



BRIGHAM AND  
WOMEN'S HOSPITAL

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# DAWN AC Medication Interface: Impact on Patient Safety

Sally Stansbury, PharmD, CACP



# Objectives

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- Give an overview of Brigham and Women's Anticoagulation Management Service (BWH AMS)
- Review daily tasks using DAWN AC medication interface
- Demonstrate how BWH AMS uses the medication interface to increase safety
- Possible obstacles of the interface

# Brigham and Women's Anticoagulation Service (BWH AMS)

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- Currently have ~3,400 outpatients
- 10 pharmacist on staff
- ~400 patients per pharmacist
- 3 pharmacy student interns
- ~7,000 INR's dosed each month
- ~250 new patients each month
- Primarily phone based



# Daily Tasks

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- Call Labs
- Call “not done’s”
- **Check the medication tab**
- Dose INR’s
- Call dosed patient’s

# What is the medication interface?

Close all tabs | Recommendations | Patient Search

List view x

DAWN

## List view

All (All patients)  
(All risk classes)  
(All diagnoses)  
(Any target range)  
All Sally Stansbury  
Today  
(All roles)

Work List | Non attendance | Status | Reminders | **Medications** | Events | Reviews | No Next Test Date | Messages

Clinic All Sally Stansbury  
Date Today  
32 records found.  
**Standard 14-day**

Name	MRN	Medication Start	Medication End	Last Updated On	Medication
	5	08/21/2014	02/17/2015	08/22/2014 05:47	LISINOPRIL
	5	08/21/2014		08/22/2014 05:47	TRAZODONE
	5	08/21/2014	02/17/2015	08/22/2014 05:47	VITAMIN D2 (ERGOCALCIFEROL)
	5	08/21/2014	08/16/2015	08/22/2014 05:46	METOPROLOL SUCCINATE EXTEN
	5	03/04/2014	09/30/2014	08/22/2014 05:47	LIPITOR (ATORVASTATIN)
	5	08/20/2014	08/15/2015	08/22/2014 05:46	REGLAN (METOCLOPRAMIDE HCL)
	1	08/21/2014	08/16/2015	08/22/2014 05:45	WARFARIN SODIUM
	5	08/21/2014		08/22/2014 05:46	DIPHENOXYLATE W/ATROPINE
	5	08/21/2014		08/22/2014 05:46	FENTANYL (PATCH)
	5	08/21/2014	09/20/2014	08/22/2014 05:46	OXYCODONE
	5	08/21/2014	09/04/2014	08/22/2014 05:48	NYSTATIN CREAM
	1	08/21/2014	02/12/2016	08/22/2014 05:46	WARFARIN SODIUM
	1	08/21/2014	10/30/2014	08/22/2014 05:48	PRED FORTE 1% (PREDNISOLONE
	1	08/21/2014	10/30/2014	08/22/2014 05:48	PROLENSA (BROMFENAC 0.07% C
	1	08/21/2014	09/04/2014	08/22/2014 05:48	VIGAMOX (MOXIFLOXACIN OPHTH
	5	08/21/2014		08/22/2014 05:48	VOLTAREN GEL (DICLOFENAC 1%
	5	08/21/2014		08/22/2014 05:46	COLCHICINE
	5	08/21/2014	08/16/2015	08/22/2014 05:46	METOPROLOL SUCCINATE EXTEN
	2	08/21/2014	08/16/2015	08/22/2014 05:46	WARFARIN SODIUM
	1	08/21/2014	11/19/2014	08/22/2014 05:48	BACTRIM SS (TRIMETHOPRIM /SU
	1	08/21/2014	08/21/2014	08/22/2014 05:48	PACERONE (AMIODARONE )
	1	07/03/2014	08/21/2014	08/22/2014 05:48	PROGRAF (TACROLIMUS)
	1	08/21/2014	11/19/2014	08/22/2014 05:48	VALCYTE (VALGANCICLOVIR)
	1	02/12/2014	08/21/2014	08/22/2014 05:48	ZOLPIDEM TARTRATE
	1	09/25/2006		08/22/2014 05:46	ALLORBITOL
	1	07/03/2014	07/23/2014	08/22/2014 05:4	AUGMENTIN 875/125 (AMOXICILLIN/
	0	07/03/2014	07/03/2014	08/22/2014 05:4	Z-PAK (AZITHROMYCIN 250 MG PAK
	1	08/21/2014	08/16/2015	08/22/2014 05:48	WARFARIN SODIUM
	1	08/21/2014	08/16/2015	08/22/2014 05:48	WARFARIN SODIUM
	3	08/21/2014	10/20/2014	08/22/2014 05:48	TRAZODONE
	0	07/17/2014	07/12/2015	08/22/2014 05:47	LASIX (FUROSEMIDE)
	0	06/09/2008	07/09/2008	08/22/2014 05:47	MULTIVITAMINS

