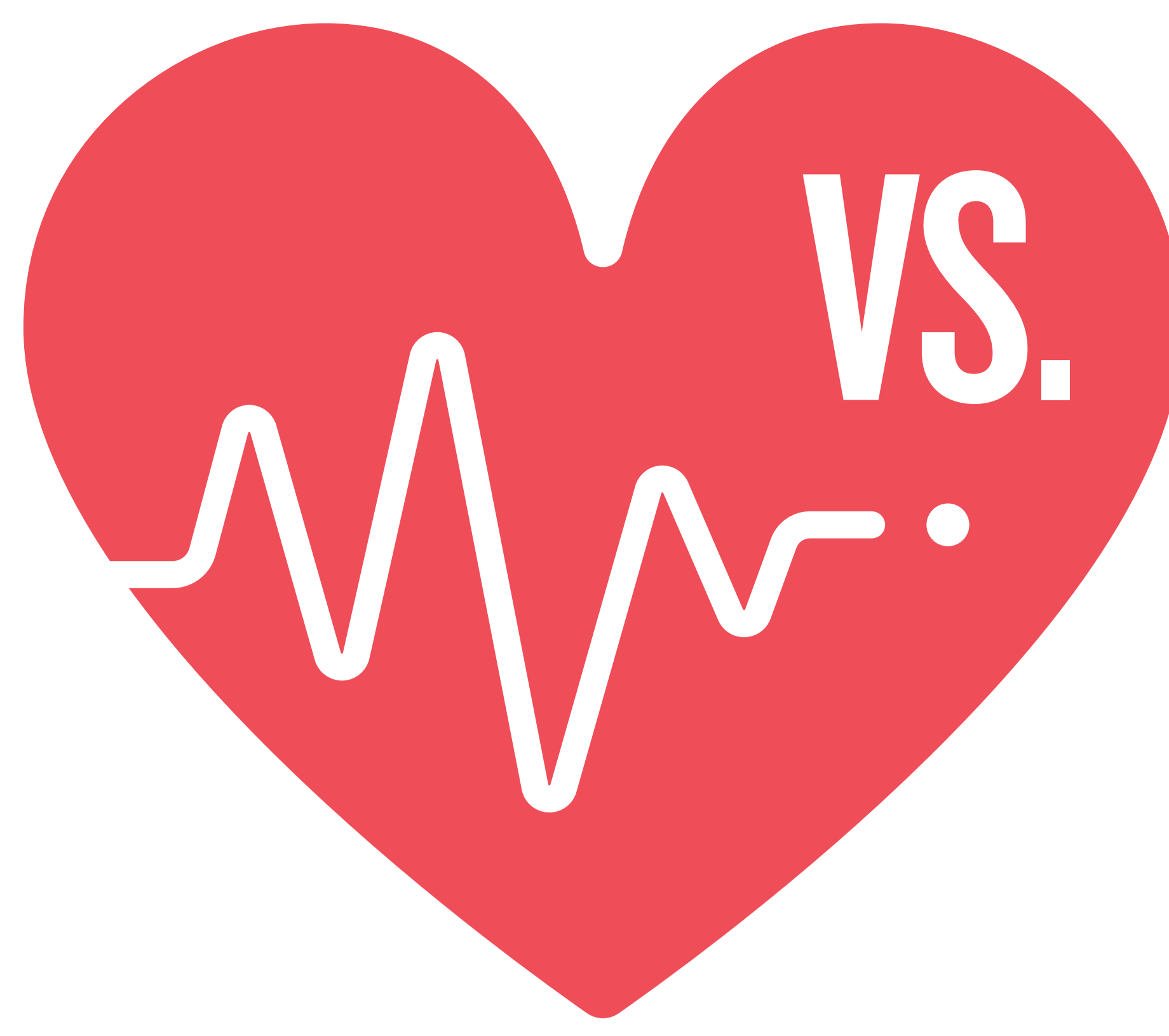# CHALLENGES IN SELECTING RATE VS. RHYTHM CONTROL IN ATRIAL FIBRILLATION

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BACKGROUND

- ESC Guidelines Update (2012) on Management of AF
  - Need to gain understanding on how guidelines are implemented in practice
- Canadian Needs Assessment in AF (2010-2011)
  - Used as model to be adapted to the European context / 2015

