

# Impact of Continuing Medical Education on the Recognition of Silent Atrial Fibrillation and Mitigation of Atrial Fibrillation-related Stroke Risk

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## Introduction

Atrial fibrillation (AF) is the most common cardiac arrhythmia; however, approximately one third of people with AF are asymptomatic and remain undiagnosed.<sup>1,2</sup> To identify these individuals, guidelines recommend screening patients aged  $\geq 65$  years using pulse palpation, electrocardiogram (ECG), or hand-held devices.<sup>1,3-5</sup> Unfortunately, many primary care physicians (PCPs) are unaware of silent AF prevalence and few test for it.<sup>6,7</sup>

Once an individual is diagnosed with AF, guidelines recommend quantitating stroke risk using the CHA<sub>2</sub>DS<sub>2</sub>-VASc score, but PCPs often rely on clinical judgement alone.<sup>3,8-12</sup> Patients not assessed using CHA<sub>2</sub>DS<sub>2</sub>-VASc score are at risk of receiving guideline-discordant care, as evidence-based management depends on scoring results.<sup>10</sup> Many patients who should receive an anticoagulant are untreated, are not given the optimal evidence-based choice of oral anticoagulant (OAC), or do not receive the appropriate dose.<sup>13-18</sup>

Based on these knowledge and competence gaps, an educational intervention was developed to help PCPs recognize the need to screen for asymptomatic AF, use the CHA<sub>2</sub>DS<sub>2</sub>-VASc score to assess stroke risk, and improve their knowledge about OACs to individualize the management of their patients with AF.

## Methods

The objectives for the education were that participants would be able to:

- Identify patients who have high stroke-associated risk and undertake appropriate long-term monitoring
- Use the CHA<sub>2</sub>DS<sub>2</sub>-VASc risk assessment score as a tool to determine the appropriate course of action to manage diagnosed AF
- Consider appropriate oral anticoagulation for patients with newly diagnosed AF and high CHA<sub>2</sub>DS<sub>2</sub>-VASc risk score

The target audience was PCPs and other healthcare professionals who treat patients with stroke-associated risk factors and who may also have AF.

The program included 3 live activities in conjunction with chapter meetings of the American College of Physicians, 3 live activities at MEDX Regional Conferences, and an online enduring webcourse hosted on Primary Issues.

### References

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## Results

### Participant Demographics

	ACP Meetings	MEDX	Webcourse
Total learners	141	1,191	288
Total certificates	66	959	168
MD/DO	64 (97%)*	522 (44%)†	78 (46%)*
Other‡	2 (3%)*	669 (56%)†	90 (54%)*
MD/DO specialty			
Internal/Family Medicine	59 (92%)*	442 (85%)†	52 (67%)*
Other	5 (8%)*	80 (15%)†	26 (33%)*
Percentage of participants who see at least 6 patients per month with AF	71%	41%	33%

\*Based on certificates awarded †Based on all MD/DO ‡Includes PharmD, NP, PA, RN, other

