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### A pharmacist integrated into a general practice setting - quality improvement outcomes in the management of anticoagulants

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## **A pharmacist integrated into a general practice setting - quality improvement outcomes in the management of anticoagulants**

### **Abstract**

Poster presentation at 2015 Primary Health Care Research Conference, Adelaide, Australia, 29-31 July.

### **Disciplines**

Medicine and Health Sciences | Social and Behavioral Sciences

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# A pharmacist integrated into a general practice setting - quality improvement outcomes in the management of anticoagulants

2015 PHC RESEARCH CONFERENCE: POSTER ABSTRACT

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## Organisation

[University of Wollongong](#), [Woonona Medical Practice](#), [Illawarra and Southern Practice Research Network](#)

## Aims & rationale

Ongoing anticoagulation is managed predominantly in primary care, by General Practitioners and practice nurses. The aim of this collaborative research was to determine if the integration of a clinical pharmacist into the team could improve the quality of management for the individual patient and within the practice; and to investigate other benefits of the placement.

## Methods

Following a retrospective review of anticoagulant practices, the pharmacist was placed within the practice for 5 months. Surrogate outcomes evaluated were measures of warfarin control for the individual patients and the practice, as well as the appropriateness of usage of the non-vitamin K oral anticoagulants (NOACs), apixaban, dabigatran and rivaroxaban, compared to previously collated measures. Significant clinical input into medication management, medicines information and quality improvement activities were documented.

## Findings

A trend towards improvement in warfarin management was observed. At the end of the study, all usage of NOACs was appropriate in the study population. Clinically significant input was made into quality improvement activities for reducing bleeding-risk; point-of-care testing; management by the practice of those patients having external haematological monitoring; and routine renal function monitoring for patients receiving NOACs.

Relevance to policy, research and/or practice needs

Clinical pharmacists have input to the quality and safety of medications in traditional settings: this opportunity is currently unavailable in an interdisciplinary general practice due to funding constraints. Results beyond an improvement in measures of anticoagulant management were realised in this study which provides evidence for the benefits of a clinical pharmacist in primary care.

#### Presentation type

Poster

#### Session theme

Integration

#### Presentation



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# A pharmacist integrated into a general practice setting - quality improvement outcomes in the management of anticoagulants

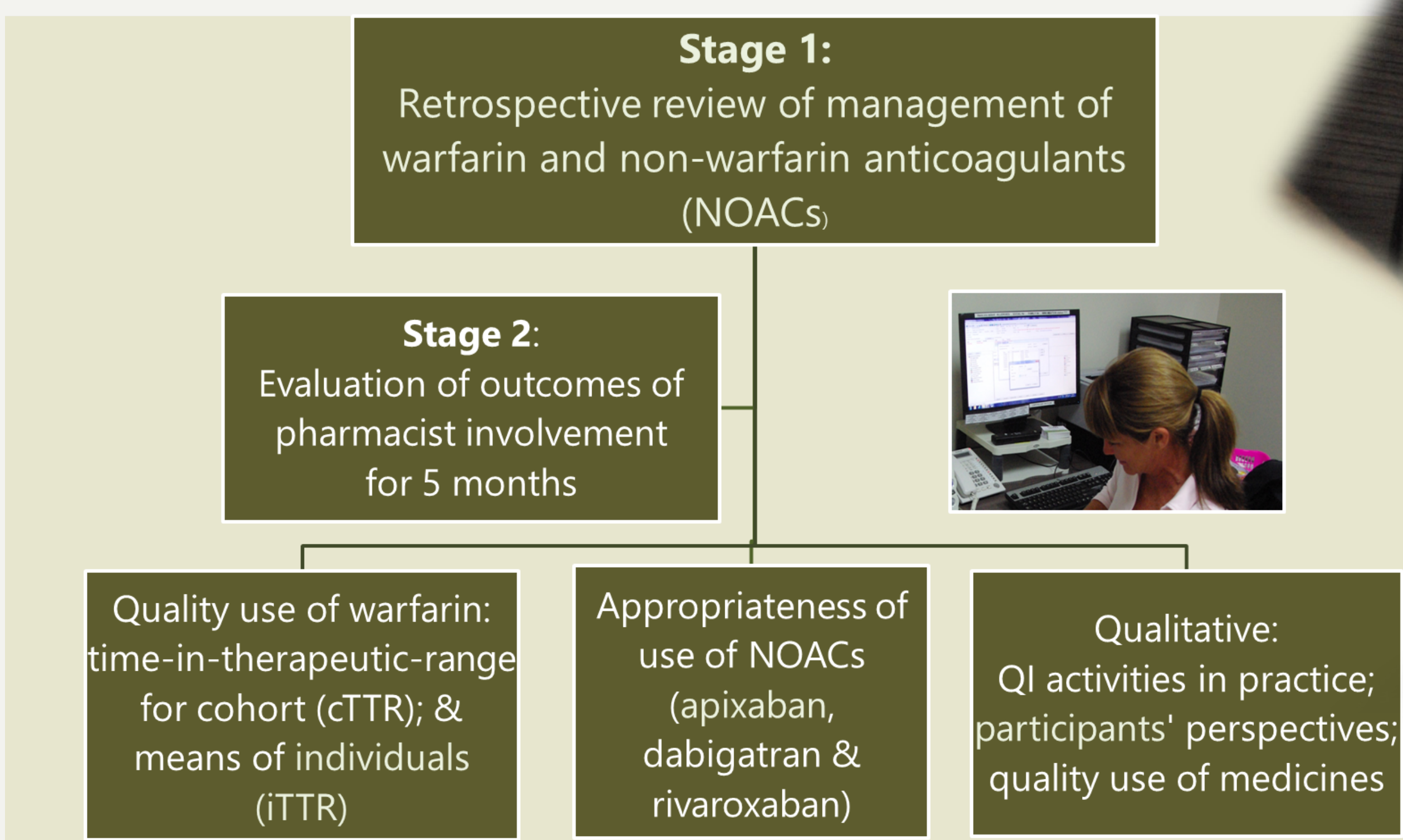
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## Background and aim