STUDY OVERVIEW

STEP I — Identify context and priorities
- Review findings from Canadian Study
- Literature Review
- Consultation with Subject Matter Experts
- Ethics (IRB) approval

STEP II — Qualitative Exploration
- Key Informant Interviews (n:30)
  - Cardiologists
  - General Practitioners/Family Physicians
  - Neurologists

STEP III — Quantitative Validation
- Online Survey (n:531)
  - Cardiologists
  - General Practitioners/Family Physicians
  - Neurologists

STEP IV — Analysis / Interpretation
- Mixed-methods analysis
- Evidence-based identification of gaps, needs, barriers and challenges

STEP V — Use and Dissemination
- Development of evidence based educational programs
- External dissemination:
  - Peer-reviewed journal
  - Conference

SUMMARY OF KEY FINDINGS

1 CONDITIONS
- 1A Underuse of pathophysiological classification of AF (K, S, A)

2 DIAGNOSIS
- 2A Difficulties in the detection of AF (S, A)

3 TREATMENT
- 3A Uncertainty when making treatment decisions (K, S, A)

4 MANAGEMENT
- 4A Issues selecting stroke prevention treatment (K, S, A)
- 4B Underuse of risk assessment tools (K, S, A)
- 4C Difficulties discussing treatment with patients (S)

5 REFERRAL/TEAM
- 5A Sub-optimal collaboration between specialists and GPs (S, A, Sy)

6 CONTEXT
- 6A National/ regional regulations impacting use of NOACs (Sy)

Legend: K- Knowledge A-Attitudes S-Skill Sy-System

STUDY PURPOSE

Identify gaps and challenges faced by cardiologists, neurologists & GPs/FPs in 6 countries in the care of Atrial Fibrillation patients to inform evidence-based continuing education

CASE #1 — 66 YEAR OLD MAN

Medical history:
- Hypertension, well-controlled
- Mitral regurgitation grade 2/4; tricuspid regurgitation grade 2/4
- No pulmonary hypertension. LVEF 57%

Current medication:
- Perindopril 4 mg/d
- Bisoprolol 5 mg/d

At consultation:
- First episode of AF since 15 hours

Symptoms:
- Palpitation. No HF symptoms/signs.
- HR:92/min.
- BP: 124/84 mmHg.
- Lab: Hb 13.6 g/dl; creatinine 1.35 mg/dl; CrCl (Cockcroft-Gault) 66 ml/min

CASE #2 — 80 YEAR OLD WOMAN

Medical history
- Hypertension, dilated cardiomyopathy (ejection fraction 40% for years)
- Current medication
- Enalapril 10 mg/d
- Bisoprolol 2.5 mg/d

Reason for consultation
- Since 8 weeks: irregular HR is displayed when she measures her BP.
- No palpitations. Reduced exercise tolerance.
- 2d ago weakness of left arm & leg which resolved after 6 hours

Work up
- HR: 115/min, BP:135/88 mmHg, Weight: 100kg
- Moderate malleolar oedema, CVP elevated; no rales
- Echo: aortic stenosis 2/4 and normal LV-function
- Lab: Hb 14 g/dl; creatinine 1.3 mg/dl; CrCl (Cockcroft-Gault) 54 ml/min

Diagnosis
- Persistent AF and TIA

SAMPLE (n=561)

PROFESSION	France (FR)	Germany (GE)	Italy (IT)	Poland (PO)	Spain (SP)	United Kingdom (UK)	TOTAL
Cardiologists	45	55	62	44	45	43	294
Neurologists	22	22	21	21	24	21	131
GPs/FPs	23	21	22	25	23	22	136
Total	88	100	108	87	91	87	561

