ICPC step by step

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Conflict of interest : unfortunately none
International Classification of Primary Care is a tool for GP/FM
What is ICPC meant for?

- **Individually**: it provides a representation of
  - patient doctor interaction
  - doctor’s decision process
  - Along the time line

- **Collectively**: Allows statistical & epidemiological studies
Why a code?

Lowering of redundancy

From pencil to machine

Source: Claude Elwood Shannon (1916-2001)
Why a specific GP/FM classification?

- **ICPC (WONCA)**
  - Conceptual construct
  - About health problems
  - Patient centered
  - Structural basement

- **ICD (WHO)**
  - Historical construct
  - About diseases
  - Provider centered
  - Linear basement
ICPC : facts

WICC
- Since the 70’s
- 41 members
- 25 countries
- 5 continents
- Preparing ICPC-3

ICPC-2
- 18 languages
- Various licences
- Universal
- Endorsed by WHO
- Terminologies
### ICPC Story

<table>
<thead>
<tr>
<th>3 components coming from 3 gathered classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symptoms and complaints</strong></td>
</tr>
<tr>
<td><strong>Process</strong></td>
</tr>
<tr>
<td><strong>Diagnoses</strong></td>
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<table>
<thead>
<tr>
<th>R F E C</th>
<th>IC-Proces-PC</th>
</tr>
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<tbody>
<tr>
<td>Reason for Encounter Classification</td>
<td>International Classification of Process in Primary Care</td>
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<table>
<thead>
<tr>
<th>ICHPPC</th>
<th>ICHPPC-2-d</th>
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<tbody>
<tr>
<td>1974</td>
<td>International Classification of Health Problem in Primary Care 1 &amp; 2 edition, defined &amp;</td>
</tr>
<tr>
<td>1979</td>
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</table>

<table>
<thead>
<tr>
<th>17 chapters</th>
</tr>
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<tbody>
<tr>
<td>15 somatic</td>
</tr>
<tr>
<td>1 Psychologic</td>
</tr>
<tr>
<td>1 Social</td>
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</table>

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<thead>
<tr>
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<tbody>
<tr>
<td>ICPC</td>
<td>ICPC 2</td>
<td>ICPC 2 R</td>
<td></td>
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</tbody>
</table>

### Revision and inclusion of criteria and definitions

- 1974: ICHPPC
- 1979: ICHPPC-2-d
- 1981: IC-Proces-PC
- 1985: IC-Proces-PC
- 1983: ICPC 2
- 1998: ICPC 2
- 2005: ICPC 2 R

**ICPC 2 R**

Revised transcoding to ICD-10
ICPC orders the domain of primary care (family medicine)…
.. and allows the coding of encounters in an episode of care structure
ICPC-2 Bi-Axial structure

- 17 alpha-coded chapters based on body systems
- 7 identical components, with rubrics bearing a two-digit numeric code
<table>
<thead>
<tr>
<th>Code</th>
<th>Chapter Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>General and unspecified</td>
</tr>
<tr>
<td>B</td>
<td>Blood/bloodforming organs, lymphatics (spleen, bone marrow)</td>
</tr>
<tr>
<td>D</td>
<td>Digestive</td>
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<tr>
<td>F</td>
<td>Eye (Focal)</td>
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<tr>
<td>H</td>
<td>Ear (Hearing)</td>
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<tr>
<td>K</td>
<td>Circulatory</td>
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<tr>
<td>L</td>
<td>Musculoskeletal (Locomotion)</td>
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<tr>
<td>N</td>
<td>Neurological</td>
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<td>P</td>
<td>Psychological</td>
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<td>R</td>
<td>Respiratory</td>
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<td>S</td>
<td>Skin</td>
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<tr>
<td>T</td>
<td>Endocrine, metabolic and nutritional (Thyroid)</td>
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<tr>
<td>U</td>
<td>Urological</td>
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<tr>
<td>W</td>
<td>Pregnancy, child bearing, family planning (Women)</td>
</tr>
<tr>
<td>X</td>
<td>Female genital (X-chromosome)</td>
</tr>
<tr>
<td>Y</td>
<td>Male genital (Y-chromosome)</td>
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<tr>
<td>Z</td>
<td>Social problems</td>
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</tbody>
</table>
ICPC COMPONENTS
(standard, if possible, for all chapters)

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1</td>
<td>Symptoms and complaints</td>
</tr>
<tr>
<td>2</td>
<td>Diagnostic and preventive procedures</td>
</tr>
<tr>
<td>3</td>
<td>Treatment procedures, medication</td>
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<tr>
<td>4</td>
<td>Test results</td>
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<td>5</td>
<td>Administrative</td>
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<tr>
<td>6</td>
<td>Referral and other reasons for encounter</td>
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<tr>
<td>7</td>
<td>Diseases:</td>
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<tr>
<td></td>
<td>- infectious diseases</td>
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<td>- neoplasms</td>
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<td>- injuries</td>
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<td>- congenital anomalies</td>
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<td>- other specific diseases</td>
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Chapters and components together form a ‘chessboard’..
ICPC-2 Structure: Chapters

