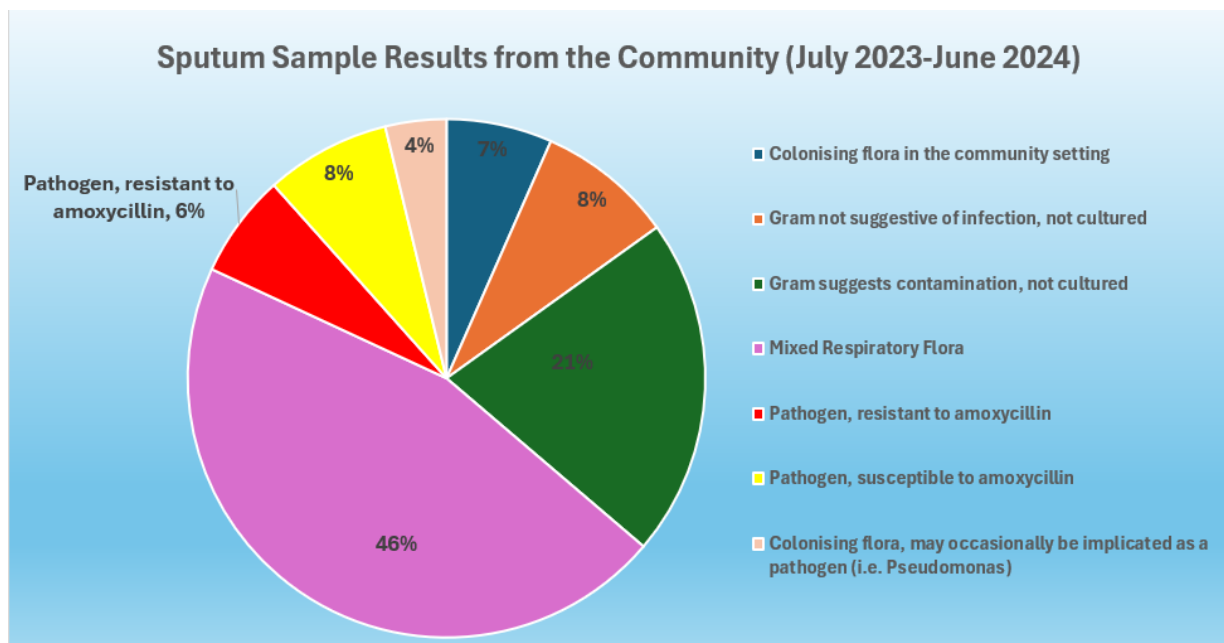




## Indications for Sputum Culture in the Community Setting

Sputum culture is in general a low value microbiology test, where the vast majority of results do not change patient management.

We analysed 3200 sputum samples between July 2023 and June 2024. The results are illustrated in the pie chart below. In summary, only 6% of the total samples grew a respiratory pathogen that was resistant to amoxicillin. Only 0.7% of the sample cohort grew a respiratory pathogen resistant to doxycycline. (excluding *Pseudomonas*)



Sputum culture suffers from both poor sensitivity and specificity in identifying bacterial pathogens.

Sputum culture in the community setting is only recommended if one of the following apply:

- The patient has clear clinical evidence of a bacterial infection of the lower respiratory tract and has failed empiric antibiotic therapy with amoxicillin and/or doxycycline.
- The patient is undergoing monitoring for bronchiectasis. Guidelines suggest 6 monthly monitoring for moderate to severe disease and annually for mild disease.
- Under direction from a respiratory specialist, including for CF patients.

In order to support good diagnostic stewardship principles, we would be grateful if you could adhere to the recommendations above before sending a sputum sample to the laboratory.

[Hill AT et al; British Thoracic Society guideline for bronchiectasis in adults. BMJ Open Respir Res. 2018 Dec 28;5\(1\)](#)  
[BPAC guidelines Community Acquired Pneumonia; May 2024](#)

**Michael Addidle, Vani Sathyendran, Vivian Black: Clinical Microbiologists**  
**Murray Robinson: Lead of Specialty, Microbiology & Molecular Diagnostics**