

POCT

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BACKGROUND

- 1500 patients attending St James's Hospital Anticoagulation Clinic.
- 24,500 attendances per year.
- National Centre for Hereditary Coagulation Disorders (NCHCD) has responsibility for the Anticoagulation Clinic.

PLANNING A SERVICE

- Why do you want a POCT service?
- What are the benefits of service to clinic and patients?
- How many patients are to be included?
- Who will be involved in training patients?
- Advice from hospital's POCT committee.
- Cost to Patients?

PLANNING A BUSINESS CASE

Business proposal submitted to the Health Service Executive.

Included in proposal:

- A. Web based dosing system Dawn V7, including remote access by GP's.
- B. Purchase of 300 CoaguChek XS devices.
- c. Third party software applications for Text Messaging.
Valentia Technologies.



FUNDING

Funding allocated from Health Service Executive innovation fund

HOW TO SELECT PATIENTS FOR PST

Acceptance Criteria for PST.

- Patients on warfarin long term.
- Patients who have sufficient manual dexterity, eyesight and cognitive skills for normal daily tasks.
- Individuals who are motivated to be involved with their own care/ or primary carers who will take the responsibility.
- Patients who have been compliant in attending the anticoagulation service and taking of medication.

EXCLUSION CRITERIA FOR POCT

Certain Conditions may cause physiological interferences:

- Severe Anaemia
- Polycythaemia
- Jaundice
- Uncontrolled hypertriglyceridaemia
- APS/Lupus Anticoagulant
- Any patient with a history of above must be discussed with the Consultant Haematologist.

TRAINING PROGRAMME

- Patients will attend the Anticoagulation Clinic for a venous INR prior to training session.
- Venous and Capillary blood results are compared and should not have an INR variance of greater than 0.5 units.
- Demonstration by the Nurse on how to utilise the Coaguchek XS POC device. This includes visual and verbal instructions.

TRAINING PROGRAMME

On leaving the first session of training the patient should have:

- POC device with pen and lancets. (small sharps bin)
- 6 strips for training purposes
- DVD - “Monitor your INR levels accurately” provided by Roche.

Contact No's for:

1. Nurse
2. Roche Customer Care
3. Roche Technical Support

Patients warfarin is dosed as per Medication Management Policy and a date/time arranged for **second** training session.

TRAINING PROGRAMME

Second training session

The patient must:

- Show competency in the use of coaguchek
- Complete short written test (10 questions)
- Sign contract of compliance

LEARNING OBJECTIVES

The patient should have an understanding of:

- ✓ The indication for warfarin.
- ✓ Warfarin therapy monitoring.
- ✓ Side effects of warfarin therapy.
- ✓ The importance of reporting any adverse incident.
- ✓ Potential for drug interactions with warfarin and reporting any medication changes.
- ✓ Keeping a record of INR results and doses.
- ✓ Operating the CoaguChek XS and finger stick testing.
- ✓ Related health and safety issues.
- ✓ Quality control.
- ✓ Only testing INR as and when requested by clinic.

UNSUITABLE PATIENTS

Patients found not to be competent during the training programme, can be reassessed at a later time, but remain in general anticoagulation clinic.

Should a patient deemed competent, *fail* to comply with the conditions of the contract signed after their training programme, SJH will request the return of the CoaguChek XS.

REVIEW CLINIC

All Patients reviewed after first 3 months

- Quality control
- Calibration
- Patient technique

Subsequent reviews at 6 monthly intervals.

DOCUMENTATION

Service documentation is incorporated into our SOPs.

We have SOPS on:

- Medication Management .
- Self Testing Clinic.
- Operational Procedures of Clinic.
- Text Messaging.

The SOPs are reviewed annually or more frequently if necessary.

AUDIT

We utilise Dawn v7 for our monthly audit reports.

The reports are as follows;

Percentage time in range monthly for both general anticoagulation clinic and self testing clinic.

NPSA KPIs:

INRs>5

INRs>8

INRs>1 unit below target

Specific events are also reported on, which are customised for our own clinic.

Monthly review of Octaplex use within the hospital, which we cross reference with the Dawn system.

