RONT Management Consultants

Preoperative anticoagulation management in everyday clinical practice: an international FRAM analysis

Nikki Damen

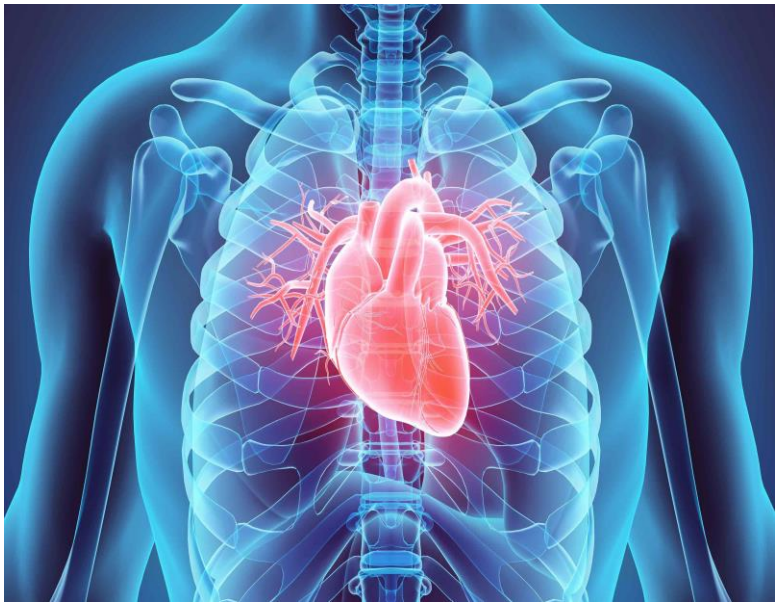
Doen wat werkt

Acknowledgements

KONINKLIJKE NEDERLANDSE
AKADEMIE VAN WETENSCHAPPEN

Instituut voor
Verantwoord Medicijngebruik

Anticoagulation therapy



HOSPITAL ADMISSIONS RELATED TO MEDICATION (HARM)

EEN PROSPECTIEF, MULTICENTER ONDERZOEK NAAR GENEESMIDDEL GERELATEERDE ZIEKENHUISOPNAMES

Eindrapport
November 2006

VUmc evico nivel

Antistollingszorg in Nederlandse ziekenhuizen

Evaluatie van tromboseprofylaxe en perioperatief antistollingsbeleid in vergelijking met geldende richtlijnen

Drs. M.L. Moeker
Dr. N.L. Damen
Dr. J.F. de Groot
Dr. M.C. de Bruijne
Prof. dr. C. Wagner

Dit rapport is een uitgave van het NIVEL en EMGO+ / VUmc. De gegevens mogen worden gebruikt met bronvermelding.

Pharmacoepidemiol Drug Saf. 2017 Jan;26(1):32-39. doi: 10.1002/pds.4037. Epub 2016 May 19.

Medication-related adverse events during hospitalization: a retrospective patient record review study in The Netherlands.

Damen NL[1], Baines R[1], Wagner C[1,2], Langelaan M[1].

Author information

Abstract

PURPOSE: Medication-related adverse events (MRAEs) are an important priority for patient safety. Results from Dutch AE studies showed that-despite various improvement initiatives-the incidence of preventable MRAEs did not decline. The aim of this study is to describe the characteristics of MRAEs during hospitalizations using national patient data from records of patients admitted to Dutch hospitals in 2008 and 2011/2012.

METHODS: Trained nurses and physicians reviewed the randomly selected records of 8071 patients admitted to one of 20 hospitals in 2008 or 2011/2012 during a two-stage review process. Patient and admission characteristics were collected. After identification of a MRAE, physicians determined their potential preventability, drug type, related prescribing factors, and potential consequences.

RESULTS: The physicians identified 928 adverse events (AEs) in 857 admissions, of which 218 (15.2%) were medication-related. They judged 55 (18.4%) of these as preventable. Preventability of MRAEs was high in anticoagulant treatment (42.5%). Haematoma (39.0%) and intra-cerebral haemorrhage (25.5%) were common types of anticoagulant-related AEs. Anticoagulant-related AEs were often related to dosage factors (46.9%) and often resulted in an intervention (80.2%), of which 40.2% was judged as preventable.

