IT tools to track and foster therapy adherence within an integrated care approach

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Prevalence of Atrial Fibrillation

Chugh. SS et al., Circulation 2014
The Challenge in AF Management

- Increasing complex patients with multiple health problems
- Patients with multiple needs are likely to utilise long-term health care services

BUT

- Care systems are increasingly struggling to cope
- Fragmentation of care leads to poor coordination of care and poor patient outcomes
Providing integrated care for atrial fibrillation patients

### Integrated AF management

#### Patient involvement

- Central role in care process.
- Patient education.
- Encouragement and empowerment for self-management.
- Advice and education on lifestyle and risk factor management.
- Shared decision making.
- *Informed, involved, empowered patient.*
## Patient involvement, education and self-management

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Class</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tailored patient education is recommended in all phases of AF management to support patients’ perception of AF and to improve management.</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>Patient involvement in the care process should be considered to encourage self-management and responsibility for lifestyle changes.</td>
<td>IIa</td>
<td>B</td>
</tr>
<tr>
<td>Shared decision making should be considered to ensure that care is based on the best available evidence and fits the needs, values and preferences of the patient.</td>
<td>IIa</td>
<td>C</td>
</tr>
</tbody>
</table>
Patients with good or moderate knowledge are more concerned about a stroke and want to be involved in joint decision-making in OAC treatment.

Patient education on AF and efficacy and safety of OAC treatment is crucial and may improve patients’ abilities to participate in joint decision-making and increase self-management and treatment adherence.
Patient preferences for involvement in OAC therapy

Most AF patients without recent stroke prefer to be involved in OAC decisions (in contrast to those without recent stroke)

AF patients with recent stroke rate effectiveness for secondary stroke prevention as the most important factor in OAC choice

Patients consider the availability of an antidote as an important factor in the choice for OAC

Lane et al. ESCO 2016
Involvement leads to responsibility

Responsibility leads to involvement

**ESC Guidelines**

(SP)AF treatment should fit the values, needs and preferences of the individual patient, and provided based on the best available evidence

Nurses, physicians, and patients are all accountable for meeting the ESC guidelines statement on AF treatment
Redesigning Daily Practice
Nurse-led Integrated Chronic Care Program

Cardiologist

Informed, Activated Patient → Productive Interactions → Prepared, Proactive Practice Team

Improved Outcomes

Hendriks JM et al. Eur Heart J 2012
Guidelines more comprehensively implemented in Integrated Care

<table>
<thead>
<tr>
<th>Guideline</th>
<th>Nurse-led care</th>
<th>Usual care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate prescription of anti-arrhythmics</td>
<td>87%</td>
<td>82%</td>
</tr>
<tr>
<td>Avoiding rhythm control strategy in asymptomatic patients</td>
<td>95%</td>
<td>85%</td>
</tr>
<tr>
<td>Avoiding rhythm control drugs in patients with permanent AF</td>
<td>97%</td>
<td>93%</td>
</tr>
<tr>
<td>Application of appropriate antithrombotic treatment</td>
<td>99%</td>
<td>83%</td>
</tr>
<tr>
<td>Performed echocardiogram</td>
<td>91%</td>
<td>82%</td>
</tr>
<tr>
<td>Laboratory assessment of thyroid stimulating hormone</td>
<td>91%</td>
<td>54%</td>
</tr>
</tbody>
</table>

Significantly higher guideline adherent management in patients receiving integrated software supported care

**Proportion of patients (%)**

- **Nurse-led care**
- **Usual care**

**P < 0.001**
Composite Endpoint:
Cardiovascular Hospitalisation or Death

Usual Care

Nurse-led Care

35% RRR
HR 0.65; 95% CI (0.45 – 0.93)
P < 0.05

Hendriks JM et al. Eur Heart J 2012
Decision support software to guide therapeutic management

- Electronic patient record
- Electronic checklist to prevent incomplete management
- Communication between the AF-team and patient
- Navigation system to guide clinical decision making
- Education and coordination of care
- Virtual clinics
- Remote monitoring to check adherence
  - How did you take your medication yesterday?
  - Thromboembolic events
  - Bleeding events
  - Set dates for laboratory control
Tools to enhance medication adherence on patient level
CATCH ME Consortium: smartphone & tablet apps

2016 ESC AF Guidelines
Support health care team
Actively involve patients
Integrate AF care

www.escardio.org/guidelines
My AF Patient App

- Patient education designed for and by patients
  - Text and images provided by the British Heart Foundation, AF patients, ESC GL Task force, EHRA and AFNET patient websites, closely aligned with 2016 AF guidelines.

- Possibility to record vital parameters in ‘my health’

- Track information on self-management of patients

- Patient can choose to transfer health data to health care professional app
Patient App
AF Healthcare Professional app

- Integrated treatment manager
  - ‘Pocket version’ of the 2016 Guidelines
  - Fill in or access information transferred by patient.
  - Receive individual treatment recommendations covering all five domains of AF treatment, aligned with 2016 AF guidelines.
  - Transfer data safely from and to patient and other professionals.
### Overall Treatment Manager

#### AF Treatment Manager

**Stroke Prevention Therapy**
- Congestive Heart Failure OR left ventricular dysfunction
- Hypertension (controlled)
- Hypertension (uncontrolled)
- Age
- Diabetes mellitus
- Prior Stroke / TIA
- Vascular Disease (coronary, cerebral, peripheral)
- Sex / Gender
- Unstable INRs OR low time in therapeutic range
- Prior bleed or anemia
- Concomitant antithrombotics
- Alcohol excess and other markers for decreased therapy adherence

**Rate Control Therapy**
- Kind of rate control
- Acute
- Long-term
- Does AF cause any symptoms?
- Does AF cause any symptoms related to AF, but patient troubled by symptoms
- Normal daily activity affected by symptoms related to AF
- Normal daily activity discontinued

**Rhythm Control Therapy**
- Does AF cause any symptoms?
- Normal daily activity not affected by symptoms related to AF, but patient troubled by symptoms
- Normal daily activity affected by symptoms related to AF
- Normal daily activity discontinued

**AF Therapy Summary**

<table>
<thead>
<tr>
<th>Stroke prevention therapy</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice of Anticoagulant</td>
<td>Name</td>
<td>Dose</td>
<td>When</td>
</tr>
<tr>
<td>Rate control therapy</td>
<td>Name</td>
<td>Dose</td>
<td>When</td>
</tr>
<tr>
<td>Rate Control Choice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhythm control therapy</td>
<td>Name</td>
<td>Dose</td>
<td>When</td>
</tr>
<tr>
<td>Rhythm Control Choice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Medications</td>
<td>Name</td>
<td>Dose</td>
<td>When</td>
</tr>
</tbody>
</table>

**Other Medications**

- None/minimal
- Coronary artery disease, Significant valvular heart disease, abnormal LVH
- Heart failure

**Have any of the following treatment options been used in the past?**

**Next Steps/Comments**
Patient-HCP data sharing
Use of IT tools in integrated care approach

- Requires comprehensive, multidisciplinary approach with structured organization of care
- Patient education, engagement & empowerment is crucial
- IT tools vital in communication and adherence, and improving outcomes (for patients and health care professionals)

Lau DH et al., Eur Heart J 2016
Thank you

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