Thirty years Registration Network of Sentinel General Practitioners

Viviane Van Casteren
Operational Direction Public Health and Surveillance
Scientific Institute of Public Health
Brussels
Outline

Start of the network
Why health information from general practice?
Surveillance and sentinel surveillance
Objectives of the network
Method
  - Partners and Steering Committee
  - Central coordinating team
  - Participating GPs
  - Denominator population
  - Registered health problems & registration forms
  - Reporting activities
  - Collaborative studies at European level

Some results
SWOT-analysis
Start of the Network

- 1978
  - Pilot Group of enthusiastic GPs and researchers
  - WVVH
  - IHE

- 1979
  - SSMG members joined the pilot group
Why health information from general practice?

- General practice is in most countries the point of entry to the health care system
- A wide variety of public health problems are (exclusively) seen and followed up in primary care
Why health information from general practice in Belgium?

Health Interview Survey (HIS) 2004 indicates that

- 95% of general population has regular GP
- 79% of general population at least 1 encounter/year
- mean number of encounters/person/year = 4.6
- no important barriers for use of GP care
Surveillance and sentinel surveillance

**Surveillance**: ongoing systematic collection, analysis and interpretation of public health data for use in planning, implementing and evaluating public health programmes (CDC)

**Sentinel sites**: group of hospitals, labs, GPs providing timely information on a wide range of health problems

- do not cover entire population
- but sufficient information for public health decisions and study of long term trends
Sentinel surveillance network

- A system that keeps a watchful eye on a sample of the population by supplying regular and standardised reports on the incidence and main epidemiological characteristics of specific diseases and of procedures in primary health care (Eurosentinel, 1988).
Objectives of the Network

Initial purpose
• To get more reliable data on infectious diseases than system of compulsory notification

Current purposes
• Estimation of importance of public health problems within the general population and study of the most important epidemiological characteristics,
• Continuous observation of certain health problems over time, e.g. measles, mumps, chickenpox, flu, in order to study the impact of prevention and vaccination campaigns, to function as early warning system,
• Study of the management and follow-up of health problems in general practice.
Method
Partners & Steering Committee

From the start

- Participating GPs
- SSMG, Domus Medica
- IPH coordinating team

As of 1987

- Steering Committee
  - Delegates of above mentioned partners
  - Delegates of Flemish and French Community (since 1991)
Method
Steering Committee & IPH team

Steering Committee:
- Choice of health problems
- Follow-up of analyses and reporting

IPH coordinating team:
- Methodological issues
- Quality control of participation and of recorded data
- Analysis of data and reporting of results

ISO9001:2000 certificate
Participating GPs

- Voluntarily participating GPs
- Representativeness of GPs
  - Aim: to get GPs as representative as possible

- Geographical spread of GPs
  - Aim: to have GPs in all 43 districts (arrondissements), covering at least 1% of the population
Denominator population, current approach

\[ P = \sum_{i=1}^{43} P_i = \sum_{i=1}^{43} \frac{CSG Pi}{CG Pi / Ni} \]

P = sentinel population
Pi = estimated population of a district
CSG Pi = total annual number of contacts with SGPs in the district
CG Pi / Ni = mean annual number of contacts with GP per inhabitant in the same district

Lobet M P, Stroobant A, Mertens R et al. 
Tool of validation of the network of sentinel general practitioners in the Belgian health care system. 
Denominator population, future approach

- Yearly contact group denominator (=number of patients seen at least once a year in a practice)
- Correction for the non-attenders (e.g. IMA data)
- Only feasible in EPR-based data collection
Recorded health problems

• Problems for which the GP is by preference consulted or plays a central role in the management,
• Problems with clear and standardised definition,
• Important health problems not subject to surveillance of another system, unless the Network provides complementary or more reliable information,
• The frequency of the problem should allow statistical analysis, and not represent too heavy a burden on the participating physicians.
Registration forms

- Weekly paper-based forms
  - A4-form for flu and ARI
  - A3-form for other themes (6-7 themes)

- Follow-up forms per theme
  - Capture missing information
  - Confirmation of diagnosis
  - Complications
  - Follow-up of patient
Reporting

To

- Participating GPs
- Public health authorities
- Medical press
- Scientific community

In form of

- Reports
- Newsletters
- Scientific publications and presentations
- PhD theses
- Individual feedback to participating GPs
European collaborative studies (1)

Coordination

- Surveillance of prescriptions of HIV-tests in general practices by sentinel networks in Europe (1992)
- Data collection on patterns of demands for HIV-testing and other HIV-AIDS related consultations in general practice through sentinel networks (1994-1995)
European collaborative studies (2)

Participation

• The denominator project (1994 - 1996)
• Health information from primary care (2001 – 2004)
• E-HID (Electronic Medical Records for Health Indicator Data) (2004 – 2006)
• European Influenza Surveillance Scheme (EISS) (2008)
• Euro Senti-melc study (sentinel network monitoring end-of-life care) (2009)
Participating GPs

- 1982 – 2008: 616 regularly participating practices
- 95/160 currently participating practices participate for at least 10 years
Age and sex distribution (%) of SGPs in 2007, compared with non SGPs
Geographical distribution of SGPs and population coverage, 2008

Belgium: 1.8%
Flanders: 1.9%
Wallonia: 1.7%
Brussels: 1.2%
Use of labeled EPR software, 2009

78% of SGPs use labeled EPR-software
  • Flanders: 91%
  • Wallonia: 66%
  • (Brussels= 9/19 MV)

Determinants of use of EPR (OR)
  • Flemish region OR:11.6
  • Group practices OR: 7.0
  • Age below median age OR 2.8
Why do GPs participate in the Network?

