our knowledge this list Q-Codes has never been published but a copy, taken on the tables of the library of the department in 1987, has been preserved. We see in Figure 1 the first list of Q-Codes proposed by Prof. H. Lamberts, also linchpin of development of ICPC in the Wonca International Classification Committee, the Wonca working group in classification field.

```
Q0 Care process (patient linked )
Q1 Care process (not patient linked )
Q3 Support task]
Q4 Personal functioning
Q5 Patient’s categories
Q6 Research
Q7 Teaching
```

Figure 1 Q-CODES Amsterdam (+/- 1987)
Dep of gen practice. Prof Lamberts
A table of content fort GP/FM?

- GP/FM definitions exists
- Also numerous textbooks
  - All with more or less the same clinical items
  - And non-clinical items
  - They are all different
- Wonca Europe has 20,000 abstracts online
  - Without indexation system
Elaboration of an authority list

- Qualitative analysis of 1600 abstracts in GP/FM
- Progressively from 2007 to 2015
- Concepts identification
- In computer sciences; **Text Classification**
- This is also done by machines: NLP and ontologies
I was willing to know the content of my job

- 183 concepts
- Some missing
- 8 categories and one categorie « other »
- 7 languages; en / fr / es / pt / nl / vn / tr (soon Italian ?)
I have been able to study their terminological and conceptual content

- HETOP Interface ([www.hetop.eu](http://www.hetop.eu))
- Database graphic interface DBGUI
- Automatic and curated mappings to more than 50 Hetop terminologies
- Identification of MeSH (if any and Entry terms
- Search for conceptual content
- Search for Full Free Access publications
- Correspondances on Babbelnet & Dbpedia
- On year work
- Revision ongoing
- Project to map to DeCS (PAHO Sao Paulo)
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
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<tbody>
<tr>
<td>Origin ID</td>
<td>QT51</td>
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<tr>
<td>Preferred Label</td>
<td>sentinel network, red centinela, réseau sentinelle, rede sentinela</td>
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<tr>
<td>3-CGP entry term</td>
<td></td>
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<tr>
<td>CISMeF synonym</td>
<td></td>
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<tr>
<td>3-CGP acronym</td>
<td></td>
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<tr>
<td>3-CGP conceptual content</td>
<td>SENTINEL PRACTICE a general practice which undertakes to maintain surveillance of and report certain health problems such as adverse drug reactions or other notifiable health events. (Woncadic) Population Surveillance; Ongoing scrutiny of a population (general population, study population, target population, etc.), generally using methods distinguished by their practicability, uniformity, and frequently their rapidity, rather than by complete accuracy (MeSH) Sentinel Surveillance; Monitoring of rate of occurrence of specific conditions to assess the stability or change in health levels of a population. It is also the study of disease rates in a specific cohort such as in a geographic area or population subgroup to estimate trends in larger population. (From Last, B., &amp; Last, J. F. (2001). Last's dictionary of epidemiology. Oxford: Oxford University Press.)</td>
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<td>CISMeF acronym</td>
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Origin ID
QT51

Preferred Label
sentinel network

3-CGP conceptual content
- SENTINEL PRACTICE: A general practice which undertakes to maintain surveillance of and report certain health problems such as adverse drug reactions or other notifiable health events. (Woncadic)
- Population Surveillance: Ongoing scrutiny of a population (general population, study population, target population, etc.), generally using methods distinguished by their practicability, uniformity, and frequently their rapidity, rather than by complete accuracy. (MeSH)
- Sentinel Surveillance: Monitoring of rate of occurrence of specific conditions to assess the stability or change in health levels of a population. It is also the study of disease rates in a specific cohort such as in a geographic area or population subgroup to estimate trends in larger population. (From Last, Dictionary of Epidemiology, 2d ed) (MeSH)

