

**DEVELOPMENT OF THE
ANTICOAGULATION SERVICE
TO INCLUDE IN-PATIENT
DOSING AT THE UNIVERSITY
HOSPITAL OF NORTH
STAFFORDSHIRE**

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University Hospital of North Staffordshire

- The University Hospital of North Staffordshire NHS trust is a 800 bed University teaching hospital serving over 3 million people. The 90 acre site is currently undergoing a £370 million redevelopment. A new Pathology laboratory will be completed in 2012

Anticoagulant Management Service

- Initially we provided a small number of face to face outreach clinics run by Biomedical Scientists
- The service was set up in 1998 to provide a service for the GP's
- The demand for the service has continued to grow – other UHNS providers have been amalgamated into the Haematology model
- Current patient numbers 5700 - service delivered in various forms

Anticoagulant Management Service

- In July 2009 we upgraded to DAWN version 7
- It was a very smooth transition
- The web based application is far superior in terms of running a community model
- Access via the Trust intranet site
- Many advantages in terms of audit

Drivers for change

- Service limited to out-patients only. No seamless transfer from in-patient to out-patient
- Limited initiation clinics provided by Pharmacy team for DVT patients
- BMS' unable to work under PGD's therefore multi disciplinary team considered advantageous
- No weekend service

Drivers for change

- Junior doctors not adhering to correct loading algorithms despite medical guidelines
- Patients well maintained by Haematology clinic but when admitted to hospital displayed poor control
- INR checked too frequently and consequently dose adjusted on a daily basis

Drivers for change

- No direct AF initiation pathway for GP's
- AF patients – unreasonable waiting time to commence warfarin
- Approximately 12,500 strokes per year are thought to be attributed to AF
- Safety; warfarin is amongst the 10 most common drugs resulting in claims against the NHS
- Audit proposed by Lead Clinician

Drivers for change

Audit findings;

- Patients on warfarin have extended hospital stays due to anticoagulation issues
- Warfarin initiation at UHNS was failing to comply with National Guidelines. NPSA BCSH
- 51% of patients loaded on the incorrect algorithm
- 53% of patients and carers received limited or no counselling

Business Case

- Audit demonstrated that 230 bed days lost/month due to inefficient anticoagulation
- Bed day costs estimated at £229/day
- Business case presented on the basis of a spend to save initiative
- Funding for 2 WTE Anticoagulant Nurse specialists (ANS) at Band 6 approved (12 month fixed term contract)

Engaging the PCT's

- PCT leads informed that business case for in-patients had been successful
- PCT's secured funding for further WTE ANS so that GP's had direct access for AF patients
- Criteria for urgent AF referrals was agreed based on CHA2DS2- VASc score

Project Development

- UHNS Operational Policy
- PGD's
- Intranet site set up to include guidance on correct referral route
- Job descriptions written and evaluated
- Comprehensive training package developed for nurses

Project Development

- Recruitment and selection process led to the employment of 4 nurses. 1 WTE and 3 part time nurses (2 WTE)
- Employed early January 2011
- Intensive training took place involving Lead Clinician, VTE Nurse, pharmacy team and Anticoagulant Management team

Project Development

- Go live February 2011
- Comprehensive initiation service was offered to both in-patients and out-patients
- Consultants and Ward Managers/Matrons were targeted to cascade information regarding the service

Advantages to New Service

- One stop service
- Counselling provided to all patients commencing anticoagulation
- NPSA yellow booklet provided to all patients
- Patients started on correct induction algorithm
- Capillary INR generated at bedside giving instant result and subsequent advice

Advantages To New Service

- Same day service if referral received before 3:30pm on weekdays and 10:00am on weekends/Bank Holidays
- A 7 day service provided for both in-patient and out-patient follow up
- All patients referred with a diagnosis of AF are offered an Induction appointment within 2 weeks.
- GPs now refer directly into the service
- Warfarin provided in clinic under PGD