Rivaroxaban

- home

81

Atrial Fibrillation / 427.31

e 2.0 - 3.0 (2.5 Target)

05/17/2014 - Treatment stopped

nt 0.5mg Warfarin Increment Regime

lan 1 of 1 stopped

chads-vasc 2

h: works Mon Wed Fri

9:16 AM

400mg po BID X 1 week, followed by 200mg  
eks, then stop Amiodarone (last day 6/21/14?)

Burton Ilene 05/30/2014 08:31

ned consent forms.

Burton Ilene 05/20/2014 07:03

rsician updated to Brigham Primary Phys at Faulkner  
min L.

#### Other drugs

Drug	Start date	End date
PACERONE (AMIODARONE )	07/15/2014	
WARFARIN SODIUM	07/03/2014	
AUGMENTIN 875/125 (AMOXICILLIN/CLAV.ACID 875/125)	07/03/2014	07/23/2014
Z-PAK (AZITHROMYCIN 250 MG PACK)	07/03/2014	07/03/2014
OXYCODONE	05/22/2014	06/10/2014
WARFARIN SODIUM	05/18/2014	06/17/2014
PACERONE (AMIODARONE )	05/17/2014	06/03/2014
NEVANAC (NEPAFENAC 0.1% OPHTHALMIC SUSPENSION)	09/25/2013	12/18/2013 1 DF
PRED FORTE 1% (PREDNISOLONE 1% ACETATE OPHTHALMIC)	09/25/2013	12/18/2013 1 DF

Graph History Personal Treatment plans Questionnaires Interface Warnings

Date	INR	Dose	Dosing Instructions
Mon 08/04/2014	0.0	0.00 w	
Mon 07/21/2014	2.2	9.00 w	Warfarin mg
Mon 07/14/2014	2.4	9.00 w	Warfarin mg
Mon 07/07/2014	2.5	9.00 w	Warfarin mg
Thu 07/03/2014	1.9	10.00 w	Warfarin mg
Mon 06/30/2014	1.4	10.00 w	Warfarin mg

7/7/2014 11:51 AM

Left voicemail : recommend patient decrease to 2mg  
MonWed and 1mg all other days of the week. retest  
7/14.

Reviewed medication profile for drug interactions.  
Recommend changes to warfarin dose or next INR test.  
Intervention: less than 15 minutes Sally Stansbury, RPh

PHS\_CDR NWH O 201407071035 PT 28.7 SEC INR 2.5

Add history data





# Drug Tab

4S Dawn Clinical Software & Internet Applications. - Windows Internet Explorer

Close all tabs System menu Patient search Anticoagulation

List view Patient X

Home Machine/Alere

Risk class: High  
 Pref. clinic: Sally Stansbury  
 Phone: - home  
 Age: 60

**Consider H.M. Correlation**

Diagnosis: Aortic Valve Replacement, mechanical / V43.3 ...  
 Target Range: 2.0 - 3.0 (2.5 Target)  
 Start date: 05/12/2008 - Indefinite  
 Anticoagulant: 2.5mg Warfarin Increment Regime  
 Treatment Plan: 1 of 1 active  
 Risks:

HM was 0.4-0.6 higher (range 2.4-3.4)  
 Pt now has HM ALERE

9/19/2012 pt working on getting bwh md. Sally Stansbury, RPh

BWH Main - Stansbury Sally 06/01/2011 11:34  
 Referring Physician updated to BWH 75 Francis St - Rajagopalan Harith

Dosing Contacts Letters **Drugs !** Events Procedures Reviews Reminders Groups Documents

INR:  Date: 10/11/2012  
 Scheduled for Tue 10/09/2012, 08:00 - 18:00  
 in clinic: Sally Stansbury Reschedule manually

No warnings

Treatment notes

(dose zero) Dose: 0.00 w  
 Status: **Scheduled** Next:   
 Accept INR DNA Un-schedule

