

QuikRead go® easy CRP - a perfect fit for the Hospital-at-Home model

An interview with Caroline Essenhigh, Matron at Tonbridge Cottage Hospital



Caroline Essenhigh is Matron at Tonbridge Cottage Hospital, a 25 bed community hospital based in Kent.

She co-authored a publication in the **British Journal of Nursing**^[1], highlighting how implementing a 'Hospital-at-Home' service can improve patient outcomes.

The 'Hospital-at-Home' model allows patients to be discharged from acute care hospital environments earlier than normal and be cared for by community nurses who are specialists in delivering hospital-level care in the patient's own home.

This type of care offers benefits to everyone involved in the patient pathway, not least the patient themselves.

One tool used by community nurses is a test called C-reactive Protein (CRP) - a marker which aids in the detection and evaluation of infection, tissue injury and inflammatory disorders. The QuikRead go® easy CRP test is designed to provide rapid, easy and portable analysis of CRP at the point of care. It requires only a 10 µl finger prick whole blood sample and has actionable results available in two minutes across a clinically relevant measuring range of 1 and 200mg/L.

We caught up with Caroline and the team from Kent Community Health NHS Foundation Trust to ask them some questions in relation to the QuikRead go device and CRP testing.

How and when do you use the QuikRead go?

"We use it in a number of different scenarios, the QuikRead go easy CRP test gives us a stronger evidence base to make decisions on the patient's treatment plan and examples of these are:

- *Allowing us to confidently keep the patient at home*
- *Knowing when to refer them to the Community Hospital*
- *Knowing when to urgently admit the patient to Acute Care at the hospital*
- *Knowing whether antibiotics are working i.e. is the CRP level coming down*

CRP helps create a clearer picture as to where the patient needs to be and what treatment they need."

How do you find the sample collection for the QuikRead go?

"Because it is a simple finger prick using a capillary collection device, the sample collection is much easier to perform than venepuncture and it's not too invasive either. We find the process especially convenient with patients who have delirium or have dementia as it allows us to assess how the patient might react to venepuncture or a cannula if this is required down the line. Also, the QuikRead go device proves to be a very useful tool overall for doing a full assessment on the patient and not just on the CRP result."

How does the QuikRead go system affect the number and efficiency of the visits that the Hospital-at-Home teams have to do?

"It definitely reduces the number of visits, the reason for this being that if we were to take venous blood tubes and send them to the lab we would receive the results back in 24 to 48 hours, which means that we would have to return to that patient after this time to act on the blood results. With an immediate result for CRP, we don't have to revisit the patient. This means more patients can be treated by our staff giving us increased capacity and a more efficient workstream."

Table 1. Referrals to the service by diagnosis, March 2019–February 2020

Patients' main diagnosis	Total number referred
Infection	82 (17.7%)
Cellulitis	82 (17.7%)
Breast surgery	62 (13.4%)
Osteomyelitis	44 (9.5%)
Chest infection/pneumonia	32 (6.9%)
Bronchiectasis	24 (5.2%)
Other medical conditions	39 (8.4%)
Other surgical conditions	25 (5.4%)
All other conditions	71 (15.4%)
Total number of patients	461

There are scenarios where more blood tests may be required and in this situation, we send samples to the laboratory.

CRP helps us make decisions for a lot of our patients as a large proportion are related to infection. This is shown in the chart 'Table 1', taken from the publication in the BJN^[1], outlining the types of patients referred to the Hospital-at-Home team."

Antibiotic Stewardship is a very important topic at the moment with the increase in antimicrobial resistance and 'Superbugs'. Does the CRP test help with this?

"Yes, we find that the CRP test reduces empirical prescribing where antibiotics are given purely on the basis of signs and symptoms. The CRP adds a bit more objectivity to the assessment which supports appropriate prescribing. It also means we can assess how the patient is responding to a course of antibiotics which reduces the incidence of changing the prescription because signs and symptoms are unchanged."

Are there any other comments?

"Not specifically related to the QuikRead go CRP. We currently don't have an interface to our Electronic Patient Records (Telepath), but we know the system is capable of being interfaced. We also have to be aware not to treat the number - in other words CRP is a part of the overall picture."

Caroline has seen the benefits of testing at home from a clinician's perspective and as a relative when her father was receiving treatment from the 'Hospital-at-Home' team. They were able to assess him and administer antibiotics based on a very high CRP level which meant he didn't have to be admitted to the hospital.

*"He had a serious infection and the CRP results allowed us to see that with the treatment things were moving in the right direction, it meant he didn't get admitted to hospital."
Caroline's father said: "The CRP going down gave me reassurance that things were improving and it helped communicate this to relatives. Also, the sample collection didn't hurt."*

Caroline, do you see a place for CRP testing in the Community Hospital?

"Yes, there are times within the community hospital when a CRP result will significantly help the nurses make decisions on how to treat a patient or whether to admit them to the hospital. We are in the process of looking at funding from health related charities like the League of Friends or Kent Community Health NHS Foundation Trust charity - 'i care', to purchase a QuikRead go and bring the CRP testing to the community hospital, which will benefit the clinicians and most importantly the service we are offering our patients."

References:

[1] Implementing a hospital-at-home service to improve patient outcomes – British Journal of Nursing:
<https://www.britishjournalofnursing.com/content/other/implementing-a-hospital-at-home-service-to-improve-patient-outcomes>