Référence bibliographique

UMLS CUI
C0242791

BabelNet link
bn:00051975n

Wikipedia link
http://en.wikipedia.org/wiki/R%C3%A9seaux_Sentinelles

Wonca theme
### Terminologies selection

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<td>☐ Q-code (1)</td>
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#### Q-Codes

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<tr>
<th>Description</th>
<th>Hierarchies</th>
<th>Relations</th>
<th>Pub</th>
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<tr>
<td>Q Q-codes</td>
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<tr>
<td>☐ QC patient's category</td>
<td>☐ QD family doctor's issue</td>
<td>☐ QE medical ethics</td>
<td>☐ QH ecological hazard</td>
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<tr>
<td>☐ QO other</td>
<td>☐ QP patient issue</td>
<td>☐ QR research &amp; development</td>
<td>☐ QS structure of practice</td>
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<tr>
<td>☐ QT knowledge management in health care</td>
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</table>
Online sources

Abreviations

terminologies
online
an example
### QD34 multimorbidity

**Origin ID**

QD34

**Preferred Label**

multimorbidity

**3-CGP entry term**

multi-morbidity, polymorbidity

**3-CGP conceptual content**

**COMORBIDITY** other diseases or health problems in addition to that being studied or dealt with. (Woncadic)

Multimorbidity: is defined as any combination of chronic disease with at least one other disease (acute or chronic) or biopsychosocial factor (associated or not) or somatic risk factor. Any biopsychosocial factor, any risk factor, the social network, the burden of diseases, the health care consumption, and the patient’s coping strategies may function as modifiers (of the effects of multimorbidity). Multimorbidity may modify the health outcomes and lead to an increased disability or a decreased quality of life or frailty. (Le Reste et all 2013)

**Référence bibliographique**

http://bjgp.org/content/bjgp/24/141/251.full.pdf  

http://journals.plos.org/plosone/article?id=10.137  

Équation automatique pour multimorbidity

(("multimorbidity"[TW] OR "multi-morbidity"[TW] OR "polymorbidity"[TW]))

Équation automatique pour health issue management

QD34 Multimorbidity is narrow
QD32 Health issue management is very huge
Each Q-Code is link to one or many free full text publications
Each Q-Code linked to Babelnet (semantic terminology)

Multiple morbidities · Multimorbidities · Multimorbidity

Multiple morbidities or Multimorbidities is a term which means co-occurring diseases.

Traductions

Multiple morbidities, Multimorbidities, Multimorbidity
Each Q-Code linked to DBPedia (semantic terminology)

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<td>Multiple morbidities or Multimorbidities is a term which means co-occurring diseases. For example, a person could have two or more chronic illnesses.</td>
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All data available in Exell and OWL2

<table>
<thead>
<tr>
<th>Q-Codes</th>
<th>MeSH</th>
<th>citations</th>
<th>urls</th>
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On 500 abstracts analysed for CNGE 2013 et 2014

F-1 score 0.4
At least, I have a knowledge base

- Its own value (one observer, European centered – multiple bias)
- But the only Bottom up (precedences; FAMLY 1992 & GP LIT 1998)
- Which is attracting huge interest (Numerous translations)
- Undergraduate trainees in GP/FM are fond of
- Possibly evolutive
- Fit for NLP
- Projet of a book (for humans without Internet)
- And an ontology (for machines)
- That’s for 2017 (for my 70 bithday😊)
Numerous friends to acknowledge

- (be) Marc Van Meerbeek, Aswin Ittoo, Sebastien Rigaux, Robert Vander Stichele, Johan Brouns, Serdal Sanak
- (br) Gustavo Gusso, Raquel Cardoso, Arthur Treuherz, Hamilton Wagner, Armando Norman
- (nl) Kees van Boven
- (ar) Mariano Marino
- (ur) Miguel Pizanelli
- (fr) Stefan Darmoni, Julien Grosjean, Gaetan Kerdelhue, Laurent Letrilliart, Christian Simon
- (It) Elena Cardillo
- (us) Melissa Resnick
- (vn) Liem Than Vo
I miss you all!