

Utilisation of Data Derived from a Nurse-led NHS Access and Information Telephone Helpline (NHS24) in Communicable Disease Management in Scotland

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Objective:

To compare NHS24 data with a range of laboratory and other surveillance systems to further explore its potential utility in communicable disease management.

Background:

NHS24 is a nurse-led telephone helpline that not only provides information, but crucially, is the means of access to out-of-hours general practice services (GPS) for most of the Scottish population.¹ Call information from NHS24, aggregated in to 10 key syndromes (colds&flu, coughs, diarrhoea, difficulty breathing, double vision, fever, eye problems, lumps, rash and vomiting) is currently monitored on a pilot basis for exceedance of historical, seasonally adjusted limits. A similar national telephone health helpline system, NHS Direct, operates in England and Wales.

Methods:

Data derived from algorithmic triaged calls to NHS24, falling in to syndromic categories of interest were aggregated to weekly totals. The relationships between time series of NHS24 data and routine surveillance and laboratory data were analysed. Systems compared included NHS24 respiratory related syndromic calls and 'flu spotter' practices, influenza like illnesses and acute respiratory illnesses diagnosed by a subgroup of GPS (SERVIS system), and laboratory virological data. NHS24 vomiting calls were compared with laboratory data.

Results:

Respiratory clinical and laboratory datasets for the winter seasons of 2004/5 and 2005/6 were analysed for lagged relationships. In general, a rise in NHS24 'colds & flu' data tended to precede 'flu spotter' data by one week and SERVIS data and influenza laboratory data by 1-

2 weeks. A rise in NHS24 vomiting data tended to precede a rise in laboratory norovirus reports by one week

Conclusions:

NHS24 was introduced for all Scotland in 2004, and is therefore limited in the data available for analysis. However, early rises in NHS 24 respiratory and gastrointestinal calls were observed which heralded later rises in GPS and laboratory data. Changes in the triaging of NHS24 calls occurred in 2005, with altered use of algorithms to ensure rapid access to emergency services. Such evolutions of the system complicate any analysis. Nevertheless, as NHS24 data captures daily requests for healthcare access in Scotland, it merits continued evaluation to assess its potential contribution to communicable disease management.

References:

1. Meyer N, McMenamin J, Michael M, Rossi M, Smith A, Robertson C, Allardice G, Cooper D, Donaghy M Designing and Implementing a Syndromic Surveillance System for the 2005 G8 Summit, Scotland, UK. *National Syndromic Surveillance Conference*. Seattle. 2005.