Supplementary material

The potential value of crowdsourced surveillance systems in supplementing sentinel influenza networks: the case of France

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![Map of French regions considered](image)

**Figure S1.** Map of French regions considered
Table S1. Correlations and peak week differences between GN incidence estimates and official estimates at the regional level, according to the season

<table>
<thead>
<tr>
<th>Regions</th>
<th>participation rate /100,000*</th>
<th>2012/2013</th>
<th></th>
<th>2013/2014</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Correlation $r$ [95% CI]</td>
<td>Peak week difference**</td>
<td>Correlation $r$ [95% CI]</td>
<td>Peak week difference**</td>
</tr>
<tr>
<td>Ile-de-France</td>
<td>7.2</td>
<td>0.86 [0.70 ; 0.94]</td>
<td>-2</td>
<td>0.75 [0.47 ; 0.89]</td>
<td>-1</td>
</tr>
<tr>
<td></td>
<td>GNILI – RS</td>
<td>0.81 [0.58 ; 0.92]</td>
<td>-1</td>
<td>0.70 [0.38 ; 0.87]</td>
<td>0</td>
</tr>
<tr>
<td>North-West</td>
<td>6.0</td>
<td>0.84 [0.64 ; 0.93]</td>
<td>-2</td>
<td>0.66 [0.33 ; 0.85]</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>GNECDC vs. GROG</td>
<td>0.61 [0.25 ; 0.82]</td>
<td>-1</td>
<td>0.64 [0.30 ; 0.84]</td>
<td>1</td>
</tr>
<tr>
<td>North-East</td>
<td>4.8</td>
<td>0.84 [0.66 ; 0.93]</td>
<td>-1</td>
<td>0.64 [0.30 ; 0.84]</td>
<td>-3</td>
</tr>
<tr>
<td></td>
<td>GNILI – RS</td>
<td>0.78 [0.53 ; 0.90]</td>
<td>-1</td>
<td>0.72 [0.43 ; 0.87]</td>
<td>1</td>
</tr>
<tr>
<td>South-West</td>
<td>5.9</td>
<td>0.75 [0.47 ; 0.89]</td>
<td>1</td>
<td>0.73 [0.43 ; 0.88]</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>GNECDC vs. GROG</td>
<td>0.70 [0.39 ; 0.86]</td>
<td>0</td>
<td>0.73 [0.44 ; 0.88]</td>
<td>0</td>
</tr>
<tr>
<td>South-East</td>
<td>7.6</td>
<td>0.87 [0.71 ; 0.94]</td>
<td>-1</td>
<td>0.64 [0.30 ; 0.84]</td>
<td>-4</td>
</tr>
<tr>
<td></td>
<td>GNECDC vs. GROG</td>
<td>0.78 [0.53 ; 0.90]</td>
<td>-1</td>
<td>0.74 [0.46 ; 0.89]</td>
<td>-2</td>
</tr>
</tbody>
</table>

*Mean participation rate for 2012/2013 and 2013/2014 seasons
**The difference is calculated as peak week of GN signal minus peak week of official source
**Symptoms survey (English version)**

**Weekly Q1**

Have you had any of the following symptoms since your last visit (or in the past week, if this is your first visit)?
(Select all options that apply)
- No symptoms
- Fever
- Chills
- Runny or blocked nose
- Sneezing
- Sore throat
- Cough
- Shortness of breath
- Headache
- Muscle/joint pain
- Chest pain
- Feeling tired or exhausted
- Loss of appetite
- Coloured sputum
- Watery, bloodshot eyes
- Nausea
- Vomiting
- Diarrhoea
- Stomach ache
- Other

If report any symptoms, check database: was the participant STILL ILL when they last completed the Weekly survey (i.e. they said “I am still ill” in response to Weekly Q4 below last time?) AND have fewer than 15 days elapsed since they last completed the Weekly Survey AND fewer than 15 days have elapsed since their previous date of symptom onset.

If Yes: continue with Weekly Q2

No or Don’t know: then treat this as a “new” bout of illness, continue with Weekly Q3

**Weekly Q2** (If the participant was STILL ILL on their last visit and has reported symptoms this time):

"On DATE OF LAST VISIT you reported that you were still ill with symptoms that began on DATE OF FIRST SYMPTOMS REPORTED PREVIOUSLY. Are the symptoms you reported today part of the same bout of illness?

- Yes
- No
- I don't know/can't remember

If NO or DON'T KNOW:

This means that the current symptoms are the start of a “new” illness: continue with Weekly Q3

if YES:

[This means that the current symptoms are the continuation of the same bout of illness as the previous visit. The remainder of the symptoms questionnaire (onset date, further details about symptoms, details...]}
about seeking medical attention, treatment, time off work/school) can be pre-filled with their previous answers:]

To save you time, we have filled in the information you gave us previously about your illness. Please check that it is still correct, and make any changes – for instance, if you have visited a doctor or taken additional time off work since you last completed the survey.