Graph History Personal Treatment plans Ad Hoc Questionnaires

	Date	INR	Dose	Dosing Instructions	Time	DNA	In range	Com						
	Thu 10/11/2012	0.0	0.00 w											
!	Thu 10/04/2012	2.2	30.00 w	Warfarin mg	Sun 5	Mon 2.5	Tue 5	Wed 5	Thu 5	Fri 2.5	Sat 5	5 d		10/4. Spo
!	Mon 10/01/2012	6.4	32.50 w	Take 0 mg for 3 days, then: Warfarin mg	Sun 5	Mon 5	Tue 5	Wed 5	Thu 5	Fri 2.5	Sat 5	3 d		10/1. Pt w
!	Wed 09/19/2012	3.4	32.50 w	Warfarin mg	Sun 5	Mon 5	Tue 5	Wed 5	Thu 5	Fri 2.5	Sat 5	10 d		9/19. INR c

System menu Patient search Anticoagulation

Patient X

DAWN

LMR

Dosing Contacts Letters Drugs Events Procedures Reviews Reminders Groups Documents

Add drug

Other drugs

Drug	Start date	End date	
COLCHICINE	08/21/2014		0.6 MG (0.6MG TABLET Ta
METOPROLOL SUCCINATE EXTENDED RELEASE	08/21/2014	08/16/2015	100 MG (100 MG TAB ER 24H Ta
CRESTOR (ROSUVASTATIN)	08/08/2014		20 MG (20MG TABLET Ta
NIZORAL CREAM (KETOCONAZOLE)	08/04/2014		(2 % CREAM
TRIAMCINOLONE 0.1% (TRIAMCINOLONE ACETONIDE 0.1	07/23/2014		1 APPLICATION (0.1% CREAM(C
SYNTHROID (LEVOTHYROXINE SODIUM)	07/15/2014	07/10/2015	125 MCG (125 MCG TABLET Ta
ZYRTEC	06/18/2014		
INSPIRA (EPLERENONE)	06/12/2014		25 MG (25 MG TABLET Ta
VALATAM (ATANORBOCT)	05/20/2014	08/04/2014	1.5000 (0.005% DR

Unclassified

Sally Stansbury

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TIA (Transient Ischemic Attack) / 435.9 ...

2.0 - 3.0 (2.5 Target)

10/31/2013 - Indefinite

0.5mg Warfarin Increment Regime

Plan 3 of 3 active

chads-vasc 8

System menu Patient search Anticoagulation

Patient X

DAWN

Dosing Contacts Letters Drugs Events Procedures Reviews Reminders Groups Documents

Add drug

Date	Dose	Frequency	Interaction
	0.6 MG (0.6MG TABLET Take 1) PO		q3d Unknown - Added By Interface
015	100 MG (100 MG TAB ER 24H Take 1) PO		QD Unknown - Added By Interface
	20 MG (20MG TABLET Take 1) PO		QHS Unknown - Added By Interface
	(2 % CREAM (G)) TOP BID TO SCALEY AREAS ON FACE AND TO GROIN		Unknown - Added By Interface
	1 APPLICATION (0.1% CREAM(GM)) TOP		BID Unknown - Added By Interface
015	125 MCG (125 MCG TABLET Take 1) PO		QD Unknown - Added By Interface
			QD Unknown - Added By Interface
	25 MG (25 MG TABLET Take 1) PO		QD Unknown - Added By Interface
015	1.5000 (0.005% DRORS) QD		QD Unknown - Added By Interface

Unclassified

Sally Stansbury

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TIA (Transient Ischemic Attack) / 435.9 ...

2.0 - 3.0 (2.5 Target)

10/31/2013 - Indefinite

0.5mg Warfarin Increment Regime

Plan 3 of 3 active

Risks chads-vasc 8



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Close all tabs System menu Patient search

List view Patient Drugs X

Drugs (FONTAINE ROSE (05/12/1930) # 155971

Drug	Start date	End date	Refills	Instructions	Standard 14-day	Refills	Instructions	Standard 14-day	Refills	Instructions
BACTRIM	07/30/2014	08/01/2014								
BACTRIM DS (TRIMETHOPRIM	07/30/2014	08/02/2014								
AMOXICILLIN	07/07/2014	07/17/2014	250 MG							
WARFARIN SODIUM	05/19/2014	05/14/2015	2.5 MG (2.5MG TABLET T	QPM						
WARFARIN SODIUM	04/28/2014	04/23/2015	1 MG (1MG TABLET Take	QPM						
AMOXICILLIN	04/22/2014	05/02/2014								
ATENOLOL	04/04/2014	03/30/2015	25 MG (25 MG TABLET Ta	QD						
DIGOXIN	12/06/2013	08/28/2015	0.125 MG (0.125MG TABL	as directed						
VITAMIN D2 (ERGOCALCIFEROI	08/14/2013	02/10/2014	50000 UNIT (50000 UNIT	QWEEK						
CLOBETASOL PROPIONATE (EI	11/08/2012	10/18/2013	1 APPLICATION TOP	BID						
KEFLEX	10/18/2012	06/14/2013	250 MG (250MG CAPSULE	QID						
PROTOPIC 0.1% (TACROLIMUS	11/10/2011	06/14/2013	1 APPLICATION (0.1% OI	BID						
AMOXICILLIN	12/08/2010	12/18/2010	500 MG (500MG TABLET	TID						