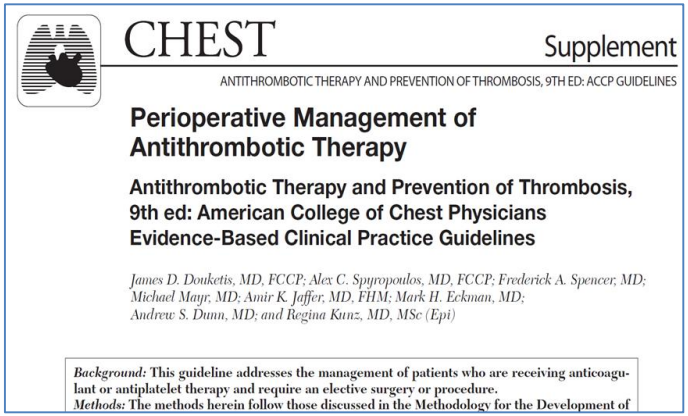
CONCLUSIONS: This study provided detailed information on MRAEs during hospital admissions in The Netherlands. A substantial proportion of AEs was medication-related (15.2%), of which 18.4% was judged to be preventable. As preventability in MRAEs was especially high in anticoagulant treatment (42.5%), those medications are a threat to patient safety. Future research and new safety programs should focus on prevention of AEs related to this medication group. Copyright © 2016 John Wiley & Sons, Ltd.

KEYWORDS: adverse events; anticoagulant treatment; hospitals; medication errors; patient safety; pharmacoepidemiology; retrospective studies

PMID: 27193415 DOI: 10.1002/pds.4037
[Indexed for MEDLINE]

Anticoagulation therapy

Around surgery, things are getting complex..



CHEST Supplement

ANTITHROMBOTIC THERAPY AND PREVENTION OF THROMBOSIS, 9TH ED: ACCP GUIDELINES

Perioperative Management of Antithrombotic Therapy

Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines

James D. Douketis, MD, FCCP; Alex C. Spyropoulos, MD, FCCP; Frederick A. Spencer, MD; Michael Mayr, MD; Amir K. Jaffer, MD, FHM; Mark H. Eckman, MD; Andrew S. Dunn, MD; and Regina Kunz, MD, MSc (Epi)

Background: **This guideline addresses the management of patients who are receiving anticoagulant or antiplatelet therapy and require an elective surgery or procedure.**
Methods: **The methods herein follow those discussed in the Methodology for the Development of**

Safety-I

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EEN PROSPECTIEF, MULTICENTER ONDERZOEK NAAR GENEESMIDDEL GERELATEERDE ZIEKENHUISOPNAMES

Eindrapport
November 2006

Dit rapport is een uitgave van het NIVEL. De gegevens mogen worden gebruikt met bronvermelding.

Implementatie Landelijke Standaard Ketenzorg Antistolling 2.0: stand van zaken

N. Damen
P. Damen
L. van Dijk
D. de Bakker
C. Wagner

Verdiepingsstudie implementatie Landelijk
Standaard Ketenzorg Antistolling (LS

Twee best practice-regio's na

Richtlijnen Implementatie
antistollingszorg

VEEL DRAAGVLAK, MAAR NOG GEEN STAANDE PRAKTIJK

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Dit onderzoek is als onderdeel van de "Monitor zorggerelateerde schade 2015-2018" gefinancierd door het Ministerie van Volksgezondheid, Welzijn en Sport

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But so far: improvement initiatives were only modestly successful!

Safety-II

BUT: 99% of the time things go ‘right’ (no errors): what can we learn from that?

Work-as-done at the frontline?

AIHI | AUSTRALIAN INSTITUTE OF HEALTH INNOVATION

Faculty of Medicine and Health Sciences

Safety-II study on 'Preoperative Anticoagulation Management (PAM)'