Clinical decision-making: rhythm vs. rate control

- Majority of participants chose Rhythm Control
- Variation by country as to when and how to restore sinus rhythm

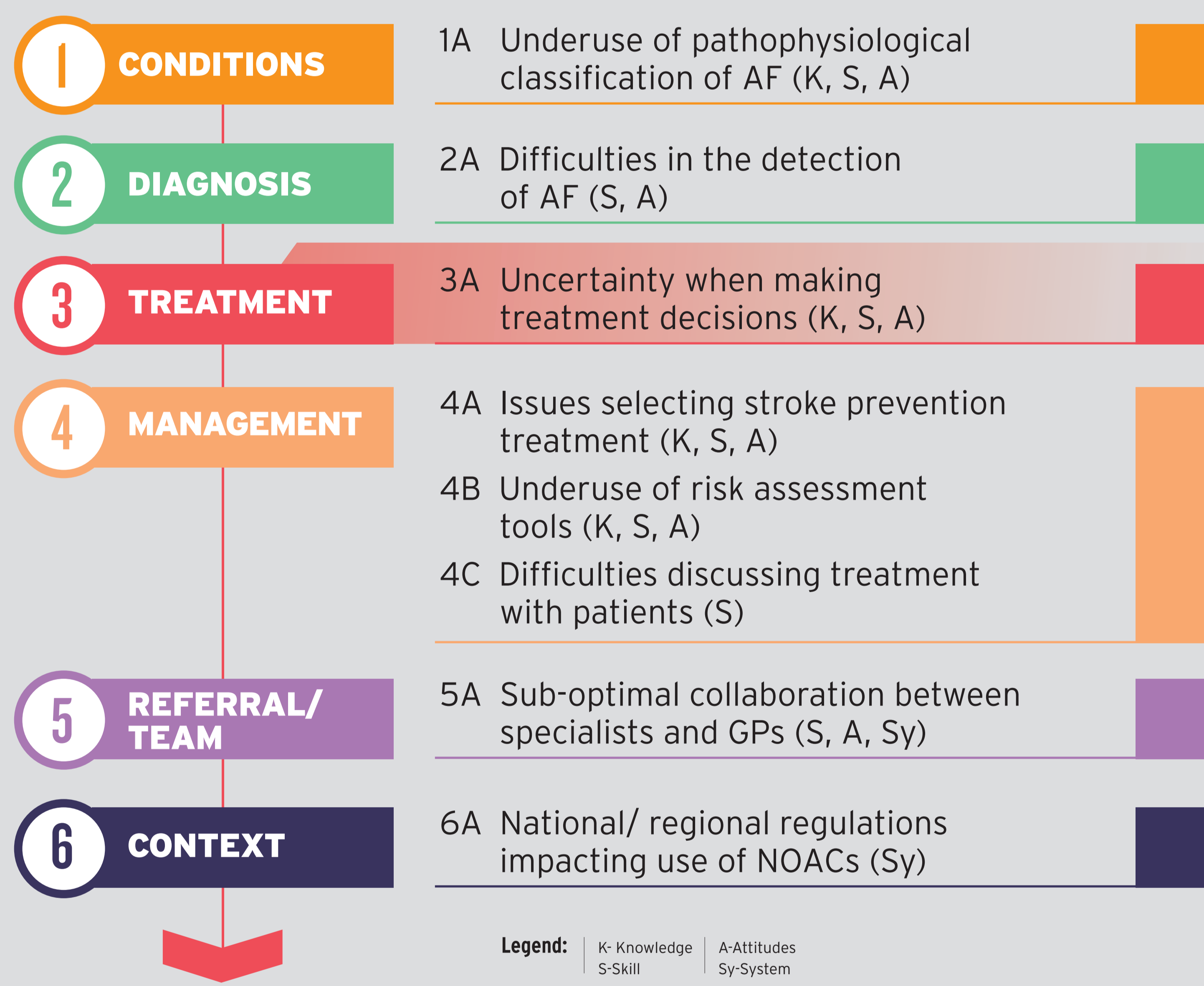|	PROFESSION	FR	GE	IT	PO	SP	UK	TOTAL
Selected Rhythm Control	Cards	81	94	98	93	95	85	92
	Neuros	86	67	90	80	78	70	78
	GPs/FPs	70	91	79	71	50	72
Selected to restore sinus rhythm within first 24hr	Cards	53*	75	93	97	90	79	83
	Neuros	56*	100	83	88	83	71	80
	GPs/FPs	86	65	95	93	93	82	85
Selected trial of anti-arrhythmic drug, and then DC cardioversion	Cards	77	27*	74	79	70	62	64
	Neuros	83	71	78	94	72	57	77
	GPs/FPs	86	40*	84	100	73	46*	71