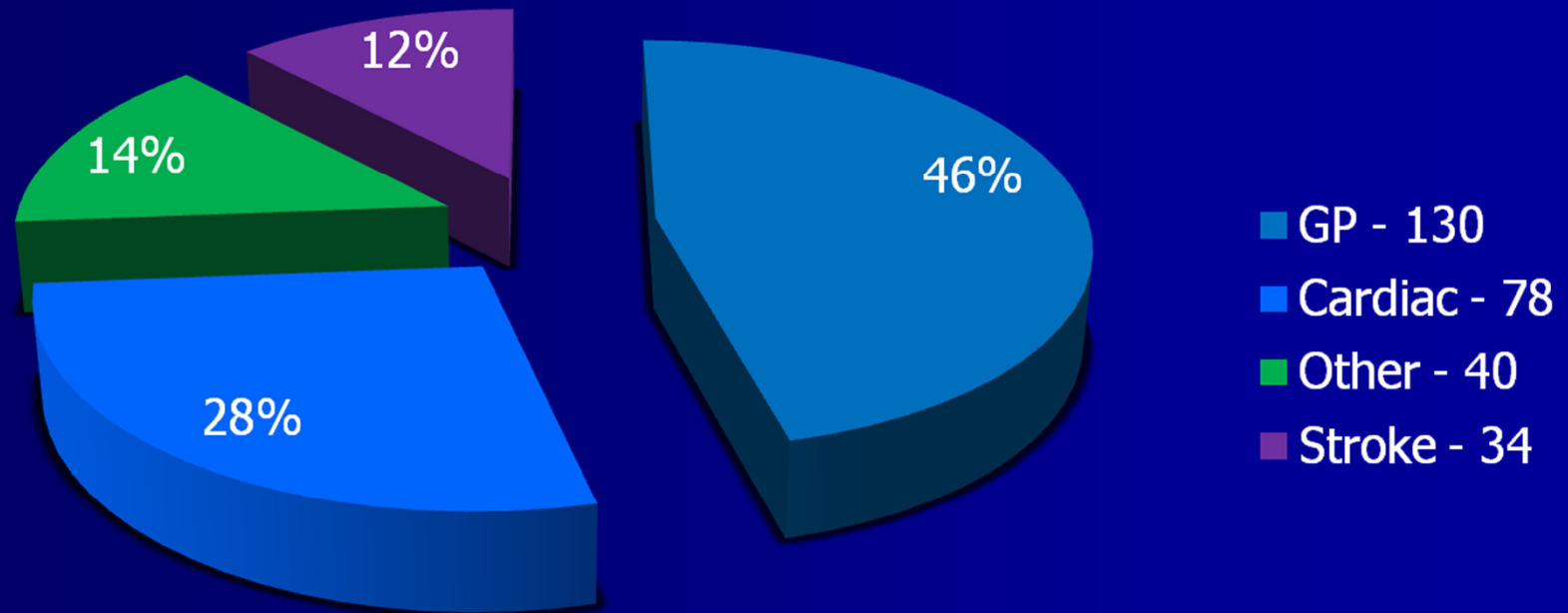
Initial teething problems

- Despite every effort to communicate with clinicians and nursing staff initial uptake slow
- Some specialties reluctant to use the service
- Medical staff over-riding the ANS warfarin dose instructions
- The ANS initially not being able to write the Warfarin dose instruction directly onto the prescription chart – lack of confidence

