



## The importance of atrial fibrillation population screening from the view of pharmacists

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On behalf of iPACT

# CONFLICT OF INTEREST

- Received travel grant from Bayer.

## BACKGROUND

- **Atrial fibrillation (AF)** – one of the major causes of stroke, heart failure and sudden death
  - Approximately 3% prevalence in adults (from 20 years of age)
    - In 2010, 33.5 million patients afflicted with AF
  - Prevalence higher in older age and patients with heart failure, hypertension, DM, obesity, CHRI...
  - By 2030, it is assumed about 14–17 million patients in the EU
  - At least one out of four strokes is directly attributable to AF

# Health, economic and social burden

# ATRIAL FIBRILLATION

- **10-30% of patients with undiagnosed AF**
- **Asymptomatic in approximately one third of patients (clinically silent AF)**
- Large population has atypical symptoms
  - Fatigue, dizziness, chest pains and breathlessness
- Symptoms may be experienced on a regular basis, intermittently or not at all
  - More than half the episodes of AF are not felt by the patient
- → **likelihood that AF remains unrecognized prior to stroke is increased**



## 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS

The Task Force for the management of atrial fibrillation of the European Society of Cardiology (ESC)

**Screening for silent AF in the community**



**Opportunistic screening for silent AF** seems cost-effective in elderly populations ( $\geq 65$  years)  
Similar effects have been reported using single-lead ECG screening in other at-risk populations.

Screening of older populations (mean age 64 years) yielded a prevalence of 2.3% for chronic forms of AF, increasing to 4.4% in patients  $\geq 65$  years.

Previously undiagnosed AF was found in 1.4% of those aged  $>65$  years.



Thromb Haemost. 2013 Aug;110(2):213-22. doi: 10.1160/TH13-02-0165. Epub 2013 Apr 18.

## **Screening to identify unknown atrial fibrillation. A systematic review.**

Lowres N<sup>1</sup>, Neubeck L, Redfern J, Freedman SB.

The overall prevalence of AF was 2.3% (CI: 2.2-2.4%)  
The incidence of previously undiagnosed AF was 1.0% (CI: 0.89-1.04%)

Higher prevalence in the GP/outpatient clinic setting (3.6%)

- **In  $\geq 65$  years** prevalence increased to **4.6%**

Community setting (prevalence 1.9%) ... ?younger age

- **In  $\geq 65$  years** prevalence increased to **4.0%**

**? PHARMACIST**

# POTENTIAL ROLE OF PHARMACISTS

- **Support undiagnosed and untreated patients by becoming engaged in early detection of AF in partnership with other healthcare professionals**
  - + Contribution to early initiation of the treatment using the most up-to-date evidence
  - + Support physicians in the treatment choice
  - + Guide an effective and safe treatment of the patient and support the patient's rational medication taking behavior

HEALTH PROMOTION  
PRIMARY CARE  
PARTNERSHIP  
EASY ACCESSIBLE  
SCREENING CAMPAIGNS  
COMMUNITY HEALTH  
COUNSELLING

## 14. SCREENING


### **Main recommendation:**

**Patients with risk factors (e.g., age > 65 years, diabetes, hypertension, or common AF symptoms) not receiving OAT should be routinely screened on AF, and (if needed) referred to a physician for diagnosis.**

### **Specifications:**

- Screening for AF could be performed by any trained health care provider in primary care settings (e.g., by community pharmacist, and/or general practitioner) as well as by physicians in hospital settings
- Screening for AF could be carried out by any appropriately validated method, including the use of electronic devices to enhance the reliability of detection (e.g., mobile app)
- When AF is found to be present at screening, patients should be referred to their treating physician for diagnosis. The health care provider who performed the screening procedure should advise the patient of the risks of not completing the follow-up process





Every **15 seconds**  
someone suffers an  
**AF-related stroke**

- Detect** AF by a simple pulse check
- Protect** from AF-stroke using anticoagulation (not aspirin)
- Correct** AF by speaking to your doctor to discuss treatment and medication options

**Screening campaign in pharmacies**  
**Know your pulse**



**Know Your Pulse**

IT COULD SAVE YOUR LIFE

[www.knowyourpulse.org](http://www.knowyourpulse.org)

# Know Your Pulse in Pharmacies

- **GOALS**

- To raise awareness of AF through pulse checking
- To capture arrhythmias including AF
- To quantify the **contribution of pharmacists**
  - Raise awareness with HCP and governments all over the world on the need for screening and awareness campaigns by pharmacists
  - **Possibilities to broaden counselling activities in pharmacies**

# Know Your Pulse in Pharmacies



- Pharmacists' global engagement
- OUR EXAMPLE
  - Umbrella organizations
    - Arrhythmia Alliance (A-A),
    - Atrial Fibrillation Association (AFA)
    - iPACT
  - Time of screening
    - „Heart Rhythm Week“ (June)
    - „Global Atrial Fibrillation Awareness Week“ (November)
- **iPACT** → support in engagement of pharmacists in the screening for AF
  - Organizing training for pharmacists, recruitment of pharmacists, translation and ensuring availability of the campaign materials, development of software for data collection...



