A Guide to: Saving £43,713.54 (€48,356.65) per year.

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A Quality Improvement Project changing the frequency of blood monitoring of Patients on Biologic Therapy, according to best practise Guidelines.

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Musgrave Park Rheumatology Department facilitates intravenous infusions of biologic therapy on a daily basis. We call it our Biologic clinic. Each Biologic clinic has between 8-12 patients in attendance. These patients are receiving their intravenous infusions anywhere from 4 weekly to yearly.

The usual protocol for these patients was that they had their routine bloods taken on arrival to the clinic. This would include FBC, U&E, LFTs, ESR, CRP.

We evaluated guidance on drug monitoring, according to the British Society of Rheumatology and the Summary of Product Characteristics, and found that in many cases, the frequency of our blood monitoring was surplus to requirement.

Standards Set

- 100% of our patients who have bloods taken at Biologic clinic should have this recorded in the blood monitoring table. This was designed as part of tbe project.

Date	Patient Details	Drug	Investigations	Medical Professional who re-viewed	Results checked

Preparation and planning

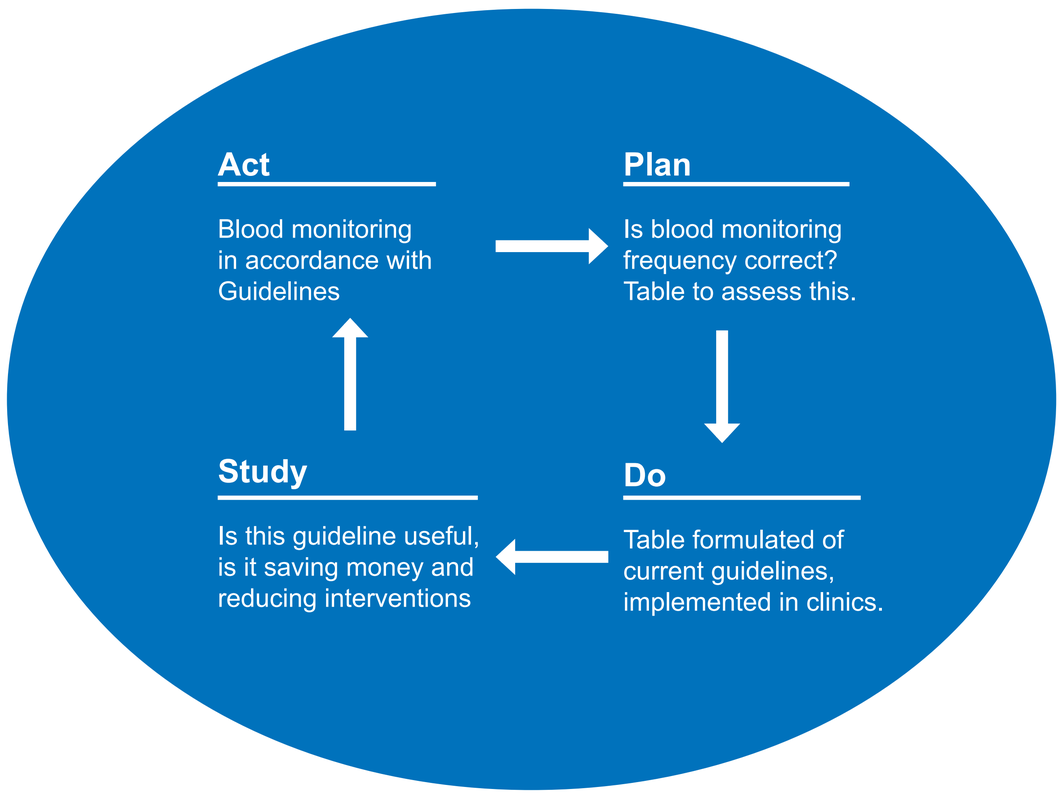
- Prior to commencement, we discussed with the Nurses and Doctors who would be leading the Biologic clinic. We showed them the table for recording and advised that all patients should have whichever bloods are sent, recorded on the chart.

Data Collection 1

- The results from our first data collection of 92 patients between 30/09/19 to 11/10/19, showed that 80% of patients in attendance had routine blood tests taken.

Changes to be implemented

- We were struck by the frequency of blood monitoring. Not only being unnecessary burden for patients, but also a significant drain on staff time in Musgrave and in the labs, as well as significant unnecessary cost. We constructed a proforma of correct frequency of drug monitoring according to the British Society of Rheumatology and Summary of Product Characteristics. This is a one page poster which has been laminated and put up on the walls in not only the Biologic clinic, but also in our Day ward and on the inpatient ward, so that this frequency of blood monitoring can be used across the board for our patients in Rheumatology. We did advise medical staff that this proforma is a guideline. If patients have had a recent infection, or currently feel unwell, it is up to the discretion of the medical professional what investigations are sent.