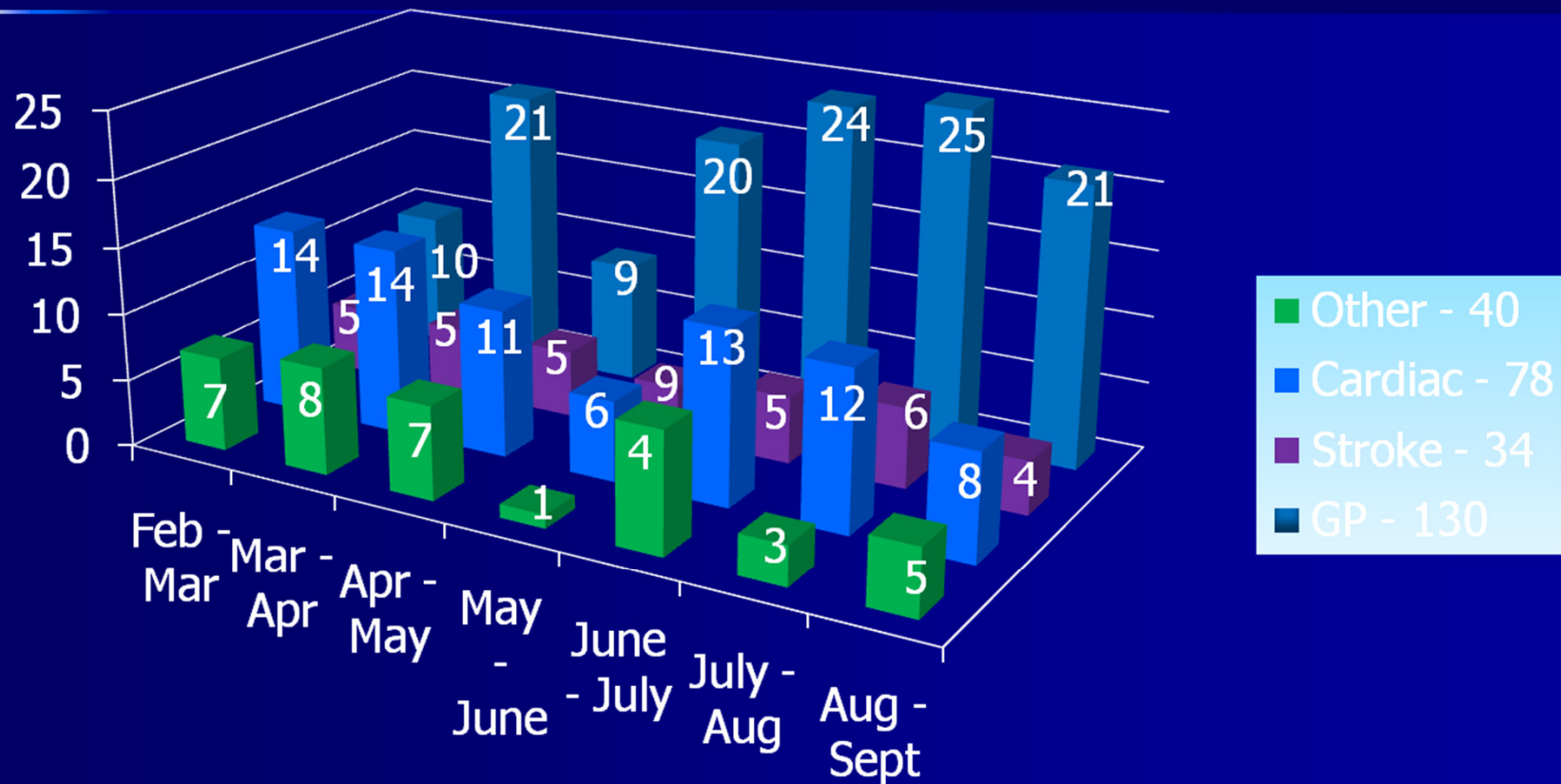
Solutions

- Non Medical prescriber issues – new protocol for the modification of warfarin therapy
- Nurses to obtain non medical prescriber qualification
- Engaging the junior medical staff
- Explaining how DAWN works