statistically significant difference at the p=0.05 level

> **Selecting rhythm control strategy**
>
> *"Sometimes picking the right anti-arrhythmic for patient can be a challenge because there are so many different factors that you have to put in, in terms of the impairment of the symptoms or the medical conditions, interaction."*
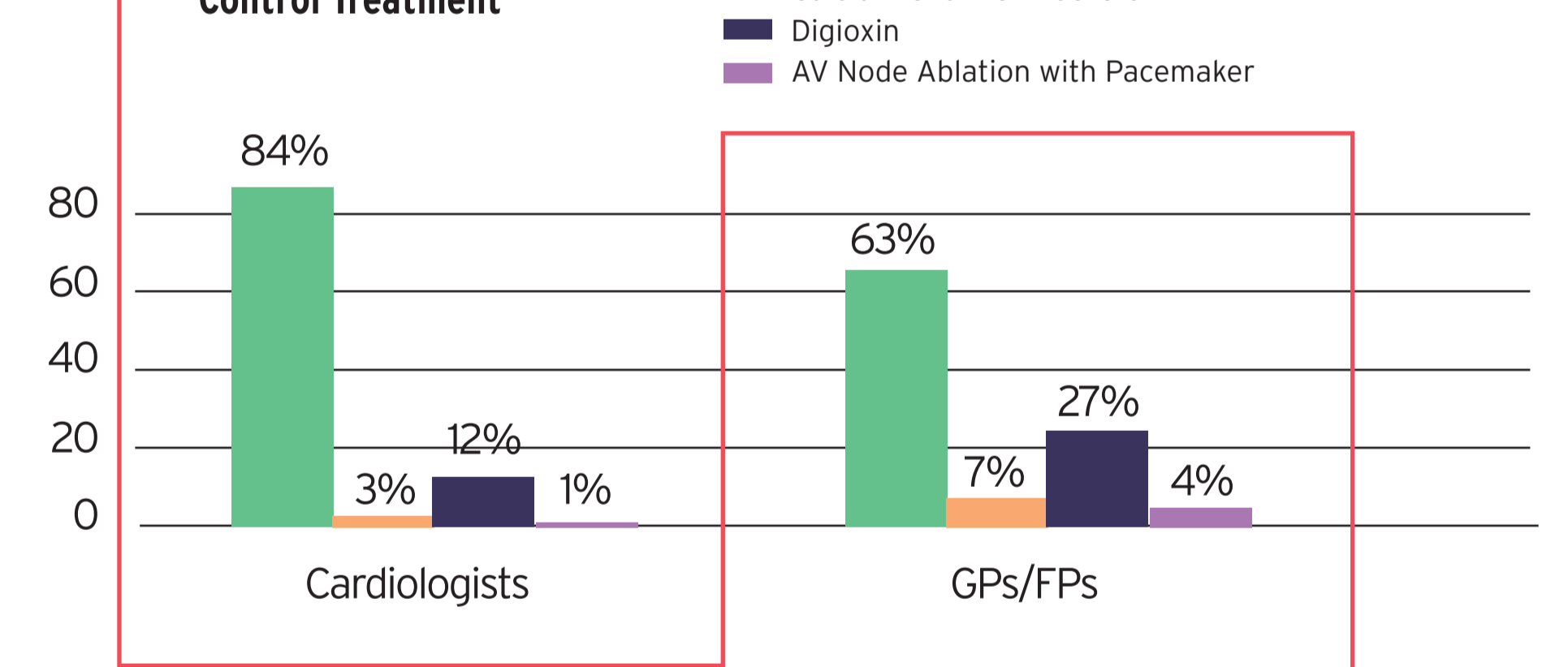>
> – Cardiologist, UK