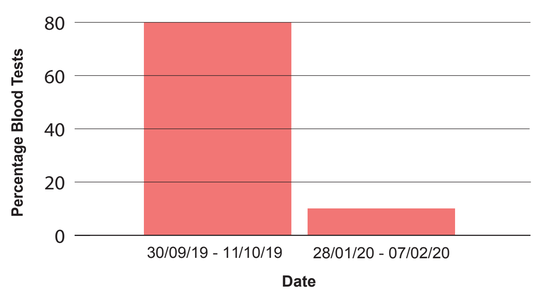


This is the blood monitoring guide:

Anti-TNF	Adalimumab (Humira/Imraldi)	FBC, U&E, LFT, ESR	3 monthly for one year then 6 monthly
	Etanercept (Enbrel/Benepali)		
	Golimumab (Simponi)		
	Certolizumab (Cimzia)		
	Infliximab (Remicade/Remsima)		
T cell inhibitor (CD28)	Abatacept (Orencia IV/SC)	FBC, U&E, LFT, ESR	3 monthly for one year then 6 monthly
B cell inhibitor (CD20)	Rituximab (Mabthera/Truxima)	FBC, U&E, LFT, ESR, Immunoglobulins	2 weeks prior to first dose of each cycle provided stable
B cell inhibitor (binds to BLyS)	Belimumab (Benlysta)	FBC, U&E, LFT, ESR Immunoglobulins	Prior to each infusion 6 monthly
IL6 Blocker	Tocilizumab (Roactemra IV/SC)	FBC, U&E, LFT, ESR	Monthly first 6 months then 3 monthly provided stable
	Sarilumab (Kevzara SC)	Lipids	At 3 months then 6 monthly
IL-17A Blocker	Secukinumab (Cocentyx) Ixekizumab (Taltz)	FBC, U&E, LFT, ESR	3 monthly for one year then 6 monthly
JAK inhibitor	Baracitinib (Olumiant)	FBC, U&E, LFT, ESR Lipids	Monthly first 3 months then 3 monthly 3 months after initiation then 3 monthly
	Tofacitinib (Xeljanz)	Blood Pressure	Each visit
IL-1 Blocker	Anakinra (Kineret)	FBC, U&E, LFT, ESR	3 monthly for one year then 6 monthly
IL-12 & IL-23 Blocker	Ustekinumab (Stelara)	FBC, U&E, LFT, ESR	3 monthly for one year then 6 monthly

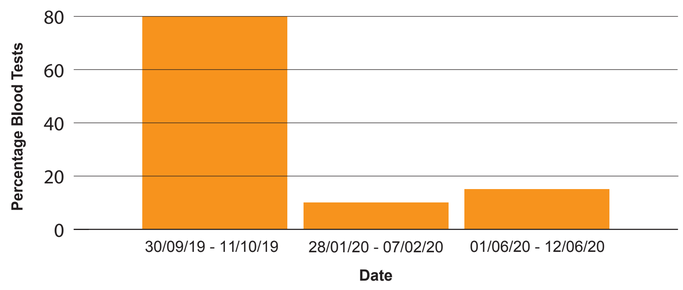
Data Collection 2

- Results found from analysing a second two week period of blood monitoring, after the implementation of our monitoring guidelines. Of 118, 12 patients had blood checked between 28/01/20 and 07/02/20. This meant a reduction in the percentage from 80% to 10%.



Data Collection 3

- Results found from analysing a third two week period of blood monitoring seen below. Of 103, 14 patients had blood checked between 01/06/20 and 12/06/20. This shows a sustained reduction in blood monitoring, from 80% pre intervention to 10% to 13.5%.



CONCLUSION

Difference in cost of blood tests sent, after implementation of monitoring guidance was £1681.29 per two week period.

It is always important to review literature to assess whether current practise is correct or whether it could be updated. This project has demonstrated how reviewing guidance can lead to significant savings.

The benefits of this quality improvement project are many.

COST REDUCTION - a saving of at least £43,713.54 per Rheumatology unit, in one year.

SAVING MEDICAL PROFESSIONAL TIME - time taking bloods, sending them to the lab, checking results.

SAVING LAB TECHNICIAN TIME

PATIENT SAFETY - less likely to miss checking blood results if less have been sent.

PATIENT COMFORT - patients do not like getting their bloods taken.

OVERALL PATIENT SATISFACTION - these patients are almost all lifelong sufferers of chronic disease. They have a life ahead of them of having frequent infusions. If there is any way we can make life easier for them, no matter how small, we want to do it.