**Weekly Q3** (if symptoms)

When did the first symptoms appear?

- Choose date XX/XX/XXXX
- I don’t know/can’t remember

**Weekly Q4** (if symptoms)

When did your symptoms end?

- Choose date XX/XX/XXXX
- I don’t know/can’t remember
- I am still ill

**Weekly Q5** (if symptoms)

Did your symptoms develop suddenly over a few hours?

- Yes
- No
- I don’t know/can’t remember

**Weekly Q6** (if fever)

When did your fever begin?

- Choose date XX/XX/XXXX
- I don’t know/can’t remember

**Weekly Q6b** (if symptoms)

Did you take your temperature?

- Yes [go to Weekly Q6c]
- No
- I don’t know

**Weekly Q6c** (if symptoms) and (if took temperature): follow-up question

What was your highest temperature measured?

- Below 37° C
- 37° - 37.4°C
- 37.5° - 37.9°C
- 38° – 38.9°C
- 39° - 39.9°C
- 40°C or more
- I don’t know/can’t remember

**Weekly Q7 (if symptoms)**

Because of your symptoms, did you VISIT (see face to face) any of the following (tick all that apply)?

- No
- GP or GP’s practice nurse
- Hospital admission
- Hospital accident & emergency department/out of hours service
- Other medical services
- No, but I have an appointment scheduled

(Select all options that apply)

Will need to be adjusted to suit different countries.

**Weekly Q7b (if symptoms) – this should be asked for each option ticked in the previous question (not including “No” or “Not yet”)**

How soon after your symptoms appeared did you visit the following?

- Same day
- 1 day
- 2 days
- 3 days
- 4 days
- 5-7 days
- More than 7 days
- I don’t know/can’t remember

**Weekly Q8 (if symptoms)**

Because of your symptoms, did you contact via TELEPHONE or INTERNET any of the following (tick all that apply)?

- No
- GP – spoke to receptionist only
- GP – spoke to doctor or nurse
- NHS Direct / NHS 24 / NHS Choices
- NPFS
- Other

(Select all options that apply)

Will need to be adjusted to suit different countries.

**Weekly Q8b (if symptoms) – this should be asked for each option ticked in the previous question (not including "No")**

How soon after your symptoms appeared did you contact via telephone or internet any of the following?

- Same day
- 1 day
- 2 days
• 3 days
• 4 days
• 5-7 days
• More than 7 days
• I don’t know/can’t remember

**Weekly Q9** (if symptoms)
Did you take medication for these symptoms (tick all that apply)?
- No medication
- Pain killers or antipyretics (e.g. paracetamol, lemsip, ibuprofen, aspirin, calpol, etc)
- Expectorants (cough medication)
- Antivirals (Tamiflu, Relenza)
- Antibiotics
- Other
- I don’t know/can’t remember

Note: this is adapted to the UK situation. Other countries will need to adapt the brand names of the commonly used pain killers or antipyretics

**Weekly Q9b** (if antivirals were taken): follow-up question
How long after the beginning of your symptoms did you start taking antiviral medication?
- Same day (within 24 hours)
- 1 day later
- 2 days later
- 3 days later
- 4 days later
- 5-7 days later
- More than 7 days later
- I don’t know/can’t remember

**Weekly Q10** (if symptoms)
Did you change your daily routine because of your illness?
- No
- Yes, but I did not take time off work/school
- Yes, I took time off work/school

**Weekly Q10b** (if symptoms) & (if taken time off work/school): follow-up question
Are you still off work/school?
- Yes
- No
- Other (e.g. I wouldn’t usually be at work/school today anyway)

**Weekly Q10c** (if symptoms) & (if taken time off work/school): follow-up question
How have you been off work/school for?
- 1 day
Weekly Q11 (if symptoms) (not a core question)
What do you think is causing your symptoms?
- Flu or flu-like illness
- Common cold
- Allergy/hay fever
- Gastroenteritis/gastric flu
- Other
- I don't know

Weekly Q12 (ask everyone)
How many members of your household have had flu-like symptoms in the past week?
- 0
- 1
- 2
- 3
- 4
- 5
- 6 or more
- I don't know

Weekly Q13 (ask everyone)
Excluding household members, how many people did you meet with flu-like symptoms in the past week?
- 0
- 1
- 2
- 3
- 4
- 5
- 6 or more
- I don't know

Weekly Q14 (if no seasonal flu vaccination yet reported in Intake Q10)
According to your background survey, you have not had a seasonal flu vaccine this season. Since filling in the background survey have you been vaccinated against influenza?
- Yes, I have now received a seasonal flu vaccination
If left blank, then assume “no”.

Here’s how it should work: if the answer to Intake Q10 is “No”, then we want to ask this question. If they answer “Yes” here, we then want to ask Intake Q10b and Intake Q10c. These data need to write
to the Intake questionnaire, updating their previous information. Once a participant has answered “Yes” here, this question should not be asked on future occasions.