AF Screen International Collaboration

ABOUT

Aims of the AF Screen International Collaboration

The aim of this collaborative group is to promote discussion and research about screening for unknown or under-treated atrial fibrillation as a way to reduce stroke and death. We will provide advocacy for implementation of AF screening programs, tailored to the medical systems of individual countries. Our efforts...
AF-SCREEN the year in review

- Membership has grown 115 → 143
- More countries represented
- Goals achieved
  - Symposia, talks at major meetings
  - Consensus document
- Another AF-SCREEN meeting > 1/3 members attending
- What do we do next?
  - Plan large studies and combine
  - What else?
AF-SCREEN – 143 Professionally diverse members

- Cardiologists both general and EP
- Stroke neurologists
- General practitioners, general physicians, geriatricians, sleep physicians
- Nurses, Pharmacists, Physiotherapists
- Epidemiologists, Health economists
- Patient organisations
AF-SCREEN - Geographically diverse

- Now 35 countries
Conference symposia, talks

- HRC Birmingham Oct 2016
  - Symposium on screening sponsored by AA/AFA
  - Award
Award for Outstanding Individual who has contributed to Arrhythmia Services 2016
Conference symposia, talks

- HRC Birmingham Oct 2016
  - Symposium on screening sponsored by AA/AFA
  - Award

- AHA 2016
  - Joint symposium AHA/AF-SCREEN, all speakers members
Conference symposia, talks

