Point of Care C-Reactive Protein (CRP) Testing in Primary Care for patients with Lower Respiratory Tract Infections

Patient presents with symptoms of lower respiratory tract infection.

Cough as the main symptom and with at least 1 other lower respiratory tract symptom (such as fever, sputum production, breathlessness, wheeze or chest discomfort or pain) and no alternative explanation (such as sinusitis or asthma).

Consider a point of care C-reactive protein (CRP) test if after clinical assessment a diagnosis of pneumonia has not been made and it is not clear whether antibiotics should be prescribed.

Use results of the CRP test to guide antibiotic prescribing as follows:

- **CRP concentration less than 20mg/litre** - Do NOT routinely offer antibiotic therapy.
- **CRP concentration is between 20 mg/litre and 100 mg/litre** - Consider a delayed antibiotic prescription (a prescription for use at a later date if symptoms worsen).
- **CRP concentration is greater than 100 mg/litre** - Offer antibiotic therapy.

Treatment Guide

Community acquired pneumonia (CAP) - Severity assessment in primary care

When a clinical diagnosis of CAP is made, determine whether patients are at low, intermediate or high risk of death using the **CRB65 score**.

CRB65 score is calculated by giving 1 point for each of the following prognostic features:

- confusion (abbreviated Mental Test score 8 or less, or new disorientation in person, place or time)
- raised respiratory rate (≥ 30 breaths per minute)
- low blood pressure (diastolic ≤ 60 mmHg or systolic ≤ 90 mmHg)
- age ≥ 65 years of age.

Stratify patients for risk of death as follows:

- 0: low risk (< 1% mortality risk)
- 1 or 2: intermediate risk (1-10% mortality risk)
- 3 or 4: high risk (> 10% mortality risk)

Use clinical judgement in conjunction with the CRB65 score to inform decisions about whether patients need hospital assessment as follows:

- score of 0 or 1: consider home-based care
- score of 1-2 consider hospital referral
- score of 3-4 urgent hospital referral

The CRB65 score should not replace clinical judgement in deciding if a person should be admitted. Other factors should also be considered in making the decision. These include:

- The person's wishes.
- Their social support.
- Pre-existing conditions.
- Pregnancy.
- General frailty.

Do NOT routinely offer microbiological tests to patients with low-severity CAP

Antibacterial therapy

Low Severity Community Acquired Pneumonia

FIRST LINE:
Amoxicillin 500mg - three times daily for 7 days

ALTERNATIVE TREATMENT OPTION (Penicillin allergic):
Doxycycline 200mg STAT on day 1 then 100mg twice daily for a further 6 days

See antibiotic prescribing guidelines for further information:
http://www.telfordccg.nhs.uk/infections

Moderate Severity Community Acquired Pneumonia

Consider hospital referral

Patient Counselling

Explain to patients with CAP that after starting treatment their symptoms should steadily improve, although the rate of improvement will vary with the severity of the pneumonia, and most people can expect that by:

1 week: fever should have resolved,
4 weeks: chest pain and sputum production should have substantially reduced,
6 weeks: cough and breathlessness should have substantially reduced,
3 months: most symptoms should have resolved but fatigue may still be present,
6 months: most people will feel back to normal.

Explain to patients they should seek further medical advice if symptoms do not begin to improve within 3 days of starting the antibiotic, or earlier if their symptoms are worsening.

Reporting POC CRP Testing for patients with lower respiratory tract infections

Complete the respiratory review template on your EMIS system confirming that you have requested a point of care CRP test.

The review template will also enable you to record examination findings, the actual CRP level and the outcome of the review in terms of prescribing of an antibacterial.

The practice will also be asked to keep a simple record of the date a CRP test was completed and the CRP level. This will facilitate the quarterly practice payment.

External Quality Assurance (EQA)

Each practice site will receive a whole blood sample on a monthly basis. The sample will need to be analysed and the result reported back to the external QA provider. The CCG will receive confirmation that each site has completed the monthly QA process and an assurance that their monitor is reading to the specified accuracy.

