

# *Overview and History of AMS*

Lynn Oertel, MS, ANP, CACP  
Clinical Nurse Specialist  
Anticoagulation Management Service  
MESAC - November 18, 2014



# Anticoagulation Management Service (AMS)

- Location
  - POB, 275 Cambridge Street, Suite 101 (next to Finagle-a-Bagel)
- Hours
  - Nurses available 7 days/week
  - 8 AM – 4:30 PM
  - MD coverage via page after hours



# AMS: A specialty out-patient clinic

- Resides within Department of Nursing, Patient Care Services
- Primary goals:
  - Comprehensive education to patients and families
  - Emphasis on timely communication, especially during transitions in care or drug therapy
  - Optimize day-to-day management and monitoring of patients on warfarin (with or without LMWHs)
- What's Required:
  - Referral (acts as treatment order) from inpatient units or outpatient practices
  - MGH-affiliated physician for long-term management
  - Discharged home
  - Collaborating physicians completes Annual Therapy Review/Order
  - Patient/family attendance at education session with primary nurse
- AMS does not:
  - Perform bloodwork
  - Provide warfarin Rx (warfarin prescribing by patient's referring physician)

**A Guide to  
Taking Warfarin**

(Brand names: Coumadin® or Jantoven®)

PARTNERS in healthcare

*Sample of generic warfarin (Barr Pharmaceuticals, Inc.)*



*Sample of generic warfarin (Taro Pharmaceutical Industries)*



*Sample of Coumadin®*

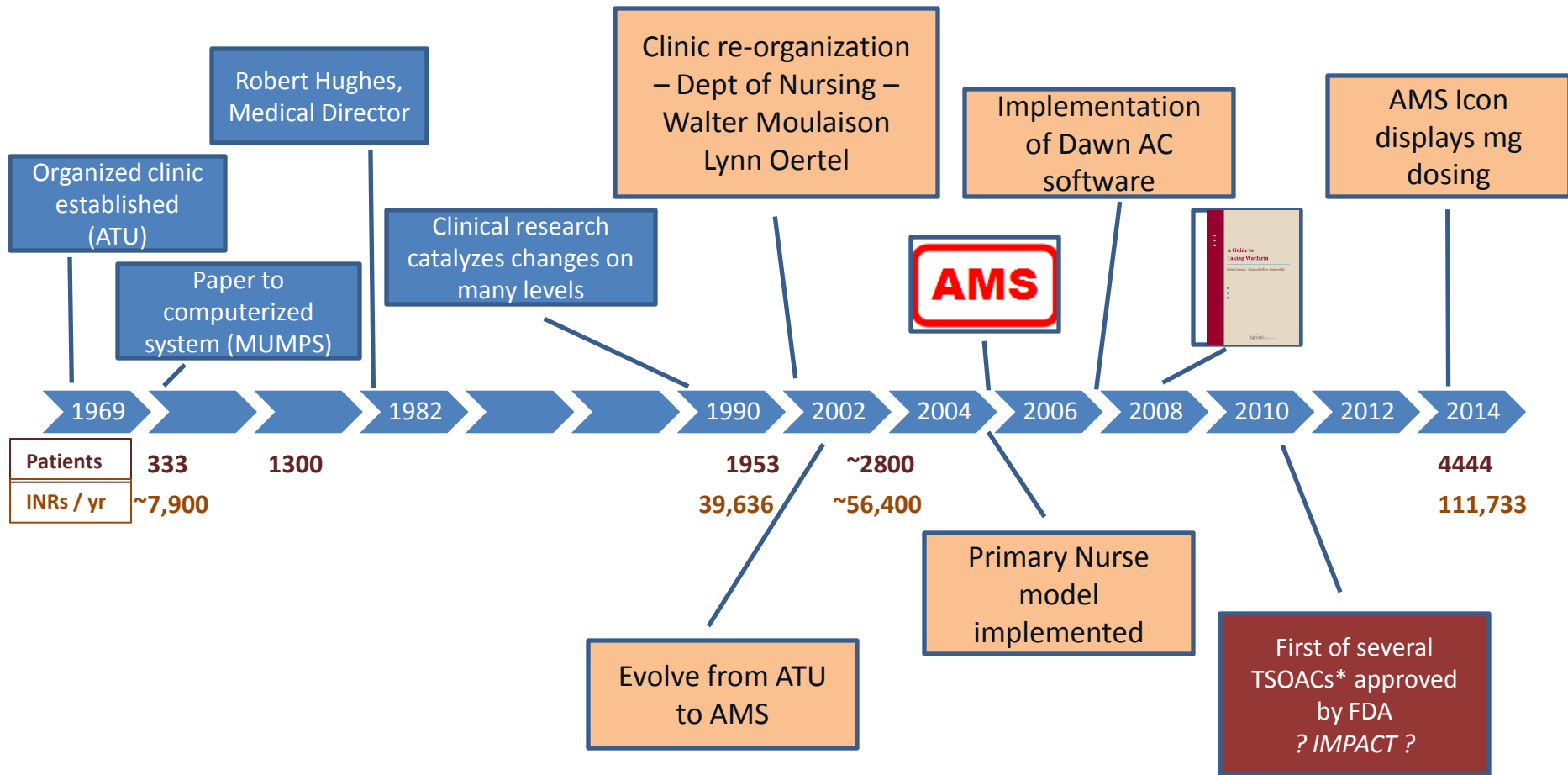


*Sample of Jantoven®*



- Printed Guide in English and Spanish
  - English: # **85474** (pkgs of 20)
  - Spanish: # **85811**
- Additional languages in Partners Handbook
  - Partners Handbook → Patient Education Info → MGH Patient Education Discharge Documents → Anticoagulation Therapy

# Historical Overview



\* TSOACs = Target Specific Oral AntiCoagulants

# Anticoagulation Management Service (AMS)

- Who should be referred?
  - Patients on warfarin AND who have a MGH-affiliated, collaborating physician to provide support to AMS as needed to optimize management