- ESC 2017 – no complete symposia as suggested, but elements remain in parts of other symposia
  - Need to keep working on this
  - Late breaking trial and registry – a first at this ESC
  - Many presentations
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Location</th>
<th>Session</th>
<th>Speaker</th>
<th>Location</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sat Aug 26</td>
<td>11:00-16:00</td>
<td>Do atrial fibrillation rates differ based on presenting symptoms in patients at risk of atrial fibrillation and stroke? Results from the REVEAL AF study.</td>
<td>Rolf WACHTER (Goettingen, Germany)</td>
<td>Poster Area P772</td>
<td>Poster session 1: Invasive diagnostics</td>
<td>Satish ANTONIU (London, United Kingdom)</td>
<td>Poster Area P4608</td>
<td>Poster session 5: Demographics and screening</td>
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<tr>
<td>Sun Aug 27</td>
<td>8:30</td>
<td>Mobile technology to identify atrial fibrillation in the general population</td>
<td>Enrico Gianluca CAIANNI (Milano, Italy)</td>
<td>Riga - Village 3</td>
<td>Remote patient monitoring and telemedicine</td>
<td>S Benedict FREEDMAN (Sydney, Australia)</td>
<td>Beirut Village3</td>
<td>Remote patient monitoring and telemedicine</td>
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<tr>
<td>Sun Aug 27</td>
<td>16:30</td>
<td>State of the Art: how and whom to screen for atrial fibrillation</td>
<td>Renate B SCHNABEL (Hamburg, Germany)</td>
<td>Valetta - Village 5</td>
<td>Novel methods for AF screening</td>
<td>Marco PROGETTI (Birmingham, United Kingdom)</td>
<td>Poster Area P4596</td>
<td>Poster session 5: Registries and cost of treatment</td>
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<tr>
<td>Sun Aug 27</td>
<td>16:48</td>
<td>Excessive supraventricular ectopic activity as a risk factor for stroke independently of atrial fibrillation detection</td>
<td>Ana Rita MARINHEIRO (Setubal, Portugal)</td>
<td>Valetta - Village 5</td>
<td>Novel methods for AF screening</td>
<td>Harry GIBBS (Melbourne, Australia)</td>
<td>Poster Area P4602</td>
<td>Poster session 5: Registries and cost of treatment</td>
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<tr>
<td>Sun Aug 27</td>
<td>17:06</td>
<td>Incidence of atrial tachyarrhythmias in patients with pacemakers. A real-world observational research.</td>
<td>Giuseppe BORIANI (Castenaso, Italy)</td>
<td>Valetta - Village 5</td>
<td>Novel methods for AF screening</td>
<td>Harry GIBBS (Melbourne, Australia)</td>
<td>Poster Area P4602</td>
<td>Poster session 5: Registries and cost of treatment</td>
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<td>Sun Aug 27</td>
<td>17:24</td>
<td>Diagnostic accuracy of a novel mobile phone application in monitoring atrial fibrillation</td>
<td>Guy ROZEN (Yuvalim, Israel)</td>
<td>Valetta - Village 5</td>
<td>Novel methods for AF screening</td>
<td>Panagiota Anna CHOUSOU (Cambridge, United Kingdom)</td>
<td>Poster Area P4599</td>
<td>Poster session 5: Registries and cost of treatment</td>
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<tr>
<td>Sun Aug 27</td>
<td>17:42</td>
<td>Atrial fibrillation screening - Where does the road lead to?</td>
<td>Jeff HEALEY (Hamilton, Canada)</td>
<td>Valetta - Village 5</td>
<td>Atrial Fibrillation</td>
<td>Panagiota Anna CHOUSOU (Cambridge, United Kingdom)</td>
<td>Poster Area P4599</td>
<td>Poster session 5: Registries and cost of treatment</td>
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<tr>
<td>Sun Aug 27</td>
<td>8:30</td>
<td>Does subclinical atrial tachyarrhythmia matter in terms of prognosis?</td>
<td>Hung-Fat TSE (Hong Kong, China)</td>
<td>Skopje - Village 5</td>
<td>Atrial Fibrillation</td>
<td>Panagiota Anna CHOUSOU (Cambridge, United Kingdom)</td>
<td>Poster Area P4599</td>
<td>Poster session 5: Registries and cost of treatment</td>
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<tr>
<td>Mon Aug 28</td>
<td>8:32</td>
<td>Monitoring for subclinical atrial fibrillation burden</td>
<td>Emmanuel SIMANTIRAKIS (Heraclion, Greece)</td>
<td>Skopje - Village 5</td>
<td>Atrial Fibrillation</td>
<td>Pamela McCabe Rochester MN USA</td>
<td>Poster Area P3423</td>
<td>Age, elderly and cardiovascular disease</td>
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<td>Mon Aug 28</td>
<td>9:15</td>
<td>Should atrial fibrillation screening programmes be promoted?</td>
<td>Marten ROSENQVIST (Stockholm, Sweden)</td>
<td>Skopje - Village 5</td>
<td>Atrial Fibrillation</td>
<td>Julian HALCOX (Swansea, United Kingdom)</td>
<td>Poster Area P3423</td>
<td>Age, elderly and cardiovascular disease</td>
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<tr>
<td>Mon Aug 28</td>
<td>3:30-12:30</td>
<td>Stroke risk in patients with asymptomatic atrial fibrillation (AF) detected incidently in general practice is comparable to symptomatic AF presentation, and AF presenting first to hospital</td>
<td>S Benedict FREEDMAN (Sydney, Australia)</td>
<td>Poster Area P3594</td>
<td>Stroke prevention</td>
<td>Ngai-Yin CHAN (Hong Kong, China)</td>
<td>Barcelona Main Auditorium</td>
<td>Hot Line: Late-Breaking Registry Results 2</td>
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<tr>
<td>Mon Aug 28</td>
<td>14:00-18:00</td>
<td>Screening for atrial fibrillation in the primary health care setting</td>
<td>Faris GHAZAL (Stockholm, Sweden)</td>
<td>Poster Area P4606</td>
<td>Poster session 5: Demo-graphics and screening</td>
<td>Ngai-Yin CHAN (Hong Kong, China)</td>
<td>Barcelona Main Auditorium</td>
<td>Hot Line: Late-Breaking Registry Results 2</td>
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<tr>
<td>Mon Aug 28</td>
<td>14:00-18:00</td>
<td>How patient advocacy in partnership with community pharmacy can identify people at risk of AF in community pharmacy setting</td>
<td>Trudie LOBB (Chipping Norton, United Kingdom)</td>
<td>Poster Area P4607</td>
<td>Poster session 5: Demo-graphics and screening</td>
<td>Bryan Ping Yen YAN (Hong Kong, China)</td>
<td>Poster Area P6057</td>
<td>Best Posters 7: Best Posters in atrial fibrillation screening</td>
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</tbody>
</table>
Conference symposia, talks