GPs and their staff manage ongoing anticoagulation in primary care. The aim of this collaborative research was to determine if adding a clinical pharmacist into the mix could improve the quality use of anticoagulants; and to investigate other benefits of the placement.

## Methods



## Results: quantitative evaluation

### Management of anticoagulants:

**Warfarin** (compared to stage 1) showed trends in improvement in:

- \* iTTRs for those patients having visit with pharmacist once only and also for those who saw the pharmacist more than once (range 2 –16 times); See Figure 1
- \* mean TTR for the total warfarin cohort (74% vs 70% n.s.)

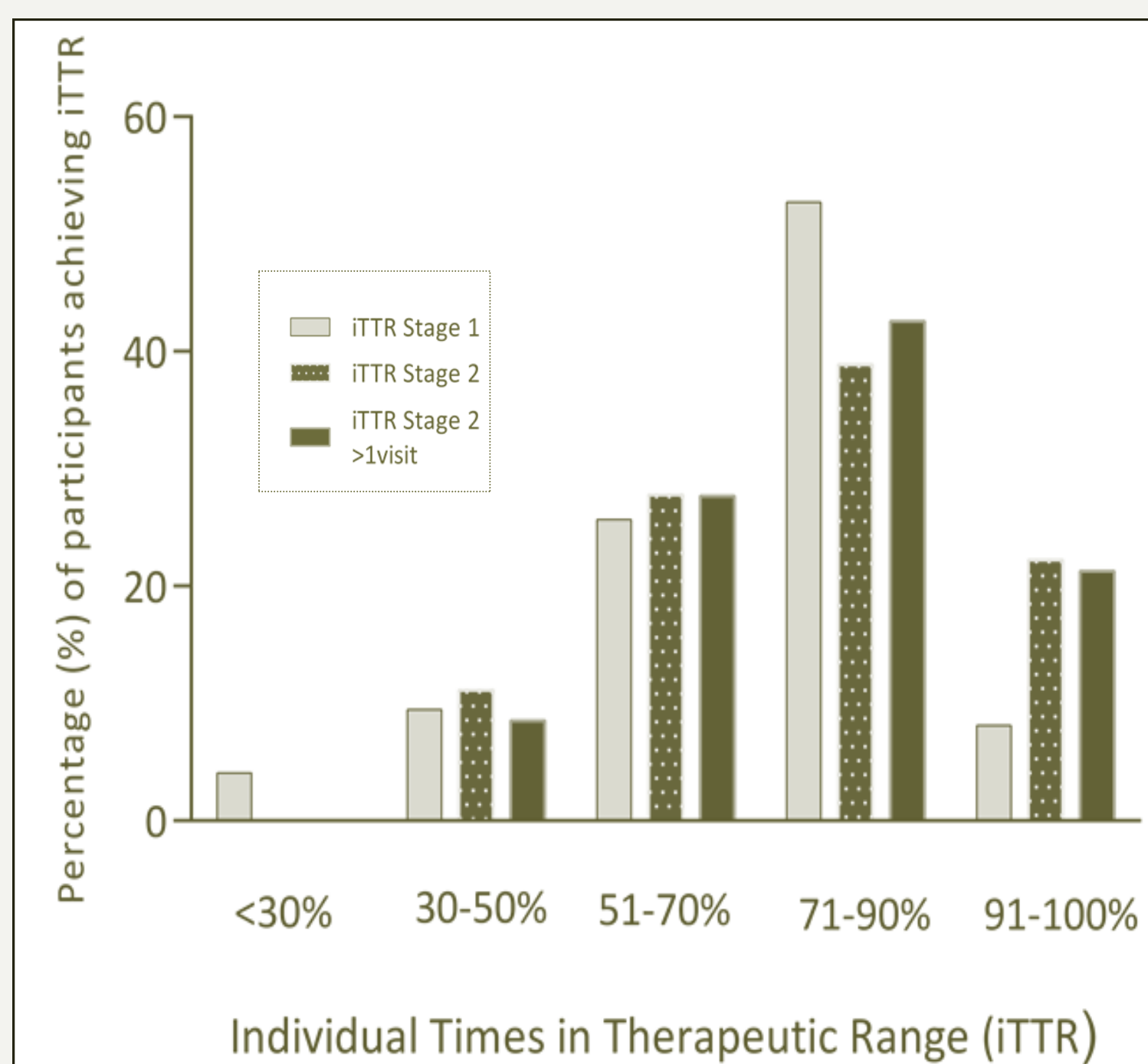
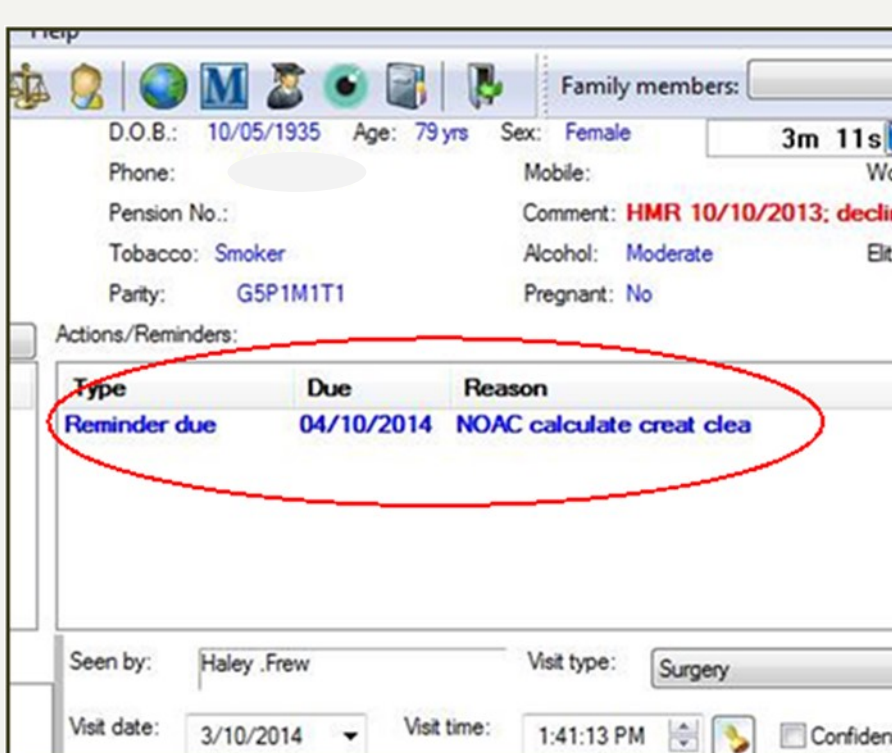


Figure 1: comparisons of the percentage of patients and iTTRs achieved in the warfarin cohort in stage 2, compared with those achieved in stage 1.

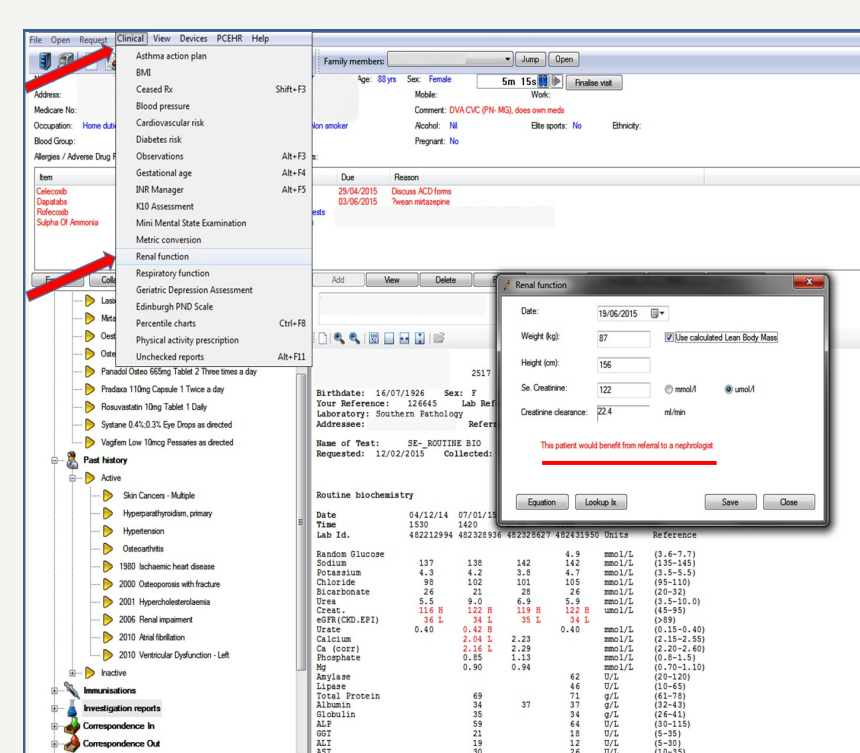
**NOACs** (compared to stage 1):