A - general
B - blood, immune system
D - digestive
F - eye
H - ear (hearing)
K - circulatory
L - musculoskeletal
N - neurological
P - psychological
R - respiratory
S - skin
T - metabolic, endocrine
U - urological
W - women’s health, pregnancy, family plan
X - female genital
Y - male genital
Z - social problems
## Structure of ICPC: chapters and components

<table>
<thead>
<tr>
<th>Components</th>
<th>A</th>
<th>B</th>
<th>D</th>
<th>F</th>
<th>H</th>
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<td>2. Diagnostic, screening</td>
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<td>3. Treatment procedures,</td>
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<td>7. Diagnoses, diseases</td>
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</tbody>
</table>

*Chapter List:*
- A. General
- B. Blood, blood formation
- D. Digestive
- F. Eye
- H. Ear
- K. Circulatory
- L. Musculoskeletal
- N. Neurological
- P. Psychologic
- R. Respiratory
- S. Skin
- T. Metabolic, endocrine, nutritional
- U. Urinary
- W. Pregnancy, childbearing, family planning
- X. Female genital
- Y. Male genital
- Z. Social
• Z25 ASSAULT & HARMFUL EVENT
  • bewitchment
  • bewitchment with pig's liver
  • damage from malediction
  • desecration of grave by witches
  • dupa spells
  • evil influence ns
  • harm from fighting
  • harm from troublesome spirits
  • harm from war
  • harm from witchcraft
  • harm from witches' familiars
  • makgoba bewitchment
  • negative condition ns
  • possession by spirits
  • possession by bad spirits
  • possession by evil spirits

Example of opening of an ICPC rubric

ICPC adaptability

- Paper & Pencil
- Electronic

1987

- Mnemotechnic
- Central coding

2007

- Terminologies
- Automatic coding
Studies

- Clinical: transversal or longitudinal
- Electronic patient record
- Huge database or personal one
- Quality assurance
- Documents indexing
..THE PATIENT’S PROBLEM LIST
(8 episodes of care that are considered important; see Glossary: problem list)

<table>
<thead>
<tr>
<th>ICPC</th>
<th>ICD10</th>
<th>Label</th>
<th>N</th>
<th>First</th>
<th>Last</th>
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<tbody>
<tr>
<td>Y85</td>
<td>N40</td>
<td>Benian prostatic hypertrophy</td>
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<td>I10</td>
<td>Hypertension uncomplicated</td>
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<td>20-08-2004</td>
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<td>T90</td>
<td>E11</td>
<td>Diabetes non-insulin dependent</td>
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<td>11-08-2004</td>
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<td>T93</td>
<td>E78.0</td>
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<td>15-04-1989</td>
<td>11-08-2004</td>
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<td>S77</td>
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<td>Malignant neoplasm of skin</td>
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<td>31-03-2003</td>
<td>29-03-2004</td>
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<td>K96</td>
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<td>Haemorrhoids</td>
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<td>Pneumonia</td>
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<td>24-02-1998</td>
<td>03-03-1998</td>
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<tr>
<td>A85</td>
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<td>Adverse effect medical agent</td>
<td>1</td>
<td>21-04-1995</td>
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</table>

From Transhis, Amsterdam
11 doctors in Belgium 1991,
Distribution of 4,000 contacts
Distribution of the 624 P diagnosis, same health centre

The workload in mental health in GP/FM

Liege, Belgium, on 10440 episodes, 1999
Comparison of chapter P diagnosis of two family doctors each in solo practice

A new insight in GP practice allowing quality assessment and alternative teaching process

Courtesy of Dr Joseph Huberty, Ciney, Belgium
200 Primary care practitioners in 5 years

Courtesy of Dr Alejandro Lopez, Buenos Aires
998 abstracts, ICPC chapters distribution

- A: 103
- B: 18
- C: 28
- D: 6
- E: 3
- F: 33
- G: 130
- H: 18
- J: 17
- K: 42
- L: 130
- M: 17
- N: 18
- O: 24
- P: 183
- Q: 120
- R: 10
- S: 179
- T: 18
- U: 24
- V: 24
- W: 7
- X: 7
- Y: 42
- Z: 42
EPISODES on the time line
Life and death of one patient

Conception-Réalisation

Dr Jacques Humbert
Dr Jacques Hidier
Dr Marc Jamouille
Dr Michel Roland

Adapted from Lamberts
This day

Life story

K 73

R 1

S 87

P 76

P 15

P 17

Z 11

P 77

D 97

T 90

P 70

Life conditions

FECONDATION

Death

- Episode initiated or closed by the doctor
- Episode initiated or closed by the patient
- Episode initiated or closed by doctor – patient consensus
Conclusions

- ICPC used in an episode oriented registration provides a powerful tool for clinical use as well as teaching the epidemiology of primary care in undergraduate and post-graduate training.
- ICPC helps to define the content of family medicine.
- ICPC contributes to research.