- AHA 2017 – joint symposium run again
  - Sunday, November 12, 2017, 8:00 am - 9:15 am
  - All 4 speakers and moderators are AF SCREEN members
  - 2 abstracts on screening (at least)
AHA Symposium 2017

- John Camm, Taya Glotzer co-chairs
- Rationale for Screening  *Ben Freedman*
- Single Time Point Screening  *Rob Tieleman*
- Brief Intermittent or Continuous Monitoring?  *Jeff Healey*
- Do We Need a Large Outcome Study to Convince National Screening Committees?  *Renate Schnabel*
Conference symposia, talks

- Little or no success with …
  - Stroke congresses – world, American, European
  - Heart Rhythm Society USA
  - ?? EHRA
  - ?? General practice societies
AF-SCREEN Consensus document

- 60 co-authors divided into groups to write 18 sections
- Each section to have draft recommendation
- Executive the steering committee selected top recommendations – finally 7
- Discussion then secret voting at consensus meeting pre ESC. Recommendations reworded
- All members voted: 85% for consensus
Voting results are shown there
1. Screen detected AF high enough risk to justify Rx  
   98%
2. Single timepoint screening recommended > 65  
   93%
3. 2 weeks BID screening > 75 or high risk  
   86%
4. Longer term monitoring after ESUS  
   92%
5. Setting individualized linked to Rx – health care, country  
   99%
6. Many technologies - handheld ECG preferred  
   93%
7. Large RCT with hard endpoints needed  
   97%
Supplementary material

- Voting on key points and Delphi process
  - Could not use the word *consensus*
- AF incidence and future projections
- Consequences of AF other than stroke
- Secondary AF (with other major illness)
- Arguments against screening and AF-SCREEN response
- Country profiles
- Full list of references
Screening for Atrial Fibrillation
A Report of the AF-SCREEN International Collaboration

ABSTRACT: Approximately 10% of ischemic strokes are associated with atrial fibrillation (AF) first diagnosed at the time of stroke. Detecting asymptomatic AF would provide an opportunity to prevent these strokes by instituting appropriate anticoagulation. The AF-SCREEN international collaboration was formed in September 2015 to promote discussion and research about AF screening as a strategy to reduce stroke and death and to provide advocacy for implementation of country-specific AF screening programs. During 2016, 60 expert members of AF-SCREEN, including physicians, nurses, allied health professionals, health economists, and patient advocates, were invited to prepare sections of a draft document. In August 2016, 51 members met in Rome to discuss the draft document and consider the key points arising from it using a Delphi process. These key points emphasize that screen-detected AF found at a single timepoint or by intermittent ECG recordings over 2 weeks is not a benign condition and, with additional stroke factors, carries sufficient risk of stroke to justify consideration of anticoagulation. With regard to the methods of mass screening, handheld ECG devices have the advantage of providing a verifiable ECG trace that guidelines require for AF diagnosis and would therefore be preferred as screening tools. Certain patient groups, such as those with recent embolic stroke of uncertain source (ESUS), require more intensive monitoring for AF. Settings for screening include various venues in both the community and the clinic, but they must be linked to a pathway for appropriate diagnosis and management for screening to be effective. It is recognized that health resources vary widely between countries and health systems, so the setting for AF screening should be both country- and health system-specific. Based on current knowledge, this white paper provides a strong case for AF screening now while recognizing that large randomized outcomes studies would be helpful to strengthen the evidence base.
AUTHORS
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*AF-SCREEN International Collaboration Steering Committee.

