Warfarin Survey

November 2007
Study Sponsors

- Massachusetts Medical Society
- Massachusetts Coalition for the Prevention of Medical Errors
- Massachusetts Association of Health Plans
Purpose

- The specific goals of the study are to determine:
  - the extent to which physicians prescribing Warfarin are, or are not, using an Anticoagulation Monitoring and Managing Service (AMMS)
  - the barriers to the use of an AMMS
  - the steps that physicians believe would be most likely to remove barriers and promote the use of AMMS, and
  - the extent to which point of care (POC) international normalized ratio (INR) testing is being used.
Methodology

• Sample Criteria
  • Full and Active License with a Massachusetts address
  • Seven Specialties
    • Cardiology
    • Family Medicine
    • Geriatrics
    • Internal Medicine
    • Neurology
    • Oncology
    • Orthopedics
  • E-mail address within the MMS IMIS database
Methodology *(continued)*

- **E-mail Survey**
  - 1st mailing September 28, 2007
  - 2nd mailing October 29, 2007

- **Response Rate**
  - Email addresses = 1,627
  - Bounce backs (bad addresses) = 119
  - Valid addresses = 1,508
  - Responses = 185
  - Response rate (excluding bad addresses) = 12.3%
1. Roughly how many outpatients do you have on Warfarin at any one time?

- None: 7.1%
- 1-10: 20.9%
- 11-30: 33.5%
- >30 (please estimate the number of patients): 38.5%

Median # of patients = 50
2. For which clinical indications do you have patients in your practice on Warfarin?

- Chronic or paroxysmal atrial fibrillation (AF) (n=167)
  - Yes: 92% (138), No: 8% (13)
- Deep Vein Thrombosis (DVT) or Pulmonary Embolus (PE) (n=165)
  - Yes: 95% (107), No: 5% (9)
- Mechanical heart valve (n=153)
  - Yes: 88% (84), No: 12% (19)
- Post total hip or knee surgery (n=139)
  - Yes: 71% (97), No: 29% (42)
- Hypercoagulable Condition (n=135)
  - Yes: 77% (104), No: 23% (31)
- History of stroke or Transient Ischemic Attack (TIA) without documented AF (n=129)
  - Yes: 65% (83), No: 35% (46)
- Chronic Congestive Heart Failure (CHF) with a low ejection fraction (n=123)
  - Yes: 71% (86), No: 29% (37)
3. Roughly what percent of the patients you manage who have chronic or paroxysmal AF do you maintain on long term Warfarin?

- None: 8.1%
- Up to a third: 5.8%
- Between a third and two thirds: 9.3%
- Between two thirds and 95%: 40.7%
- Almost all (i.e., >95%): 36.0%
4. Of the patients you have on long term Warfarin, roughly what percentage of your patients use Point of Care (POC) INR testing for measuring their INR?
5. Do you use an anticoagulation monitoring and managing service (AMMS)?

- Yes: 44.1%
- No: 55.9%

n = 177
6. If you answered “yes” to question #5, does your AMMS include:

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A registry of your patients who are on Warfarin and enrolled in the AMMS (n=72)</td>
<td>81.9%</td>
</tr>
<tr>
<td>A written set of guidelines (n=76)</td>
<td>82.9%</td>
</tr>
<tr>
<td>A defined program of patient education (n=75)</td>
<td>78.7%</td>
</tr>
<tr>
<td>Specification of the targeted INR range for each patient (n=75)</td>
<td>100.0%</td>
</tr>
<tr>
<td>An algorithm for dose adjustments to be made when the INR is outside the targeted therapeutic range (n=74)</td>
<td>79.7%</td>
</tr>
<tr>
<td>Follow-up phone calls by a nurse, physician assistant (PA), or pharmacist when the patient is overdue for an INR test or the INR result is outside the targeted (n=75)</td>
<td>90.7%</td>
</tr>
<tr>
<td>Communication to you of INR test results, dose changes made, timing of next INR test, etc. (n=75)</td>
<td>80.0%</td>
</tr>
</tbody>
</table>

Yes | No
7. When you decide not to place a patient with chronic or paroxysmal atrial fibrillation on Warfarin, which patient characteristics are most likely to lead you to that decision? *Please check the three most common reasons.*

<table>
<thead>
<tr>
<th>Reason</th>
<th>% of Respondents</th>
<th># of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low risk for a thrombotic stroke (n=43)</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Too high a risk or intracranial bleeding (n=89)</td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>History of GI bleed (n=81)</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>Too old (please specify age limit) (n=13)</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>History or risk of falls (n=132)</td>
<td>71%</td>
<td></td>
</tr>
<tr>
<td>Lives alone (n=5)</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>History of poor compliance (n=89)</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>Dementia (n=50)</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>On other medications, one or more known to interact with Warfarin</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>My previous experience with serious Warfarin complications (n=10)</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>11%</td>
<td></td>
</tr>
</tbody>
</table>