- \* All patients had recommended assessment of kidney function
- \* **Significant improvement in appropriateness of use of NOACs (50% vs 100%, p=0.0245)**

## Qualitative use of anticoagulants - NOACs



All patients prescribed a NOAC have 6-monthly reminder to assess kidney function, using estimated creatinine clearance in Best Practice™ clinical management software



The researcher gratefully acknowledges the Pharmacy Council of NSW for its support of this project; as well as all the GPs and staff of Woonona Medical Practice and the people receiving oral anticoagulants who consented to be involved.

## Qualitative evaluation - quality improvement

### Practice INR “Point-of-care” (PoCT) testing:

- \* External quality assurance & competencies established through Australian Point-of-care Practitioners’ Network ([appn.net.au](http://appn.net.au))
- \* Best practice procedures for monitoring INR -  
“Don’t squeeze the fingers!”- and aberrant INRs
- \* Education of patients - warm hands!



### Standardised patient advice & resources:

- \* Counselling tools, alert cards, “MedicAlert” recommendations
- \* Change of practice management of patients *not* receiving PoCT - using practice nurses and “recall & reminders”



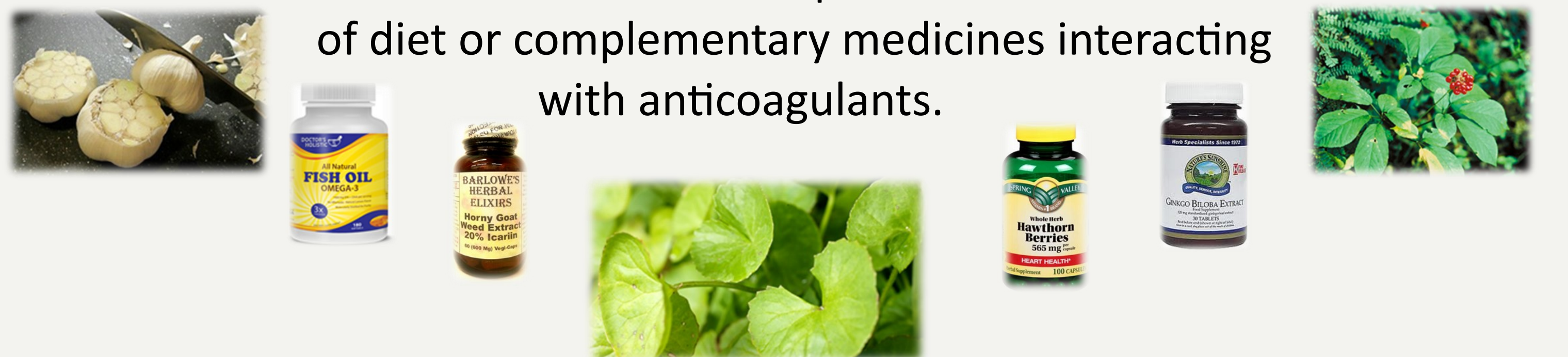
## Qualitative use of all medicines, including anticoagulants

### Clinical activities undertaken by pharmacist:

- \* Obtained best-possible medication history during consultations
- \* Ensured up-to-date medication lists
- \* Referred patients for GP consultation for other bleeding-risk factors (eg persistent hypertension requiring attention)
- \* Complex and not-so-complex medication management
- \* Medicines information



- \* Identified **ONE THIRD** of patients with use of diet or complementary medicines interacting with anticoagulants.



## Implications for practice and policy

Clinical pharmacists have input to the quality and safety of medications in traditional settings: this opportunity is currently unavailable in an interdisciplinary general practice.

The placement of a clinical pharmacist into this general practice realised quality improvements in the management of anticoagulants. Evidence is provided for the benefits of pharmacist integration into the primary healthcare team, at a time when discussion between the relevant professional bodies is occurring.