- Contributing to the delivery of morbidity data for public health monitoring and commissioning
- Contributing to the delivery of data to support medical practice
- Unique opportunity to reinforce the recognition of the profession of GP
- Contributing to quality improvement of general practice
Recorded health problems

1979
• Acute conjonctivitis
• Measles
• Acute gastro-enteritis
• Viral hepatitis
• Meningitis
• Gonorrhea
• Syphilis

Past 10 years e.g.
• Cerebrovascular accident
• Cancer
• Asthma
• Diabetes
• Heart failure
• Placement in institution
• End of life care

• Intentional violence
• Suicide
• Accidents
• Depression

• ILI and ARI, Lyme, Chickenpox
### Measles recording by SGPs

<table>
<thead>
<tr>
<th>Period</th>
<th>Flemish Region</th>
<th></th>
<th>Walloon Region</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inc 100 000 inh.</td>
<td>95% C.I.</td>
<td>Inc 100 000 inh.</td>
<td>95% C.I.</td>
</tr>
<tr>
<td>1982-1983</td>
<td>714</td>
<td>654-775</td>
<td>1281</td>
<td>1147-1419</td>
</tr>
<tr>
<td>1984-1986</td>
<td>367</td>
<td>332-399</td>
<td>519</td>
<td>465-568</td>
</tr>
<tr>
<td>1987-1990</td>
<td>79</td>
<td>65-87</td>
<td>252</td>
<td>217-277</td>
</tr>
<tr>
<td>1991-1993</td>
<td>76</td>
<td>64-85</td>
<td>102</td>
<td>79-125</td>
</tr>
<tr>
<td>1994-1996</td>
<td>87</td>
<td>76-97</td>
<td>134</td>
<td>112-153</td>
</tr>
<tr>
<td>1997-1998</td>
<td>23</td>
<td>17-31</td>
<td>40</td>
<td>27-57</td>
</tr>
</tbody>
</table>

Stroobant A, Lamotte J M, Van Casteren V et al.  
Epidemiological surveillance of measles through a network of sentinel general practitioners in Belgium.  
Influenza clinical surveillance
Virological Influenza surveillance
Stroke attack rates by age and gender (/100,000), 1989-1999
Age standardised attack rates by sex (/100,000)
Case fatality after stroke by age and sex (%) (1989-1999)
Monitoring end-of-life care (MELC)
SENTI-MELC, 2006 - 2010

• Financed by IWT Vlaanderen (Agency for Innovation by Science and Technology)
• Consortium:
  • Vrije Universiteit Brussel (coordination)
  • Universiteit Gent
  • Universiteit Antwerpen
  • Scientific Institute of Public Health
  • VU Medisch Centrum Amsterdam

www.endoflifecare.be

• One part: SENTI-MELC study
Purpose of SENTI-MELC

To study

- Places of care and death and care setting trajectory
- Caregivers, palliative care initiatives
- Symptoms, treatments and type of care
- End-of life medical decisions (with possible life shortening effect)
  - Non-treatment, intensifying alleviation of pain/other symptoms, administering drugs with intention of hastening death with/without patients’ explicit request
- Advance care planning

Among patients who died non-suddenly

Care in the last 3 months of life
Places of care at the end of life

- **Place of death**
  - 59% hospital
  - 30% care home
  - 26% home
  - 10% palliative care unit

- **Where did the patient reside the last 90 days before death and how long did he/she reside in each setting?**
  - 40% hospital
  - 24% care home
  - 26% home
  - 10% palliative care unit

- **Day before death**
  - 90 days before death: 59% hospital
  - 80 days before death: 30% care home
  - 70 days before death: 26% home
  - 60 days before death: 10% palliative care unit
  - 50 days before death: 0.5% palliative care unit
  - 40 days before death: 0% palliative care unit
Nb of transitions between care settings in final three months of life

- 62% moved
- 80% in last month
- 33% in last week
Publications (1)

Publications (2)


30 ans Médecins Vigies
30 jaar Huisartsenpeilpraktijken
SGPs - Strengths

- Highly motivated GPs
  - Good quality of participation and data
- Good acceptability of recording
  - Annual low drop out of GPs (<10%)
- Flexible network
  - Enabling the study of new topics every year
- Monitoring over long or repeated periods
  - Enabling studies on impact of e.g. vaccination
- Follow-up studies
  - Gathering considerable unique information
SGPs - Weaknesses

- Denominator problem
- Representativeness
- Sensitivity – specificity
- A selected list of health problems can be studied
- Constant efforts are requested from the GPs
SGPs - Opportunities

- Emerging health problems can be included
- Many similar networks all over Europe
  - Collaborative European efforts
- Increasing use of the EPR
  - EPR-based recording
  - Another denominator approach
SGPs - Threats

- Many other health information sources (surveys, registers, …)
- Other GP-based registration networks in Belgium (e.g. Intego)
- Only financed by Flemish and French Community
- No accreditation for participating GPs
Visit the website