If there are any concerns about the accuracy of the monitor following EQA further analysis of the monitor/assay procedure may be requested.

Practices will not receive payment for CRP analysis if they do not participate in the EQA process.

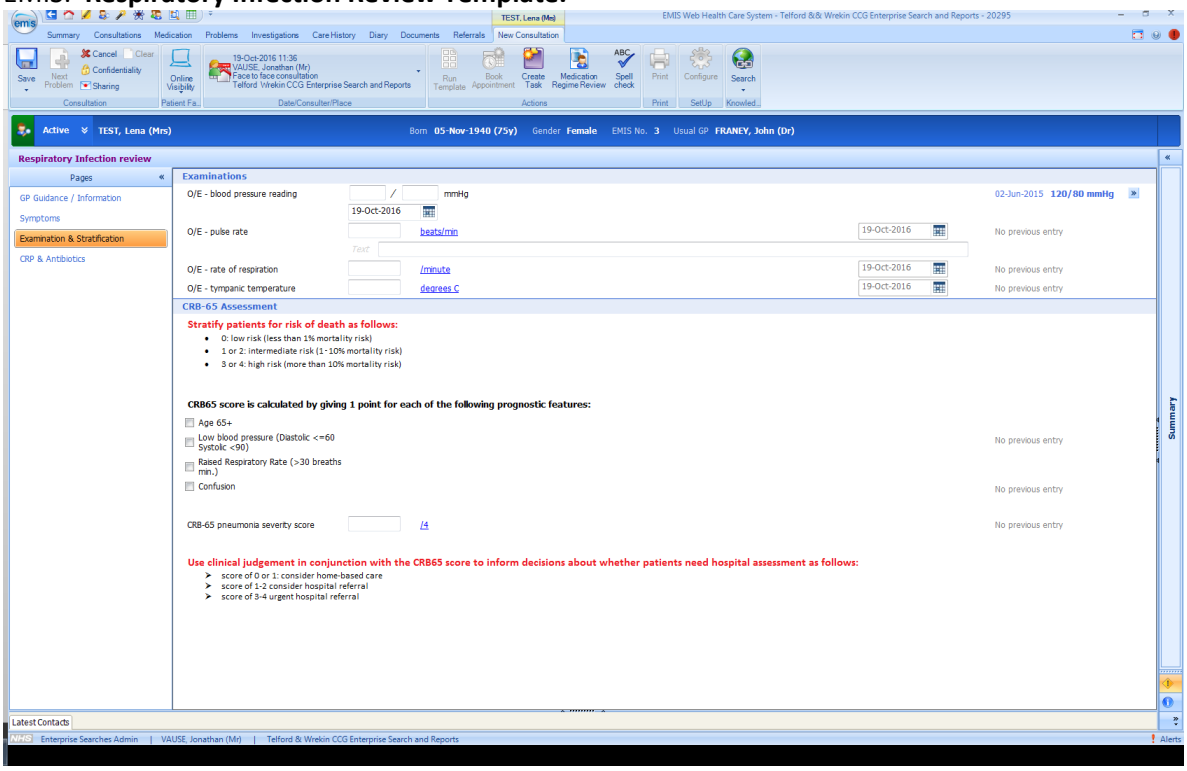
Practice payment

Each practice will receive payment for actively using the CRP testing capability. A fee will be reimbursed for every completed test.

Payment will initially be based on return of a quarterly submission form, outlining the date each test was completed and the associated CRP level.

Additionally, practices will be encouraged to complete the respiratory review template. This will further underpin practice payments as it will allow central data extraction of CRP and confirmation of any outcome linked to CRP testing. The EMIS template will be uploaded centrally onto your clinical systems.

EMIS: **Respiratory Infection Review Template.**



Point of Care C-Reactive Protein (CRP) Testing – Practice Payment Claim Form

Practice	
Period Claimed	

Date	Unique patient identifier	CRP level	Was an antibiotic prescribed? (please tick ☑)		
			Antibiotic Prescribed	Delayed Antibiotic Prescription given	No Antibiotic prescribed

Please fax your claim form to Heather Weaver, Medicines Management (01952) 580303