# How to perform...

- Supportive materials
- Video
  - Video demonstrating how to manually check pulse produced for training pharmacists in: English, French, German, Dutch, Spanish, Hungarian, Czech, Arabic, Chinese



**AFA Association**  
Atrial fibrillation

**Know Your Pulse in four steps**

1. To assess your resting pulse rate in your wrist, sit down for 5 minutes (beforehand). Remember that any stimulants taken before the reading will affect the rate (such as caffeine or nicotine). You will need a watch or clock with a second hand.
2. Take off your watch and hold your left or right hand out with your palm facing up and your elbow slightly bent.
3. With your other hand, place your index and middle fingers on your wrist, at the base of your thumb. Your fingers should sit between the bone on the edge of your wrist and the string beads attached to your thumb (or those in the ring). You may need to move your fingers around a little to find the pulse. Keep firm pressure on your wrist with your fingers in order to feel your pulse.
4. Count for 30 seconds, and multiply by 2 to get your heart rate in beats per minute. If your heart rhythm is irregular, you should count for 1 minute and do not multiply.

**Record your pulse here**

Day	Rate	Rate	Activity
1			
2			
3			
4			
5			
6			
7			

## How to measure...

- **The pulse may be regular or irregular**
  - This may be felt manually
  - AF, if present, can be detected by way of an electrocardiogram (ECG)



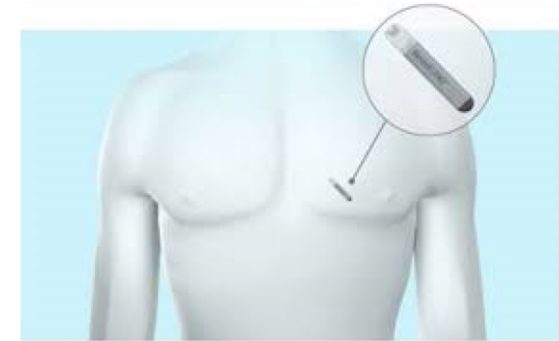
European Heart Journal (2016) 37, 2893–2962  
doi:10.1093/eurheartj/ehw210

ESC GUIDELINES

### 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS

Recommendations	Class <sup>a</sup>	Level <sup>b</sup>	Ref <sup>c</sup>
Opportunistic screening for AF is recommended by <u>pulse taking</u> or <u>ECG rhythm strip</u> in patients <u>&gt;65 years of age</u> .	I	B	130, 134, 155

# Screening options




## Novel technologies




# Pulse Check

## Know Your Pulse in four steps

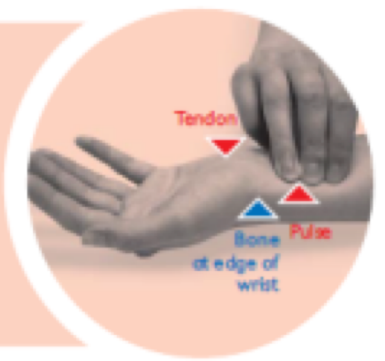
**1** To assess your resting pulse rate in your wrist, sit down for 5 minutes beforehand. Remember that any stimulants taken before the reading will affect the rate (such as caffeine or nicotine). You will need a watch or clock with a second hand.




**2** Take off your watch and hold your left or right hand out with your palm facing up and your elbow slightly bent.



**3** With your other hand, place your index and middle fingers on your wrist, at the base of your thumb. Your fingers should sit between the bone on the edge of your wrist and the stringy tendon attached to your thumb (as shown in the image). You may need to move your fingers around a little to find the pulse. Keep firm pressure on your wrist with your fingers in order to feel your pulse.



**4** Count for 30 seconds, and multiply by 2 to get your heart rate in beats per minute. If your heart rhythm is irregular, you should count for 1 minute and do not multiply.