- How to refer patients?
  - Inpatient: POE Consult Referral. AMS supports a safe and timely transition when discharged to home for **ALL\*** patients NEW to warfarin (with or without LMWH). Patient management begins at discharge.
  - Outpatient: Referrals by fax or CRMS. AMS confirms receipt of referral, patient management begins when patient arrives for one-time educational appointment

\*'ALL' – includes patients new to warfarin but have physician in community who will ultimately be 'warfarin manager' – in these cases, AMS will hand-off anticoag care in 7 – 10 days.

# AMS patient population

- **Population:** 4444 outpatients, ~200+ patients at any given time in transition/bridge pathways (“Highest” priority)
- **Mean age (yrs):** 69 ± 14 years
- **Gender:** 59% male
- **Top 4 indications:**
  - AF (63%)
  - VTE (18%)
  - MHV (8.5%)
  - Stroke/TIA (7%)
- **Patient Care Delivery Model:** Patient-focused, utilizes a primary nurse model. Use a number of protocols/algorithms for day-to-day decision making.
- **Quality of INR control:** 74% Time in Therapeutic Range (TTR) for majority of patients (90% of patients in 2-3 INR range)
- **Detailed process for patient follow-up (compliance):** few patients discharged for non-compliance
- **Support patient self testing (PST):** ~500 patients self test INRs at home

# Unique features of AMS

- **Unique anticoagulation management software (DawnAC):** paperless patient records, dose decision-making support
- **Use LMR** for documenting in patient's hospital eMR
- **3 electronic interfaces:**
  - **Lab Interface:** approx 40% INRs values electronically entered on Dawn patient record
  - **ADT Interface:** electronic lists update AMS patient activity for hospital admission/discharges, including out-patient procedures and ED
  - **AMS Icon:** outbound message from Dawn records to display patient-specific information a
- **Televox reminder calls:** delivers timely phone reminder if late for scheduled INR test
- **Mail or email dose instruction letter** for all maintenance patients