### Evaluation of Activity

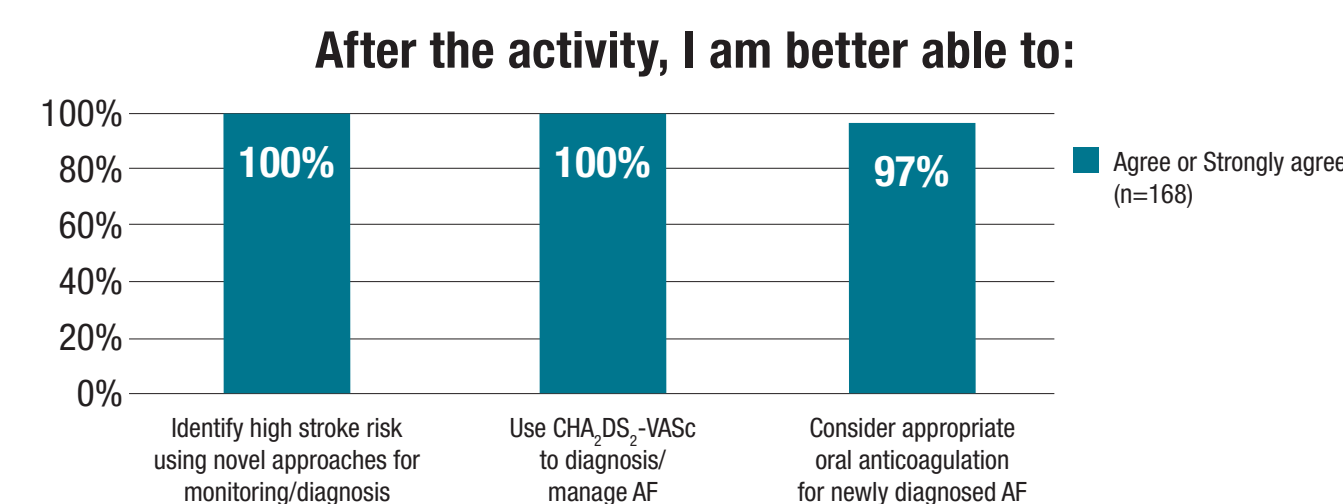
#### Live Activities

Of the 1,125 participants who responded to the evaluation, 99% agreed that the activity provided strategies to improve their practice and better prepared them to care for their patients.

More than half of participants (58%) said at least half of the content was new to them.

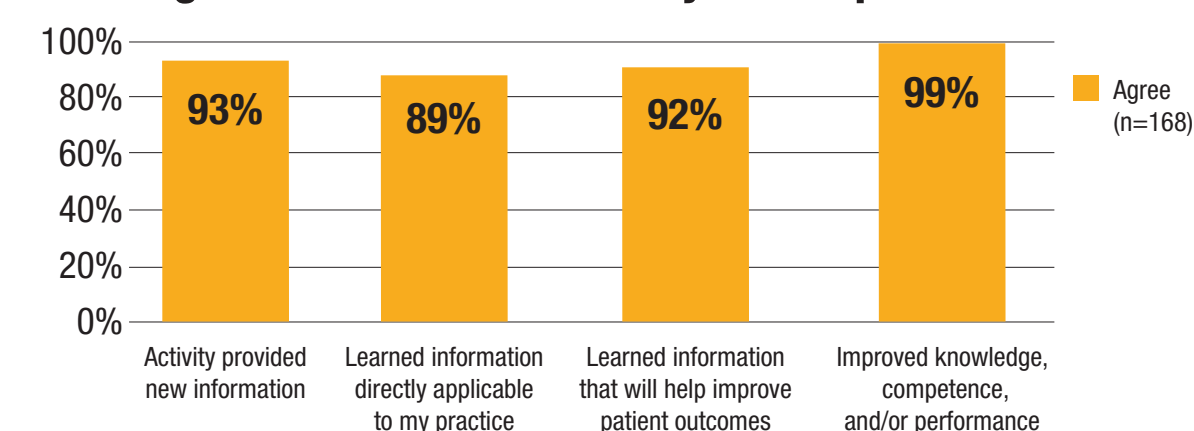
#### Webcourse

Greater ability to assess and manage stroke risk in AF



Overall educational value of the activity

#### Agreement that the activity will improve clinical care:



### Knowledge and Competence

The overall pre-test score was 63%, while the overall post-test score was 94%;  $P < 0.05$ .

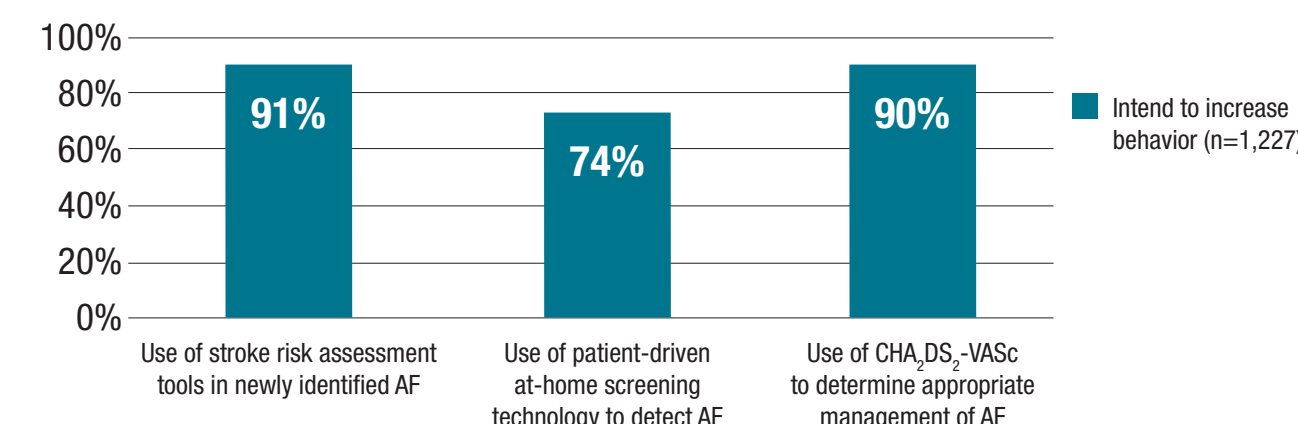
#### Overall Responses to Knowledge Questions