Clinical decision-making: rhythm vs. rate control

- Majority of participants selected Rate Control using Beta-Blockers
- GPs/FPs responses show greater variability in treatment selection

	PROFESSION	FR	GE	IT	PO	SP	UK	TOTAL
Selected Rhythm Control	Cards	74	77	34*	76	93	82	70
	Neuros	65	57	63	55	70	95	67
	GPs/FPs	65	73	54	24*	57	73	58

statistically significant difference at the p=0.05 level

Selection of Rate Control Treatment
- Beta-Blockers
- Calcium Channel Blockers
- Digoxin
- AV Node Ablation with Pacemaker

Cardiologists: 84%, 3%, 12%, 1%
GPs/FPs: 63%, 7%, 27%, 4%

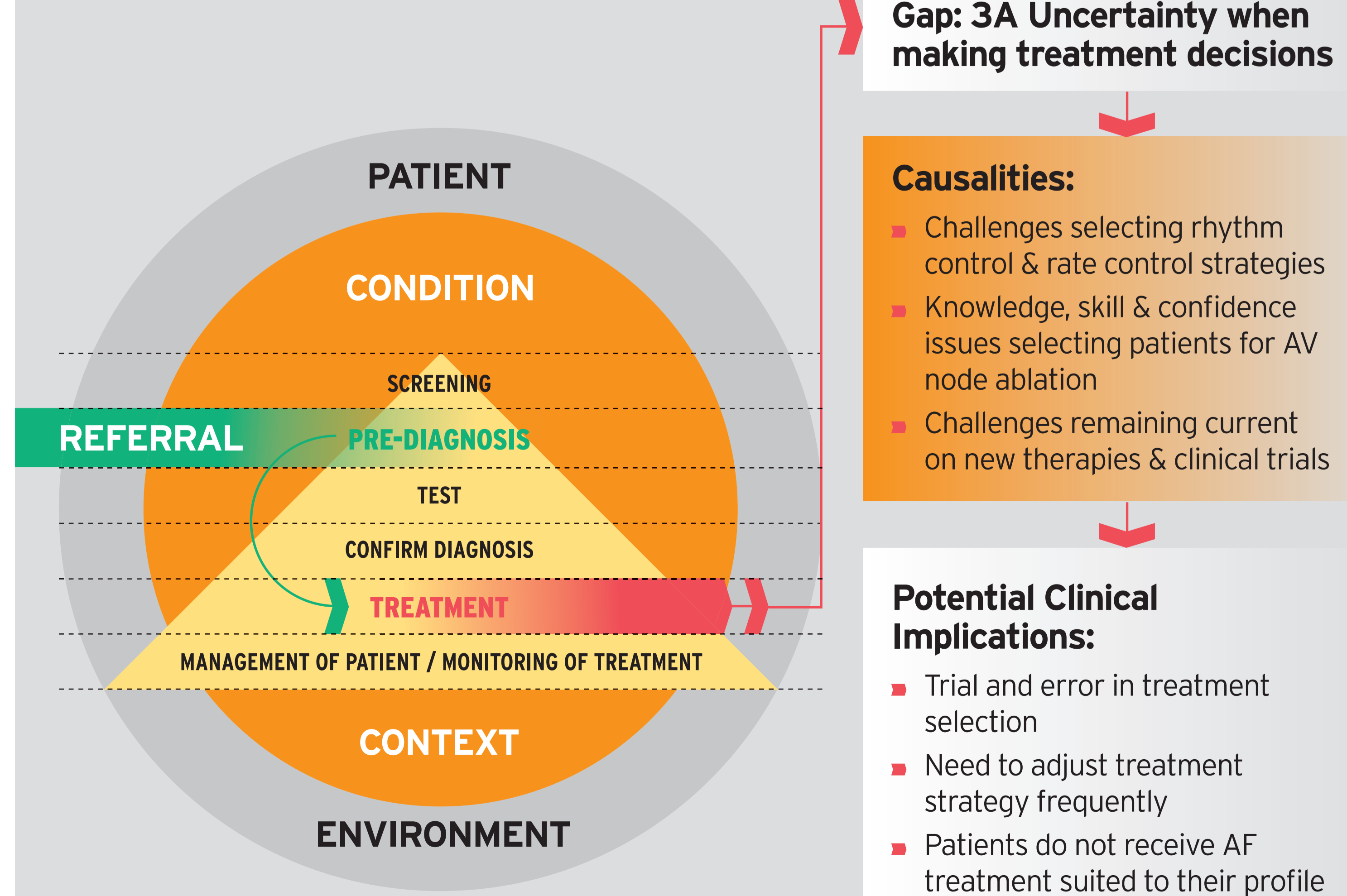> *"The procedures are long and complex. They require the use of specific equipment (...), mapping systems, and trained professionals. The main challenge is treating these patients with the ablation, which is a long, complex and delicate procedure."*
>
> – Cardiologist, Italy