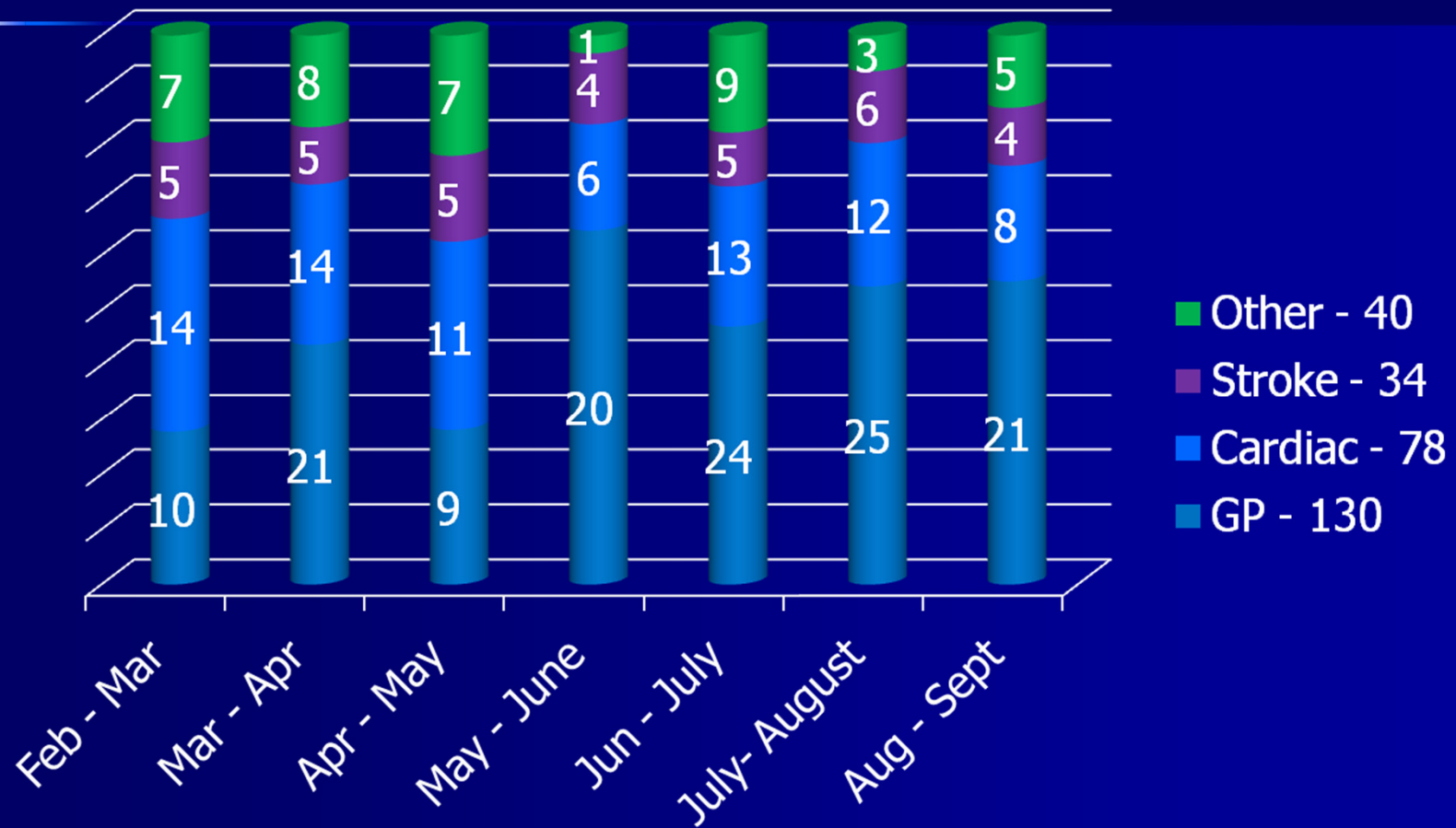
All outpatient AF referrals received from 14/2/11 – 13/9/11



Outpatient AF referrals monthly (mid month – mid month)



Outpatient AF referrals monthly (mid month – mid month)



Securing Continuation of the service

- Funding recently secured for further 2 years following benefits review update
- Funding agreed for finite time due to potential new anticoagulants
- Service reported no delays attributed to induction and/or monitoring
- Target of scheme to reduce delays associated with inefficient anticoagulation by 75% achieved
- VTE and anticoagulation service worked closely together to secure CQUIN rewards

Future developments

- Expansion of role to cover the administration of Low Molecular Weight Heparin (LMWH)
- Current arrangements fragmented – proposal to streamline the provision for LMWH
- PGD written

Future developments

- Electronic referral form
- Target specialties where uptake low – supported by Thrombosis Committee
- Audit initiated to investigate patients not referred to service
- Lead Clinician chairing regional Thrombosis Committee – collective decision regarding new anticoagulants