



Meningitis in the social media generation:

Public health management of a complex meningococcal meningitis in a teenager

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Situation

The Health Protection Unit received a call from a microbiologist on Saturday lunchtime during 2011 reporting a case of probable bacterial meningococcal meningitis in a teenager who had been admitted to intensive care unit (ICU).

As well as a number of close family contacts requiring prophylaxis we were informed that the case had recently returned from a trip, sharing an apartment with an extended group of friends – all of whom would be classed as close contacts and would need prophylaxis. There was a high level of anxiety, particularly as several of the close contacts had meningitis-like symptoms.

Sadly the case's condition deteriorated and they died. This escalated anxiety within the friend network. There was considerable concern from friends who had had minimal contact with the case in the previous week and several presented at a range of out of hours GP practices and A&E units across the region wanting prophylaxis.

Health Protection Units

The Health Protection Unit provides 24/7 public health management of cases of infectious diseases. Units provide both proactive and reactive support. At weekends and between 5pm and 9am Monday to Friday an out of hours oncall team is available to manage urgent reactive work – this includes following up meningococcal meningitis cases.

Proactive work is about preventing health incidents from happening. Whilst *reactive work* is about minimising the risk to the general public once an incident happens, this includes:

- advising how to stop infectious diseases such as meningitis from spreading
- carrying out risk assessments to find out how outbreaks occurred, and recommending ways to prevent them happening again
- tracing people who may have come into contact with, or be carrying an infectious disease or be contaminated with chemicals or radiation.

Key actions for a meningococcal meningitis cases

The Health Protection Unit normally gets notified by a hospital doctor or microbiologist of a case of meningococcal meningitis. These would be followed up as a priority.

1. Complete meningococcal meningitis questionnaire to gather information on:
 - Case details
 - Clinical condition and symptoms
 - Microbiology
 - Contacts
2. Assessment of likelihood of this actually being meningococcal meningitis - is it a possible, probable or confirmed case. Follow-up only occurs for probable or confirmed cases
3. Arrange with treating clinician to give prophylaxis to case, send specimens to microbiology, inform HPU of any change in clinical condition or microbiology results, liaise with hospital infection control team if exposure occurred and team were not wearing PPE
4. Arrange prophylaxis of close contacts – ideally within 24 hours of index case diagnosis
5. Follow-up with close contacts
 - Provide factsheet and information on signs/symptoms of meningitis, including signposting to Meningitis Research Foundation
 - Reasons for antibiotics
6. Manage wider concern
7. Vaccination recommended to case and contacts



Timeline

Notification

- Sat lunchtime – microbiologist notifies HPU of a case of probable meningococcal meningitis in teenager admitted to ITU

Clinical info

- Call to ITU registrar, basic demographic and clinical information gained
- Recently returned from a holiday with number of friends – shared apartment
- Report that another person from holiday also unwell & being assessed in A&E

Family contacts

- Call to family
- Questionnaire completed & details of all family contacts recorded
- Agree we will arrange prophylaxis
- Family provides contact details for one of the holiday party

Holiday contacts

- Call to one of the close contacts on the holiday
- All close holiday contacts know about case and know they need to see a doctor
- Provided with a list of contact details of these contacts
- Clarify that second girl who was unwell assessed & discharged - not a case of meningococcal meningitis

Managing anxiety

- Case deteriorated rapidly and sadly died – much anxiety
- Anxious calls from families of close contacts, worried about developing meningitis
- Friends who have had minimal contact presenting at A&Es & OOH GPs across sector
- Reassurance re: risk of two linked cases being extremely low
- Emphasise management of contacts remains same & ensure assessment of those with symptoms



What worked well

- Team oncall out of hours – ensuring public health registrar was well supported by Consultant in Communicable Disease Control (CCDC)
- Good communication with ITU registrar – acted as the point of contact with family of case
- Cooperation with OOH GP – enabled there to be one point of access for provision of antibiotics to close non-family contacts
- Linking in with the family of one of the close contacts to get a list of the contact details for all those who had stayed in same apartment and need prophylaxis

Challenges

- Managing misinformation and maintaining confidentiality – social media sites, internet, mobiles and instant messaging meant that information and rumours spread very quickly. It is important to emphasise confidentiality, and signpost to websites with accurate public health information.
- Dealing with worried well – communication of risk and reasons for given prophylaxis needed to be clearly explained. Signposting to reliable websites such as MRF was important
- Managing clinicians – in some instances clinicians were anxious about prophylaxis and wanted to dispense antibiotics widely. Needed to discuss rationale and ensure they were aware of guidance
- Getting information to hospitals and A&E units out of hours could be problematic – reliance of fax which not readily available to OOH HPU. Lack of secure nhs.net emails on hospital wards and in A&E



Going forward

- Update meningitis factsheet for worried well with Meningitis Research Foundation (MRF)
- Educating health professionals about public health management of meningitis cases and risk of spread
- Local approaches agreed to securely transferring information to hospitals and GPs out of hours
- Sharing lessons learned with others in unit

Managing contacts of the case

Category	Details
Family	<ul style="list-style-type: none"> • Completion of questionnaire identified family contacts. • Due to severity of case and reluctance of A&E to prescribe, ITU registrar arranged and prescribed antibiotics for close family contacts.
Holiday	<ul style="list-style-type: none"> • Liaised with one close contact to get details of holiday contacts • Coordinated approach to prescribing prophylaxis - arranged through out of hours GP who agreed to see, assess and prescribe antibiotics for all holiday contacts. • Called each holiday contact to explain rationale for antibiotics, signs and symptoms and need to attend out of hours GP clinic • Some had meningitis symptoms and had presented to A&E –increased anxiety of group and staff in A&E. This needed to be managed and reassurance provided. • Within 12 hours of notification all identified close contacts spoken to and antibiotics prescribed
Worried well	<ul style="list-style-type: none"> • Number of calls from A&E departments and GPs about other friends who had been presenting requesting prophylaxis - limited understanding of criteria for prophylaxis of close contacts • Calls being received in our area and in neighbouring HPU • Discussed and agreed consistent approach to management • Clear we give public health advice – clinical management the responsibility of doctor assessing patient • Clear discussion of risk of secondary cases • Signposting to MRF phone number and website

Time spent on different tasks over weekend– estimated total time: 13.5hours

Task	Total time spent
Initial assessment	Total time: 1.5hrs
30 mins Background discussion with micro, ITU reg	
30 mins Questionnaire with family	
30 mins Identification of close contacts	
Prophylaxis for close contacts	Total time spent: 4.5hrs
2.5 hours Contact close contacts	
1 hour Negotiating agreement with clinicians to assess & prescribe	
1 hours Follow-up calls / queries from close contacts	
Managing worried well	Total time spent: 2hrs
1 hour Calls from parents of girls who knew case but not close contacts	
1 hour Calls from GPs / A&E anxious about managing cases	
Admin	Total time spent 3.5hrs
30 mins Handing over to Surrey HPU	
2.5 hours HPZone – patient record	
30 mins Emailing info to clinicians	
PH support & liaison with clinical teams	Total time spent 2hrs
1 hour Advice to clinicians re prescribing: – close contacts / health professionals	
1 hour Update, checking results etc	