CHALLENGES IN THE CLINICAL DECISION-MAKING PROCESS

Gap: 3A Uncertainty when making treatment decisions

Causalities:
- Challenges selecting rhythm control & rate control strategies
- Knowledge, skill & confidence issues selecting patients for AV node ablation
- Challenges remaining current on new therapies & clinical trials

Potential Clinical Implications:
- Trial and error in treatment selection
- Need to adjust treatment strategy frequently
- Patients do not receive AF treatment suited to their profile

Diagram labels: PATIENT, CONDITION, SCREENING, REFERRAL, PRE-DIAGNOSIS, TEST, CONFIRM DIAGNOSIS, TREATMENT, MANAGEMENT OF PATIENT / MONITORING OF TREATMENT, CONTEXT, ENVIRONMENT

SELECTING PATIENTS FOR AV NODE ABLATION

All three groups reported skill issues. Neurologists and GPs/FPs also reported knowledge & confidence issues

- No statistically significant differences by country

% Knowledge not acceptable/needs improvement
% Needs significant/minor improvement
% 1-Low to 3-Moderate

ITEM	PROFESSION		FR	GE	IT	PO	SP	UK	TOTAL
Selecting patients who would benefit from AV node ablation	Cardiologists	K	27	37	39	46	14	33	33
		S	50	59	72	67	62	55	61
		C	32	42	57	58	40	48	47
	Neurologists	K	84	85	74	87	78	75	80
		S	100	100	89	100	100	100	98
		C	100	100	88	73	94	86	92
	GPs/FPs	K	78	59	57	60	83	58	65
		S	100	90	88	81	85	81	87
		C	88	80	92	84	90	81	86

K- Knowledge (Not acceptable, could be improved, not acceptable)
S- Skill (Needs significant improvement, Needs minor improvement, Optimal)
C- Confidence (1-Low to 5-Optimal)

CONCLUSION

- Findings corroborate those of the Canadian study
- Variability in the skills and treatment decision preferences of physicians
- Differences between countries may indicate variation in implementation of guidelines and/or in access to treatment options
- Findings call for targeted, locally adapted, specialty-specific, educational interventions to improve and standardise care provided to AF patients

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