1. What is the advice for requesting and obtaining an optimal sputum sample?

When requesting a sputum sample write 'known bronchiectasis' or 'suspected bronchiectasis' on the request form/ICE request. Ideally the sputum sample should arrive on the same day as the sample is taken (e.g. a morning sample that will arrive in the lab in the afternoon). If this is not possible sputum sample should be stored in a fridge overnight.

2. What adjuncts can be used with chest physiotherapy to improve chest clearance?

Short acting beta₂-agonist inhalers (e.g. salbutamol 100mcg 2 puffs prior to physiotherapy) can be used to improve sputum clearance. Mucolytic agents such as carbocisteine* 375mg two tablets three times per day for 2 months and reducing to twice a day thereafter, can help reduce sputum viscosity (limited evidence). Stop after 6 months if there is no benefit. Normal 0.9% saline and 3 - 7% (hypertonic) saline nebulisers can also be administered prior to chest physiotherapy to aid sputum clearance and loosen thick sputum. These nebulisers would usually be instituted in secondary care.

3. Can patients respond to antibiotics that show a resistance to their current sputum pathogen?

Yes, patients can still respond to some antibiotics ('in vivo') even if the sputum results show antibiotic resistance to the sputum pathogen 'in vitro'. Only change antibiotics if the patient is not clinically improving. (e.g. a trial of ciprofloxacin 500mg BD should be given to patients with ciprofloxacin-resistant *Pseudomonas aeruginosa* in their sputum). Several days of antibiotics may be needed before starting to see an improvement, especially in patients with more severe bronchiectasis.

4. Why are longer courses of antibiotics needed in bronchiectasis (up to 14 days)?

There is evidence of higher microbial load in the airways of bronchiectasis patients which can cause airway irritation and inflammation. Although the evidence is still needed, expert consensus recommends patients with moderate to severe bronchiectasis should have a course of 14 days. The duration of antibiotic for each patient should be specified in their last hospital bronchiectasis clinic letter.

5. Are antibiotics doses the same when treating bronchiectasis patients with an acute chest infection?

Yes and no. For some antibiotics the doses are the same such as **amoxicillin (500mg three times per day)** and for patients with *Pseudomonas aeruginosa* **ciprofloxacin (500mg twice per day)**. For other antibiotics the doses can be higher such as **doxycycline 100mg twice per day** (rather than once daily). **Co-amoxiclav is usually prescribed at the higher dose of 625mg three times per day** and **flucloxacillin at 500mg four times per day**. This is again, related to the fact that bronchiectasis patients tend to have higher microbial loads in their airways.

6. When are long-term antibiotics given?

Patients can be considered for long-term antibiotics if they have been diagnosed with \geq 3 chest infections needing antibiotics in the past year. This will be initially prescribed by secondary care with repeat prescriptions being continued by primary care. Long-term antibiotics can be either oral or inhaled and patients attend the hospital for regular reviews and monitoring. For further information see the Guidelines on Inhaled and Oral Long-term Antibiotics.

*Not approved by Lothian Joint Formulary but in practice a 6 months trial can be prescribed.