

# Audit of Warfarin Monitoring Service at Ely Bridge Surgery,

February 2004

## Background

- The current warfarin monitoring service commenced in August 2003. The service is protocol driven and nurse-led, with problems referred to a lead clinician when necessary.
- A computer system – RAT (Regulating Anticoagulation Therapy), based on the 1998 guidelines is used for maintaining a register, dosing patients and facilitating audit.
- Previous to August 2003, patients on warfarin who were surgery monitored, were dosed by one of two nurses or the doctor on call, using the 'Guidelines on Oral Anticoagulation 1998' as a basis. A formal surgery register of patients was not kept, and audit was not carried out. Detailed comparisons of audit standards between the previous and current systems are therefore difficult.

## Numbers

- The average monthly number of **patients registered** each month fell from –  
May-Aug = 97  
to Sept - Jan = 90  
  
This is a **7% fall**

This reduction is chiefly due to the transfer of care of some housebound patients back to the hospital for monitoring. The district nurses had reported repeated problems with venesection in these patients, having unstable INRs and needing frequent testing.

- The average monthly number of **patients attending for INRs** fell from –  
May –Aug = 79  
to Sept – Jan = 64  
  
This is a **19% fall**

The number of patients attending for INR testing per month has reduced steadily following the introduction of the new system. To illustrate, the number attending in August was 79, reducing to 57 by January. This is largely due to the longer intervals advised for repeat INRs particularly for stable patients on the RAT system, and in part due to the referral of some unstable patients back to secondary care for monitoring.

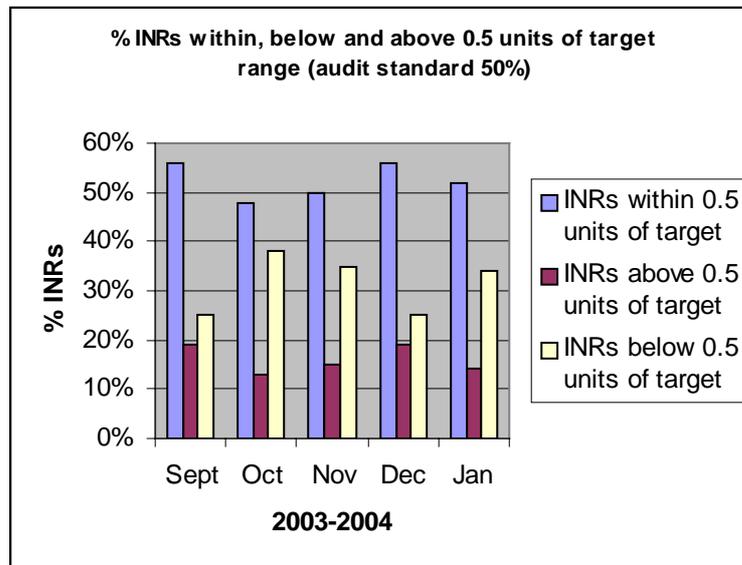
- The average number of **INR tests taken** each month fell from –  
May – Aug = 143  
to Sept – Jan = 119  
  
This is a **17% fall**

## Audit Standards

- Standard **50% of INRs within 0.5 units of target range**: Sept – Jan = **52%** (average)

INRs **below** = 31% (average)

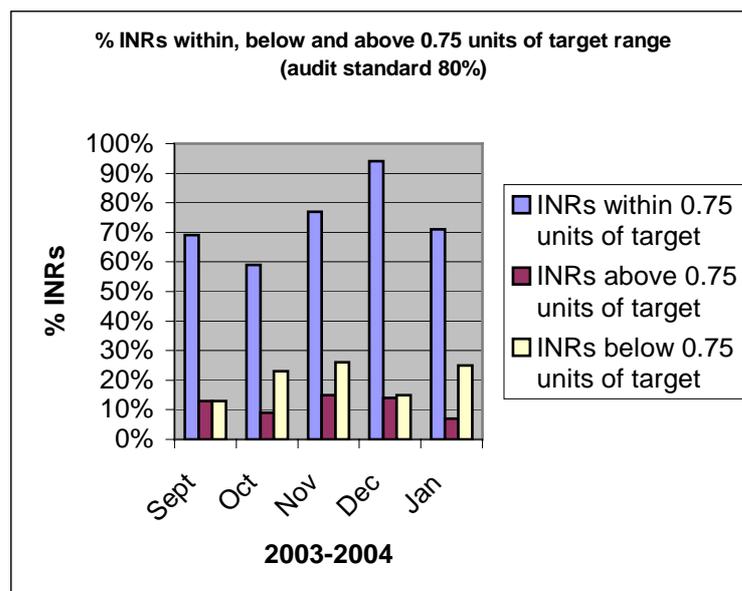
INRs **above** = 16% (average)



- Standard **80% of INRs within 0.75 units of target range**: Sept – Jan = **70%** (average)

INRs **below** = 19% (average)

INRs **above** = 11% (average)



- **Haemorrhage requiring admission** – none recorded on RAT – see recommendations.
- **Adverse effects of warfarin** – none recorded on RAT – see recommendations.
- **Deaths** – none.
- **Outcome review of patients with INR above 8** – none recorded on RAT – see recommendations.
- **Patients requiring therapeutic interventions to reverse warfarin** – none recorded – see recommendations.
- **Patients overdue for review** by more than 8 weeks – none. Identification and follow-up of late attenders operating successfully.

## Recommendations for improving Practice

- **Nurses to add adverse effects** / complications of warfarin therapy to the RAT programme to facilitate audit.
- Chase outstanding **cardiology reviews** x 4.
- There is an identified need for a **community phlebotomy service**, providing an expert service for patients in whom venous access can be difficult, and enabling more appropriate use of district nursing time.
- **Improve communication from the GPs** to the nursing team regarding –
  - patients who have discontinued warfarin therapy,
  - information in hospital letters regarding patients on the surgery warfarin register,
  - patients on the surgery warfarin register whom they have commenced on new medication including antibiotics, or changed existing dosages, in order to bring forward the INR test.
- Nurses to **maintain a separate record** of patients who -
  - have had an INR of above 8;
  - have needed therapeutic interventions to reverse the effects of warfarin, and
  - haemorrhage requiring admission.

Planned date for next audit – February 2005.

JK 13/2/04