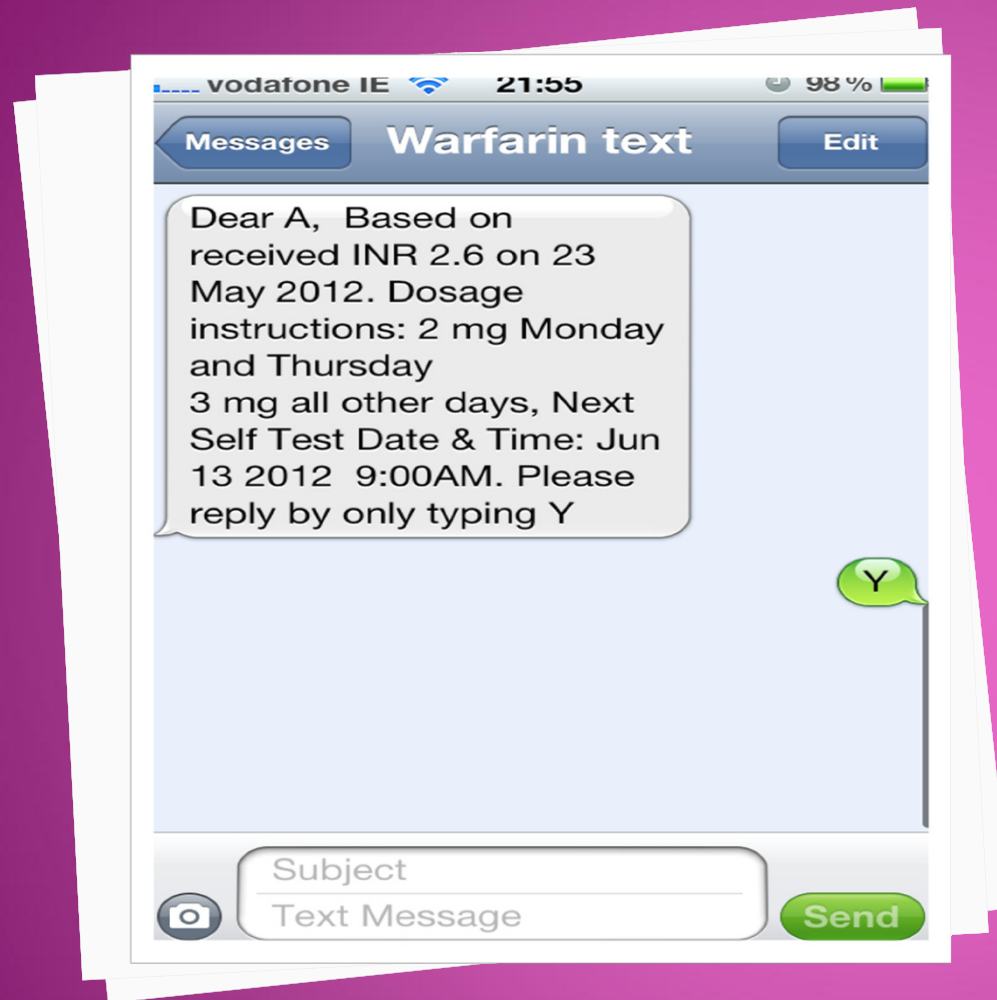
BENEFITS OF PST SERVICES

- Improvement in the quality of life for patients (work, holidays etc...)
- Patient Empowerment.
- Safe effective monitoring.
- More Time In Range.

PROBLEM

With up to 250 self test patients using telephone communication, there is the potential for error due to the volume of phone calls, including:

- ◉ Patient unable to get through to the clinic.
- ◉ Pressure on the nurse due to volume of calls.
- ◉ Transcription errors - nurse. (mishearing the INR)
- ◉ Transcription errors - patient (mishearing dosing instructions)



TEXT MESSAGING

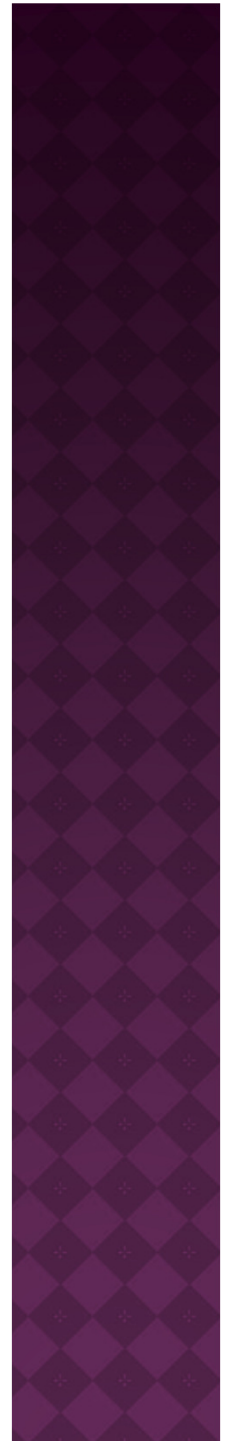
Web based Warfarin Management System(WMS)

THE IDEA

St. James's Hospital in association with **Valentia Technologies** has designed and developed a web based Warfarin Management System (WMS).

This web based system has been designed to accept the self test patient INR in the form of a text message and transmit it automatically into the DAWN system where it will appear in exactly the same way as an INR result from the Laboratory.

The application therefore sits between the patient mobile phone and the DAWN system



HOW IT WORKS

The WMS has been designed to associate the patient MRN with their mobile phone number.

