Bridging the Gap between Patients’ Expectations and General Practitioners’ Knowledge through Disease Surveillance

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Overview of presentation

• Introduction
• Method
• Results
• Discussion

• Unpublished data
• Next step

"Now, don't panic, but I'd like you to take off all your clothes so we can burn them."
Introduction

• Infectious diseases - 25% of all deaths [1]
• WHO – detect outbreaks
• The swine-flu
• Syndromic or symptom-based surveillance
• Public surveillance information based on reports from laboratories, hospitals and general practitioners (GPs).
• How much knowledge GPs actually have about the prevalence of infectious diseases in their local community, and how and from whom do they get this information?
• What do patients expect their local GP to know?
• Important since the information patients provide to their GP will be influenced by what they expect their GP to know already.

=> it is interesting to investigate patients’ expectations regarding local GPs, and compare them with the GPs’ actual knowledge about infectious diseases in the patient population.
This paper presents
• a quantitative study to investigate “to what degree patients trust their regular doctor to be fully informed about the prevalence of infectious diseases in their neighbourhood”, and
• a qualitative study to investigate “what general practitioners actually know”.
Method

Investigating patients’ expectations regarding local GPs’ knowledge
• Professional polling agencies interviewed a representative randomised sample of 1001 Norwegians by telephone
  • “To what degree do you trust your regular doctor to be fully informed about the prevalence of infectious diseases in your neighbourhood”.
  • Scale from 1 (“very high”) to 5 (“very low”).
• Reversed / SPSS 15.0
Method

Investigating what GPs actually know

- Interpretative study approach
- 13 different GPs
- Five individual semi-structured interviews
- Two focus groups
- Recorded
- Transcribed
- Informed consent
### RESULTS - Patients Trust

To what degree the 888 respondents trusted their regular doctor to be fully informed about the prevalence of infectious diseases in their neighbourhood in total, crossed with gender, and crossed with place of residence.

<table>
<thead>
<tr>
<th>Would you say...?</th>
<th>Total %</th>
<th>Gender %</th>
<th>Where do you live? %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Very high</td>
<td>14.4</td>
<td>10.8</td>
<td>18.2</td>
</tr>
<tr>
<td>(46,2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat high</td>
<td>31.8</td>
<td>34.6</td>
<td>28.8</td>
</tr>
<tr>
<td>Neither high nor low</td>
<td>27.0</td>
<td>25.6</td>
<td>28.6</td>
</tr>
<tr>
<td>Somewhat low</td>
<td>14.9</td>
<td>14.3</td>
<td>15.4</td>
</tr>
<tr>
<td>(26,8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very low</td>
<td>11.9</td>
<td>14.8</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Total 100 100 100 100 100 100 100
The multiple regression analysis – to investigate which variables predicted patients’ “confidence in the GP’s knowledge”:

• Variables selected - correlation analysis and theoretical assumptions

=> patient’s trust in their GP predicted by:
  – Location (“Where do you live”),
  – Gender
  – Medical visits in the last twelve months (yes/no)
Results:
What the GPs Actually Know

• The 13 GPs - not informed about the prevalence of infectious diseases
• Public surveillance system
  – data several weeks old when it became available
  - not information about the local patient population

“The reports from the ‘public system’ present ancient data. When we receive the reports people are dead and buried, or they have recovered.”
Results:
What the GPs Actually Know

• Their primary source of information:
  – The patients.

• Patients report
  – own symptoms
  – information about family members
  – colleagues
  – children in kindergarten / school
  – other patients at nursing homes

• Information shared between GP-colleagues at lunch or at joint meetings
Discussion

• Interviews => GPs not very well informed.
• GPs want up-to-date information relevant to the local population [7], but this is not available through the current system.
• The SNOW project [10, 11] - a system to improve this situation by extracting and presenting local surveillance data from GPs’ EPR, + laboratories and hospitals in real time.
- Patients report symptoms to the GP
- The GP should enter all these symptoms in a standardised “symptom and diagnosis field” in the EPR.
- GPs - only enter one (1,3) symptom in the “symptom and diagnosis field” in the EPR, and not all as intended [11, 12].

=> extracting symptom data from the GP’s EPR is unlikely to provide the desired overview for syndromic surveillance [11].
• Patients - the GPs’ primary source
• motivation to report to their doctor might be lacking
• to exploit this primary source more reliably – we suggest a new public system for symptom reporting - that will minimize the importance of expectations and trust issues in the doctor-patient relationship, while providing the GP’s with up-dated information.
• Realised by patients reporting symptoms directly to a **neutral and public “patient-informer-based” surveillance system**.

• Symptoms reported when they occur

=> a new approach for syndromic surveillance that might provide

much more data of

much better quality than what is available today, and at a

much earlier stage.
• Template - copy the symptoms both into the patient’s EPR + the public surveillance system.
• into the EPR => patients would report correct data.
• Might analyse symptoms and provide diagnostic aid for patients and links to further reading
• Individual symptoms - together with the prevalence of diagnosed diseases that match these symptoms - presented to the GP when the patient arrives, + an overview of what is brewing based on symptoms reported by other local patients, to guide the GP in the diagnosing process.
Related work and possible input

• Google Flu Trends
• Use of online social networks like for instance Facebook and MySpace.
• a study from the Netherlands:
  – this approach is feasible in influenza surveillance;
  – the information gathered is reliable, and
  – the pattern of influenza cases is comparable to traditional approaches
Unpublished data and Next Steps

Survey - people’s attitude towards providing symptom information electronically

- what sources or
- channels or
- methods they would prefer

• Eighty-seven people
  - 42 female and 45 male.
• 93 % - positive to provide symptom information
• Preferred email as their highest priority, web interface being the next priority.
• **people say that they would report symptoms**
• Need to find out if people actually are willing to report symptom, and the quality and correctness of these symptoms.
• Next step – conduct a study to investigate if patients actually are able and willing to report and rate symptoms electronically
Thank you!

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