05/19/2014 --- Special

11/06/2013 --- Special

Instructions: or as directed by BWH anticoagulation at 617.264.3000. --- End

2014 3:00:15 PM: ed by pt. Jenny Jung

Notes entered via interface on 04/12/2014 05:48 : Refills: 3 --- Date Updated: 09/2014 --- Special

06/2013 --- Special Instructions: or as directed by BWH anticoagulation at 617.264.3000. --- End

Notes entered via interface on 04/12/2014 12:14 : Refills: 3 --- Date Updated: 12/27/2013 --- Special

04/12/2014 12:14 : Refills: 6 --- Date Updated: 12/06/2013 --- Special Instructions: 1 po qd, but 2

Notes entered via interface on 04/12/2014 12:14 : Refills: 5 --- Date Updated: 08/14/2013 --- Special

10/18/2013 --- Reason for Discontinue: No Longer Necessary --- Special Instructions: --- End

06/14/2013 --- Reason for Discontinue: No Longer Necessary --- Special Instructions: --- End

Notes entered via interface on 04/12/2014 12:15 : Refills: 3 --- Date Updated: 06/14/2013 --- Reason for

Refills: 0 --- Date Updated: 12/18/2010 --- Reason for

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Done

Local intranet | Protected Mode: Off

115%

12:21 PM



# Quick Code

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- .ddi
- “Reviewed medication profile for drug interactions. Recommend changes to warfarin dose or next INR test.”

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Close all tabs System menu Patient search

List view CodedComment

DAWN CLINICAL FRAMEWORK 7.9

◆ LicenseAgreement  
◆ License\_MaxActivePatientCount

Frontpage

Normal Tables

- ◆ HealthAuthority
- ◆ Organisation
- ◆ Ward
- ◆ HCPProfessional
- ◆ Clinic
- ◆ PatientGroup
- ◆ LoginLog
- ◆ Clinic-diary
- ◆ Meeting
- ◆ MeetingTemplate
- ◆ Test
- ◆ TestAlias
- ◆ ReferenceRange
- ◆ TestGroup
- ◆ TherapyTemplate
- ◆ Trial
- ◆ QuestionnaireType
- ◆ GeneralLookupCategory
- ◆ Team

Lookup tables

- ◆ Reports

Management

- ◆ Clinic View settings
- ◆ MessageManagement
- ◆ Printing
- ◆ Reports
  - ◆ Parameter
  - ◆ Report
  - ◆ Polar Reporting
- ◆ Audit & security
- ◆ DawnInterface
- ◆ System
  - ◆ CodedComment

CodedComment

Search for: ShortCode: FullComment: SEARCH

ShortCode	FullComment
850	850 Boylston Street
ad10	Adverse Drug Event: less than 15 minutes
ad20	Adverse Drug Event: 15 to less than 30 minutes
ad30	Adverse Drug Event: 30 minutes or more
al	Amy Levesque PharmD, RPh
alere	Patient will self dose per protocol.
ap	Ashley Palmer, RPh
ar	Andrea Resseguie, Pharm.D., CACP, R.Ph.
bah	Beth Hirling, RPh
bc	Bridget Chisholm, PharmD, RPh
bics	INR from BICS.

1 - 20 / 85

Local intranet | Protected Mode: Off 115% 10:03 AM



# Possible Obstacles

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- Over correction
- Decrease in patient reporting
- List may not be all-inclusive

# In Summary

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- Medications update daily into DAWNAC
- Pharmacist review medication list each day
- Contact patients with changes
- Track changes



# What's Ahead?

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- Vocantas
- Plans to manage HTN, DM and HF patients
- Follow-up with NOAC patient's
- Drug-Drug interaction guidelines
- Online education (nearing completion)
- Adding the detailed interaction for each drug

# Questions?

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