# AMS Icon

'Click It' to view helpful information



**MGH**

Name: Oe-Test,Lisa      MRN: 3861819 (MGH)      Please contact AMS for further information by email at [mghams@partners.org](mailto:mghams@partners.org) or by page at [30104](tel:30104)

Referring MD: Lynn Oertel      Tel: 617-726-6955

AMS Nurse: Lynn Oertel, RN

**MGH Anticoagulation Management Services (AMS)**

Lab: Brockton Hospital - Lab

INR Target Range: 2.0 - 3.0 (2.5 Target)      Treatment Duration: Indefinite

Time in Therapeutic Range: 94%      Annual Therapy Review or Planned Stop Date: 8/17/2014

Management Type: Maintenance      Treatment Plan Status: active

Primary Indication:  
Thrombosis/ Embolism: acute, deep, unspecified LE

Secondary Indications:  
Atrial Fibrillation  
Dissection, carotid artery  
Hx of (family): Other Cardiac Diseases

Additional Antithrombotics:  
Aspirin  
Cilostazol/Plletal  
Enoxaparin/Lovenox

Notes:  
**For Warfarin/Coumadin prescription refills please use 2mg Pill Strength**

INR Date	INR	Dose	Instructions (mgs/day)																
06/30/2014			Next INR Date																
06/16/2014	2.2	22 mg per week	<table border="1"> <tr> <td>Warfarin</td> <td>Sun</td> <td>Mon</td> <td>Tue</td> <td>Wed</td> <td>Thu</td> <td>Fri</td> <td>Sat</td> </tr> <tr> <td>Total mg</td> <td>4</td> <td>2</td> <td>4</td> <td>2</td> <td>4</td> <td>2</td> <td>4</td> </tr> </table>	Warfarin	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total mg	4	2	4	2	4	2	4
Warfarin	Sun	Mon	Tue	Wed	Thu	Fri	Sat												
Total mg	4	2	4	2	4	2	4												
06/09/2014	2.3	22 mg per week	<table border="1"> <tr> <td>Warfarin</td> <td>Sun</td> <td>Mon</td> <td>Tue</td> <td>Wed</td> <td>Thu</td> <td>Fri</td> <td>Sat</td> </tr> <tr> <td>Total mg</td> <td>4</td> <td>2</td> <td>4</td> <td>2</td> <td>4</td> <td>2</td> <td>4</td> </tr> </table>	Warfarin	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total mg	4	2	4	2	4	2	4
Warfarin	Sun	Mon	Tue	Wed	Thu	Fri	Sat												
Total mg	4	2	4	2	4	2	4												
06/02/2014	1.9	22 mg per week	<table border="1"> <tr> <td>Warfarin</td> <td>Sun</td> <td>Mon</td> <td>Tue</td> <td>Wed</td> <td>Thu</td> <td>Fri</td> <td>Sat</td> </tr> <tr> <td>Total mg</td> <td>4</td> <td>2</td> <td>4</td> <td>2</td> <td>4</td> <td>2</td> <td>4</td> </tr> </table>	Warfarin	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total mg	4	2	4	2	4	2	4
Warfarin	Sun	Mon	Tue	Wed	Thu	Fri	Sat												
Total mg	4	2	4	2	4	2	4												
05/26/2014	1.7	20 mg per week	<table border="1"> <tr> <td>Warfarin</td> <td>Sun</td> <td>Mon</td> <td>Tue</td> <td>Wed</td> <td>Thu</td> <td>Fri</td> <td>Sat</td> </tr> <tr> <td>Total mg</td> <td>2</td> <td>4</td> <td>2</td> <td>4</td> <td>2</td> <td>4</td> <td>2</td> </tr> </table>	Warfarin	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total mg	2	4	2	4	2	4	2
Warfarin	Sun	Mon	Tue	Wed	Thu	Fri	Sat												
Total mg	2	4	2	4	2	4	2												

Convenient hyperlinks to communicate with AMS

Patient Clinical Details

Pill Size

Last 4 INRs and dose instructions