Once the patient has performed their INR in the home, they open the text message application on their phone and enter the result twice in a specific format;

RESULT space RESULT

This is done for validation purposes to ensure the patient is entering the correct result. They then send the result (as a text message) to a specific mobile number for the clinic.

The patient then receives their dosage instructions back in the form of a text message

SYSTEM VALIDATION

The primary objective of the validation was to fully test the developed text application with respect to accuracy, functionality, reliability and ease of use.

The patient focus group was formed (10 patients) and three User Acceptance Test (UAT) scripts were developed as follows;

- For staff to test and validate full end to end functionality of the system including error alerts, e-mail messages, system integration, interfaces etc.
- For the patient focus group to fully test all possible scenarios under supervision in SJH on 3 separate occasions.
- For the patient focus group to test the system in their own home, once a week, for 6 weeks.

VALIDATION (PUT SIMPLY)

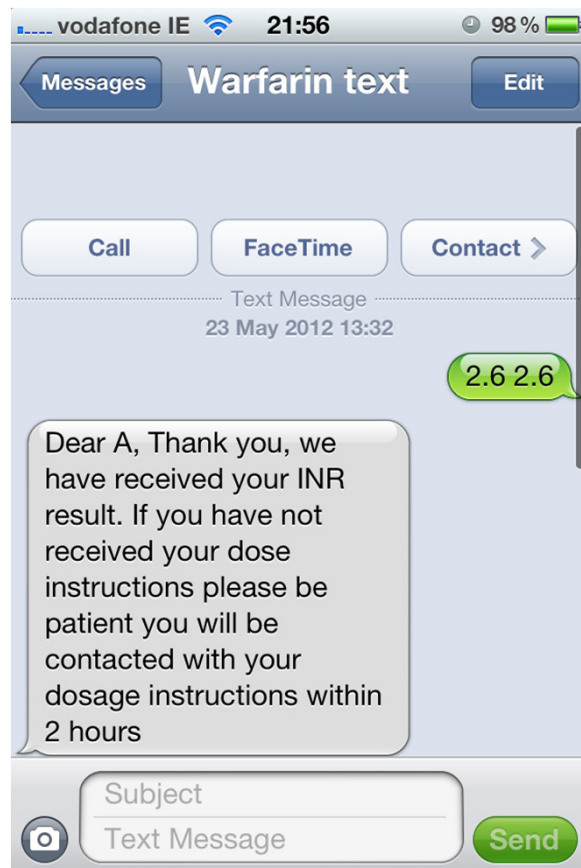
- The 10 patients were educated on the process and given a copy of the user guide.
- The focus group came to hospital site on three separate occasions to test the system.
- Patients and staff covered all possible and potential scenarios using the text messaging system.
- All issues were fed back to Valentia Technologies, who made modifications where necessary.
- The 10 patients text their results weekly for six weeks from home.

RESULTS

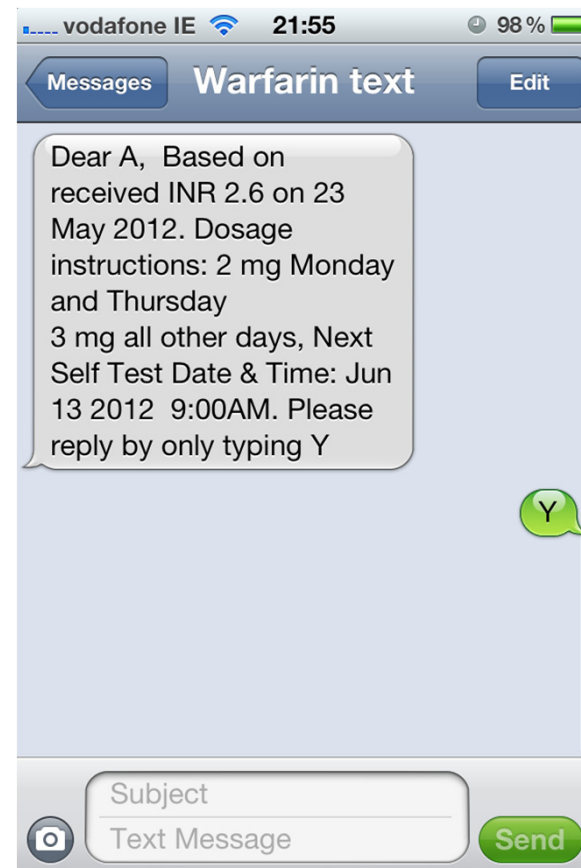
Results showed that all patients were able to text their results in the correct format.

They fully understood the dosage instructions they received by text and they successfully acknowledged that they had received their dose instructions.

HOW IT LOOKS



Patient's INR and acknowledgement



Dosage and confirmation

QUESTIONS