Correct Response	Percent Correct on Pre-test	Percent Correct on Post-test	Absolute Increase Percentage	P value
CHA <sub>2</sub> DS <sub>2</sub> -VASc risk score can be useful to identify people who have not been diagnosed with AF, but are at high risk for stroke (pre n = 966; post n = 1,031)	69%	98%	29%	< 0.05
Brief episodes (e.g. ~10 mins) of subclinical atrial tachyarrhythmias without clinical AF are associated with doubling the risk of stroke (pre n = 982; post n = 1,056)	58%	89%	31%	< 0.05
High-risk patients with newly diagnosed paroxysmal AF should be treated with oral anticoagulant therapy (pre n = 972; post n = 1,030)	63%	95%	32%	< 0.05

Percentage of respondents who were confident, very confident, or expert in managing patients who do not have a history of AF, but would be high stroke risk if they develop AF, increased from 36% (n = 915) before the activity to 81% (n = 1,227) after the activity; ( $P < 0.05$ ).

### Intent to Change Clinical Practice

#### Percentage who will increase the behavior:



### Barriers

After the activity, the issues perceived as high barriers to managing patients with undiagnosed/asymptomatic AF by the highest percentage of participants were:

#### ACP meetings

- Unclear guidelines about management of high-risk patients with no evidence of AF (11%)
- Unclear guidelines about management of high-risk patients with history of AF (11%)
- Uncertainty about usefulness of patient-use AF detection technologies (10%)

#### MEDX meetings

- Uncertainty about the predictive value of patient-use devices for detection of AF (8%)

### Webcourse

- Uncertainty about the predictive value of patient-use devices for detection of AF (21%)

## Discussion

The impact of the program was assessed by comparing pre- and post-activity scores. The difference between scores was expressed as % non-overlap, which correlates with effect size. Higher % non-overlap results indicate increased effectiveness of the education. Using this assessment method, large effect sizes were observed in all three activities (ACP meetings, MEDX meetings, and webcourse) indicating a program that was very effective in educating clinicians.

Activity	% Non-overlap	Practice Impact
ACP	55.4	The 141 clinicians who participated in this activity are 55.4% more likely to deliver evidence-based care for AF, positively affecting the care of patients seen during 1,657 AF patient-visits each month.
MEDX	47.4	The 1,191 clinicians who participated in this activity are 47.4% more likely to deliver evidence-based care for AF, positively affecting the care of patients seen during 8,706 AF patient-visits each month.
Webcourse	47.4	The 288 clinicians who participated in this activity are 47.4% more likely to deliver evidence-based care for AF, positively affecting the care of patients seen during 1,639 AF patient-visits each month.

## Conclusion

- Before activity, 58% of participants were not familiar with at least half of the material
- Statistically significant ( $P < 0.05$ ) increase in knowledge about:
  - Use of CHA<sub>2</sub>DS<sub>2</sub>-VASc to identify patients with high stroke risk not diagnosed with AF
  - Doubling of stroke risk with brief episodes of subclinical atrial tachyarrhythmia without clinical AF
  - Use of oral anticoagulant therapy in high-risk newly diagnosed paroxysmal AF
- Participants felt activity would improve patient care
- Participants were more confident in:
  - Ability to identify patients at high risk of stroke using novel approaches
  - Using CHA<sub>2</sub>DS<sub>2</sub>-VASc to diagnose/manage AF and select oral anticoagulant therapy for newly diagnosed AF
- Participants expressed intention to incorporate this information into practice
- Based on pre-test scores, there is a need for education on:
  - Identifying patients at high risk for stroke who have not been diagnosed with AF
  - Using the CHA<sub>2</sub>DS<sub>2</sub>-VASc Risk Score
  - Individualizing oral anticoagulant therapy in patients with AF