### Record your pulse here

Day	Result		Activity (e.g. after a run)
	am	pm	
1			
2			
3			
4			
5			
6			
7			



## Know Your Pulse Campaigns





## Know Your Pulse in Pharmacies



# Know Your Pulse in Pharmacies



# THE NEED FOR EVALUATION

- **Interview with the patient**

- Pulse check
- Medication review
- Risk score evaluation
  - CHA<sub>2</sub>DS<sub>2</sub>-VASc

Hypertension

Stroke  
TIA

Heart  
failure

Diabetes  
mellitus

Age

Vascular  
diseases

Female



- **Referral to the physician**

- Diagnosis

- **Feedback**

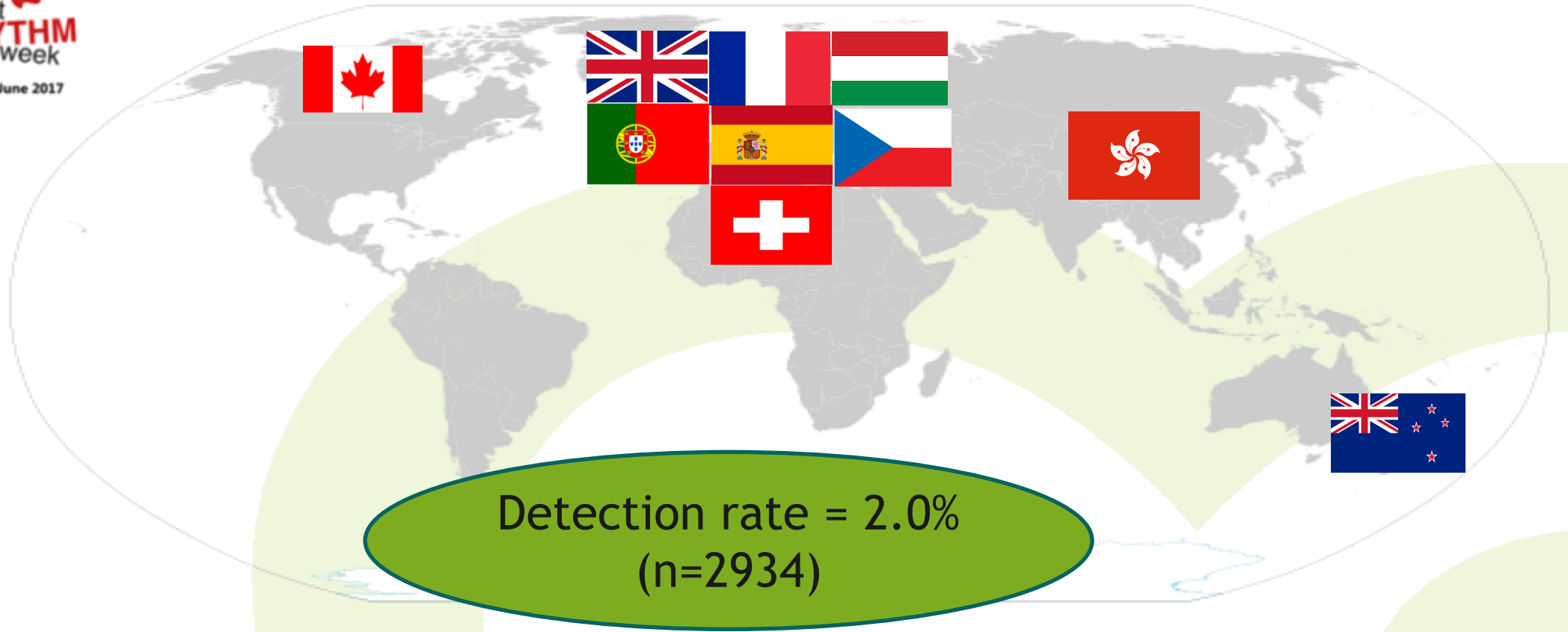
- From the patient
- From the physician



- **Documentation**



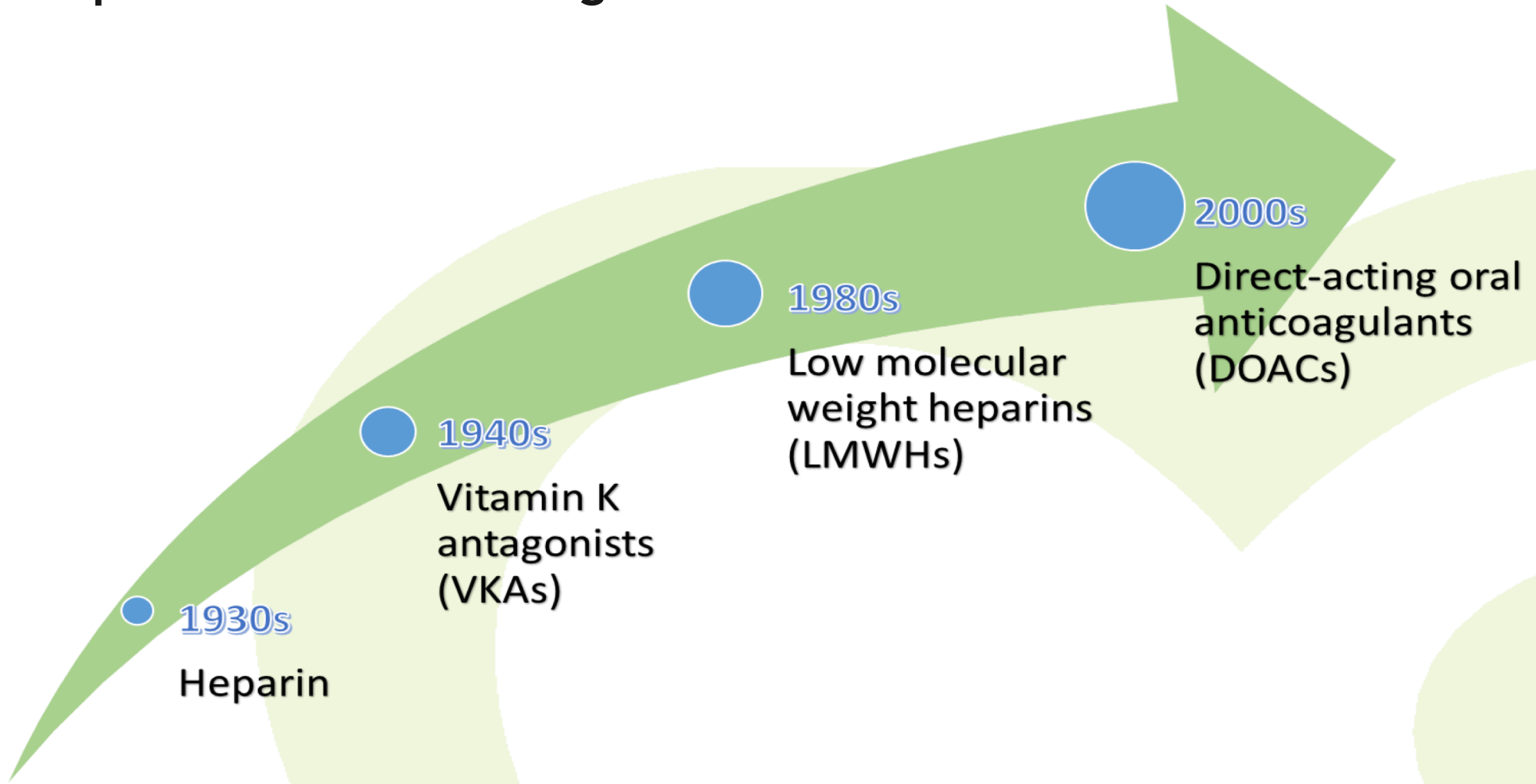
# Overall results (June 2017)



CHA<sub>2</sub>DS<sub>2</sub>-VASc: 0-9; mean = 2.5±1.6  
143 referred

# CONSEQUENCES WITH DETECTED AF

- Stroke prevention = anticoagulant medications



# CONCLUSIONS

- Prevalence of **AF is increasing**, especially in the elderly.
- Pharmacists, as one of the key players in primary care, are able to identify the risk of AF in **community setting**.
- **Trained** pharmacists can ask patients for any risk factors or undesired symptoms.
- Consequently, the abnormalities in the heart rate can be checked **manually** and/or detect by **electronic devices**.
- **Feedback and documentation** of screening activities are essential.

# TAKE HOME MESSAGES

Pharmacists can support undiagnosed and untreated patients by becoming engaged in **early detection**.

**Pulse check** could be easily implemented in many pharmacies as well as raising the general population's knowledge of AF.

The collaboration with physicians to increase awareness about the **role of pharmacists** is needed.

**THANK YOU FOR  
YOUR ATTENTION**

## **ACKNOWLEDGEMENTS**

All the iPACT collaborators involved in the Know Your Pulse project and especially Filipa Alves da Costa (POR)

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