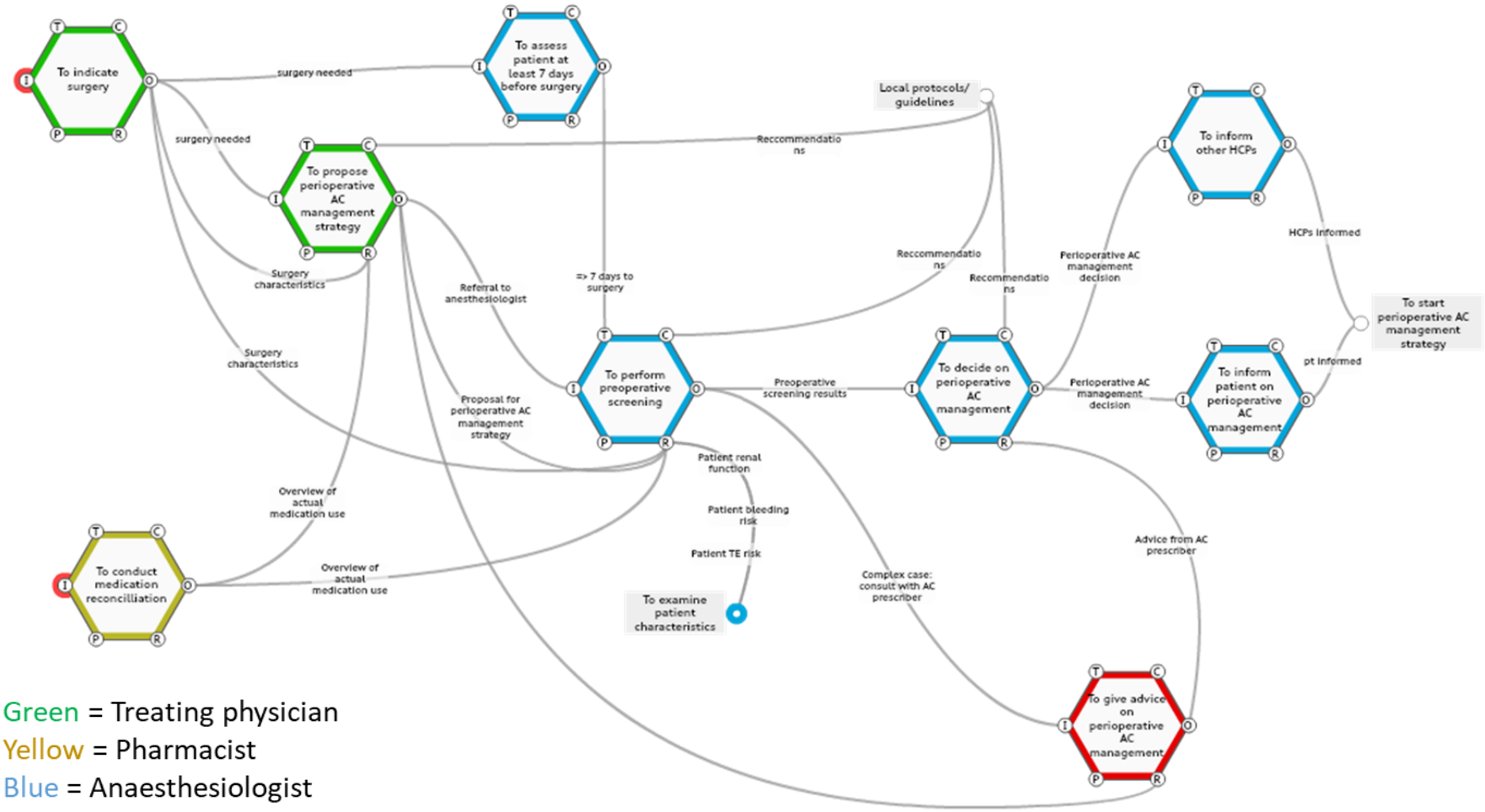
T C I FRAM O P R

Study design

"The aim of the study was to assess preoperative anticoagulation management in everyday practice and explore the usability and utility of FRAM".

- Two departments of Cardiothoracic Surgery:
  - Macquarie University Hospital (MUH), Sydney, Australia
  - Leiden University Medical Center (LUMC), Leiden, the Netherlands

‘Work-as-imagined’



Green = Treating physician
Yellow = Pharmacist
Blue = Anaesthesiologist
Red = Prescribing physician (cardiologist/pulmonologist)