**Other (please specify)**
- Alcohol abuse (3)
- DNA, History any kind of bleeding, pt refusal
- I am a surgeon; not in my bailiwick, I don't make these decisions, I only treat oncologic/hematologic problems
- Impossible phlebotomy
- Informed consent, Laennec cirrhosis, chronic renal failure
- Ortho only, Patient declines, Pt refuses, Pt refuses despite info consent & 2nd opinion
- Pt strong preference, Recurrent GI bleeds, Refer back to PCP
- Unable to have lab access or medication adjustment, We do not manage PAF

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Massachusetts Medical Society Health Policy/Health Systems

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8. Which system issues are important factors when you decide not to place a patient with chronic or paroxysmal atrial fibrillation on Warfarin? *(check all that apply)*

<table>
<thead>
<tr>
<th>Issue</th>
<th># of Responses</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not have access to an AMMS (n=23)</td>
<td></td>
<td>12%</td>
</tr>
<tr>
<td>I cannot manage the time consuming activities required to safely manage a patient on Warfarin (n=6)</td>
<td></td>
<td>3%</td>
</tr>
<tr>
<td>I do not want to refer my patients to the AMMS that is available to my practice (n=8)</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>Limitations in third party coverage for the AMMS, specifically the AMMS, specifically for phone calls by the nurse, PA or pharmacist (n=9)</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>Limitations in third party coverage for my services (n=7)</td>
<td></td>
<td>4%</td>
</tr>
</tbody>
</table>

# of Responses  % of Responses
9. What actions would you like to see MMS take to help you manage the patients in your practice whom you want to have on Warfarin?
10. Which approach would you prefer (check all that apply):

- Educational conference(s) at MMS (n=34) - 18%
- Written materials sent to me (n=82) - 44%
- Web-based learning (n=85) - 46%
- Other (please specify) (n=3) - 2%

Come to our hospital grand rounds
Educational presentation close or at my office
Setting up AMMS toolkit
CD-ROM
11. Please advise us regarding your principal practice setting.
12. What is your specialty?

- Cardiology: 11%
- Family Medicine: 19%
- Geriatrics: 2%
- Internal Medicine: 52%
- Neurology: 2%
- Oncology: 1%
- Orthopedics: 7%
- Other (please specify): 7%

Specialties not listed include:
- Hematology
- Hematology/Oncology
- ID
- Med-Peds
- Nephrology
- Pulmonary Diseases
- Retired internal medicine
- Rheumatology/IM
- State institution for retarded adults
- Surgical oncology
- Vascular surgery
13. How long did it take you to complete this survey?

- <15 minutes: 95%
- 16-30 minutes: 3%
- >30 minutes (please specify how long): 2%
- +5 minutes (2)
- +10 minutes (2)
14. Were there other questions you think we should have asked?

- Yes: 21%
- No: 79%
14a. If yes, what are they?

- Do some or all of your patients get managed by an AMMS
- Do you already have POC testing, and how well does it work?
- Do you think a system-wide standardized protocol for monitoring and adjusting Warfarin is long overdue?
- Do you think the AMMS services are reliable, make accurate decisions, and communicate properly with PCPs?
- Do you wish we were spending our time on more important issues, like legislative advocacy and fair contracts for members not affiliated with big powerful groups?
- Have you ever heard of "AMMS"? Do you know what services one offers?
- Have you noticed any difference in managing patients on Coumadin -brand name, versus generic brands?
- How often is Coumadin control less than ideal? How often does the patient co Coumadin get into trouble from Coumadin?
- How well do you feel you are doing managing Coumadin with your current system?
- If you do your own anti-coagulation monitoring, do you use a tool- paper registry, Web-INR, etc
- Is there a convenient lab/service that offers AMMS to all my patients?
- Is your AMS based in your practice
- Our office follows written guidelines and an algorithm for dose adjustments but it isn't an "AMMS". Perhaps some questions could get at the characteristics of an AAMS that an office uses rather than just asking whether one has access to an AMMS.
- Should insurance companies or the federal government supply software to practitioners for INR management. It seems that this could reduce the rate of adverse events with proper software.
- Surgical targets for the community
- There should be a place to say "not applicable" for the various options.
- What % of patients have you tried on Warfarin but had to stop and why?
- Serious complications from Warfarin
- What percentage of patients in physician practices suffer complications of anticoagulant therapy?
- While not a question, better explanation of the monitoring service you describe.  We use a nurse for POC and also lab monitoring, tracking patients, etc.
Questions