AF-SCREEN Members Other Than Coauthors Who Contributed to the Individual Country Profiles and Who Participated in the Delphi Process
Al Awwad, A; Al-Kalili, F; Berge, T; Breithardt, G; Bury, G; Caorsi, WR; Chan, NY; Chen, SA; Christophersen, I; Connolly, S; Crijns, H; Davis, S; Dixon, U; Doughty, R; Du, X; Ezekowitz, M; Fay, M; Frykman, V; Geanta, M; Gray, H; Grubb, N; Guerra, A; Halcox, J; Hatala, R; Heidbuchel, H; Jackson, R; Johnson, L; Kaab, S; Keane, K; Kim, YH; Kollias, G; Løchen, ML; Ma, C; Mant, J; Martinek, M; Marzona, I; Matsumoto, K; McManus, D; Moran, P; Naik, N; Ngarmukos, T; Prabhakaran, D; Reidpath, D; Ribeiro, A; Rudd, A; Savalieva, I; Schilling, R; Sinner, M; Stewart, S; Suwanwela, N; Takahashi, N; Topol, E; Ushiyama, S; Verbiest van Gurp, N; Walker, N; Wijeratne, T.

Total = 115
NB 105 voted
Screening for atrial fibrillation: a European Heart Rhythm Association (EHRA) consensus document endorsed by the Heart Rhythm Society (HRS), Asia Pacific Heart Rhythm Society (APHRS), and Societad Latinoamericana de Estimulacion Cardiacay Electrofisiologia (SOLAECE)

Georges H. Mairesse (Chair, Belgium), Patrick Moran (Ireland), Isabelle C. Van Gelder (The Netherlands), Christian Ebringer (Germany), Marten Rosenqvist (Sweden), Jonathan Mant (UK), Amitava Banerjee (UK), Bulent Gorenek (Turkey), Johannes Brachmann (Germany), Niraj Varma (USA, HRS Representative), Gustavo Glotz de Lima (Brazil, SOLAECE Representative), Jonathan Kalman (Australia, APHRS representative), Neree Claes (Belgium), Trudie Lobban (UK), Deirdre Lane (UK), Gregory Y.H. Lip (UK), and Giuseppe Boriani (Co-Chair, Italy) Laurent Fauchier (France) Werner Jung (Germany) Irene Savelieva (UK) Benedict Freedman (Australia) Shih Ann Chen (Taiwan) Rodrigo Isa (Chile) Mintu Turakhia (USA) John Lewis Sapp (Canada)
EHRA Consensus document Mairesse et al

Europace online 2017

- Pulse palpation
- Automated BP measurement
- Handheld ECG devices
- Multilead patch recording
- Smartphone application
- Implant devices

ECG confirmation

Clinical evaluation
12 lead ECG
Refer for echocardiogram

Treat underlying heart disease
Assess risk of stroke
Anticoagulation if needed
Rate control therapy
Rhythm control if needed
Key Point 6
There is a need to perform large randomized controlled studies using hard end points (including stroke, systemic embolism, and death), of strategies for screening, to strengthen the evidence base to inform guidelines and national systematic screening strategies.
setting for screening is highly dependent on the health system in each country and needs to be individualized but must crucially be linked to a pathway for appropriate diagnosis and management. Although the World Health Organization criteria for screening appear to be met and the evidence is strong for commencing screening efforts in many countries, 1 or more large and adequately powered randomized outcomes trials of a strategy of screening would strengthen the evidence for the adoption of larger scale systematic screening programs for AF to reduce ischemic stroke/systemic embolism and death (Figure 3).
This meeting - program

- Setting the scene – moving the field forward
  - Jeff Healey
- Review studies – ongoing and planned
  - Mårten Rosenqvist
- Statistical and data considerations re pooling
  - Shrikant Bangdiwala
- Implementation workshop
  - Ben Freedman
This meeting - program

- What the authorities want
  - Jonathan Mant

- Review studies – ongoing and planned
  - Mårten Rosenqvist

- The future
  - Meetings, Congresses, Symposia
  - Screening surveys, post-stroke screening white paper, interest groups (pharmacy, indigenous etc), screening bibliography, list of studies, ??????
AF-SCREEN

- Small organization of enthusiasts
  - Jeff Healey, Mårten Rosenqvist, Ben Freedman
- No budget – run year to year with help from industry sponsors to hold meetings
- PHRI – C-SPIN – Jeff Healey for secretariat
  - Kimberley Begley, Heather Beresh, Andrea Thornton