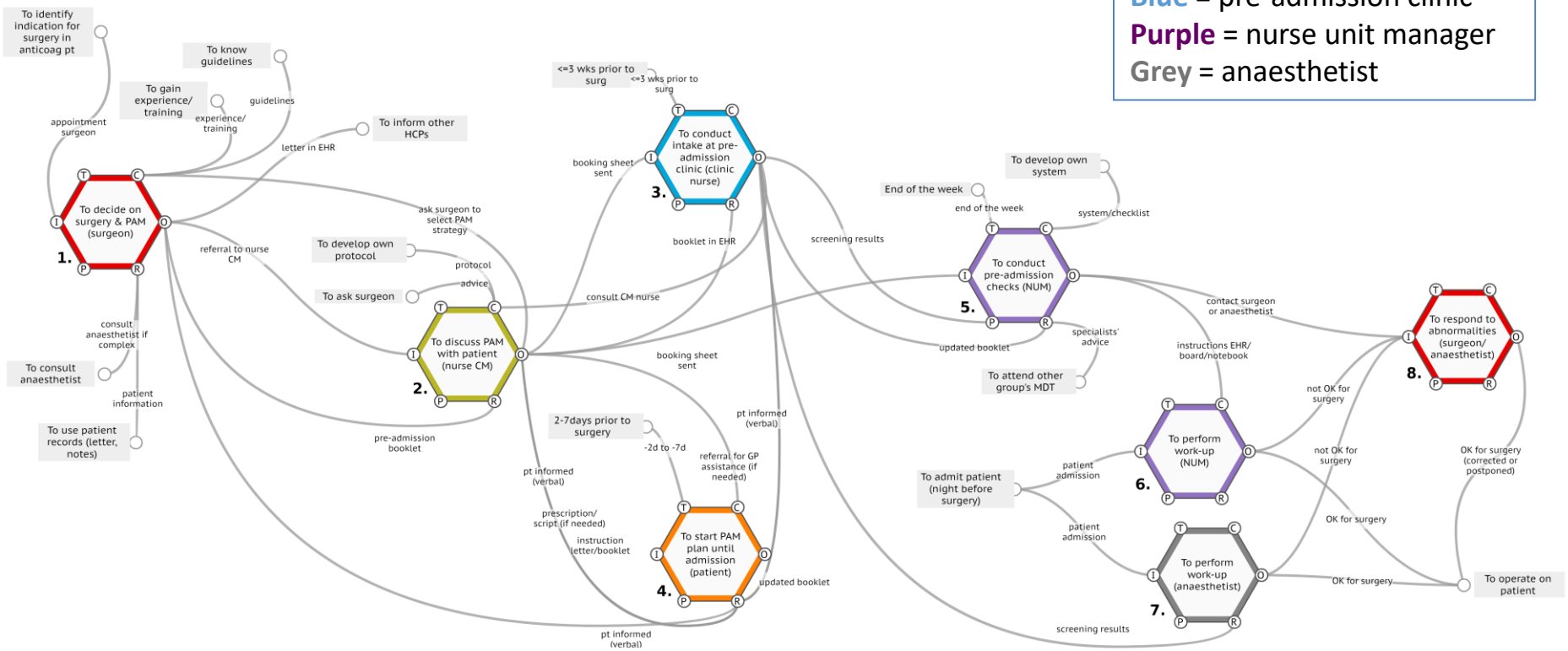
Work-as-done

- 18 semi-structured interviews with all disciplines involved in PAM:

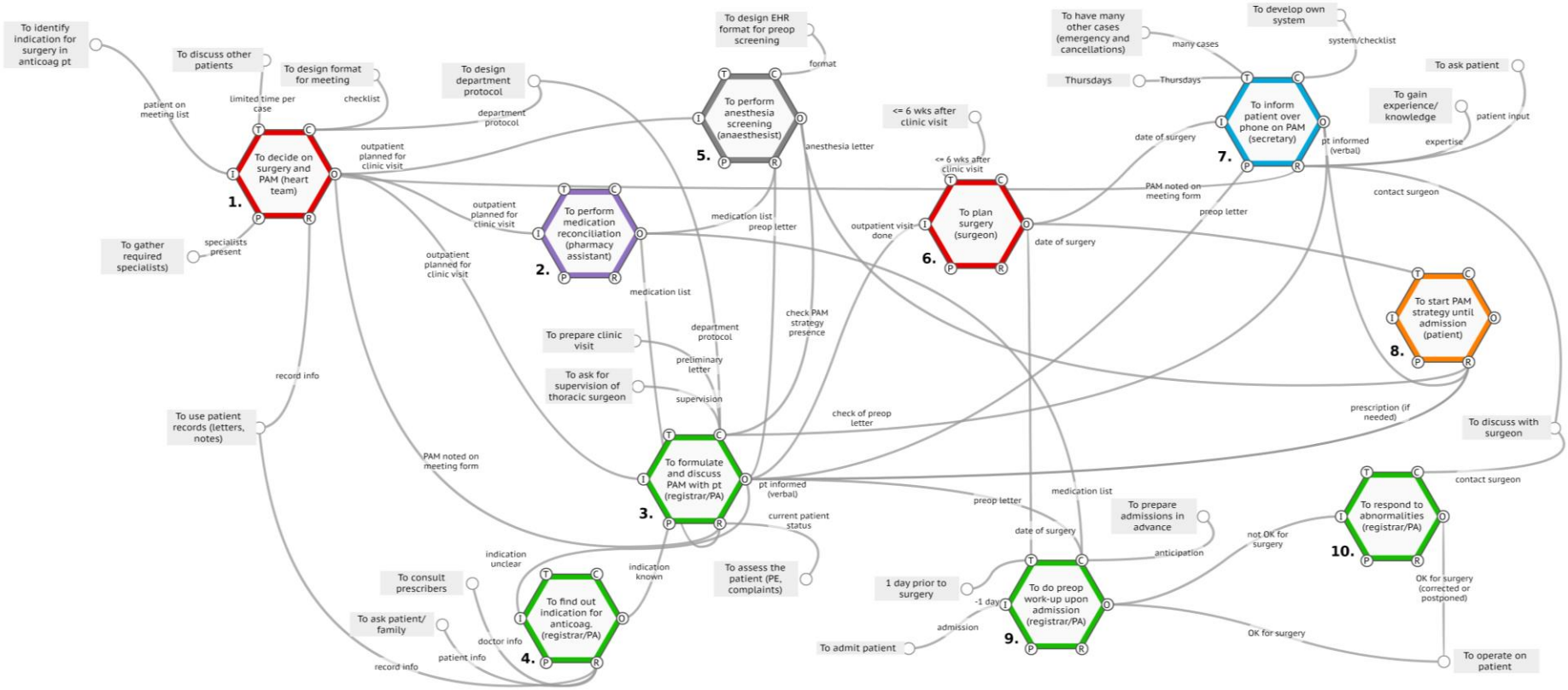
Australia	The Netherlands
Cardiothoracic surgeon	Cardiothoracic surgeon
Cardiologist	Cardiologist
Nurse Casemanager	Cardiothoracic PA
Nurse Unit Manager (NUM)	Registrars
Anaesthesist	Anaesthesist
Pre-admission clinic nurse	Planning office secretary

Work-as-done: Australia

Green = cardiologist
Red = surgeon
Yellow = nurse CM
Blue = pre-admission clinic
Purple = nurse unit manager
Grey = anaesthetist



Work-as-done: the Netherlands



Red = surgeon (and cardiologist)
Green = registrar/physician assistant (PA)
Purple = pharmacy assistant
Grey = anaesthetist
Blue = planning office secretary
Orange = patient

What do the models tell us?

- Design PAM process in NL vs AUS differed highly
  - Practical organisation and disciplines involved
  - But: Learning cuts both ways!

- Big differences betwee[illegible] WAD!!
  - Surgical st[illegible] PA's vs. anesthetists
  - An[illegible]tion services not involved (NL)

- Control mechanisms t[illegible]
  - Individual [illegible] work

Practical reasons!!

Profound adaptation and thoroughness, but what if absent or replaced?

What do the models tell us?

- Ambiguity in roles/responsibilities

"I am the surgeon, I decide…"

"If the surgeon forgets to write down the AC policy, I decide myself.." (nurse/PA)

- Collaboration:

"We don't have a regular team meeting on cardiac surgery, but if I have questions, I'll ask the surgeon when I see him at another meeting" (nurse/PA)

- Efficiency:

"I check if everything that needs to be done before surgery, is done properly. My staff does so too, but just to be sure you know" (nurse)

- Quality & Safety:

"I just have my own system and that works perfectly for me" (NUM)

"Sometimes I text, sometimes I ring..usually I text if it is surgeon X and he just knows…but it all works very well" (registrar)

Discussion meeting

- All involved disciplines
- Presentation of FRAM model
- Elaboration on potential implications
- Discussion on opportunities for improvement

"Well, I think we can conclude this is a very complicated process…"
Head of department, Australia

Utility and usability FRAM

- Workload: 46 hours per site
- Comparable to traditional methods (e.g. RCA)
- Easily understood by clinicians
- High disclosure during interviews
- Discussion meeting: insightful, raised awareness, and stimulated discussion on practical improvement measures

Response

*"The FRAM analysis gave us a new, different perspective on our perioperative anticoagulation policy, for years one of our main bottlenecks. This way, we simply never looked at it before. By sticking closer to what **actually** happens at our frontline, instead of mainly looking at what the guidelines tell us to do, we are now able to enroll several improvement measures successfully. And for the first time, our people understood why they get implemented and are willing to contribute actively"*

Surgeon Australian hospital

Thank you for your attention!

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