

National Patient Safety Goal

3E Compliance

Reducing the Likelihood of Patient Harm
Associated with the Use of Anticoagulant
Therapy

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Clarian Health

Clarian Health Partners

Indianapolis, IN

- Large integrated health delivery network
- Indianapolis metroplex campus includes:
 - Indiana University Medical Center
 - Riley Children's Hospital
 - Indiana University Simon Cancer Center
 - Clarian Methodist Hospital

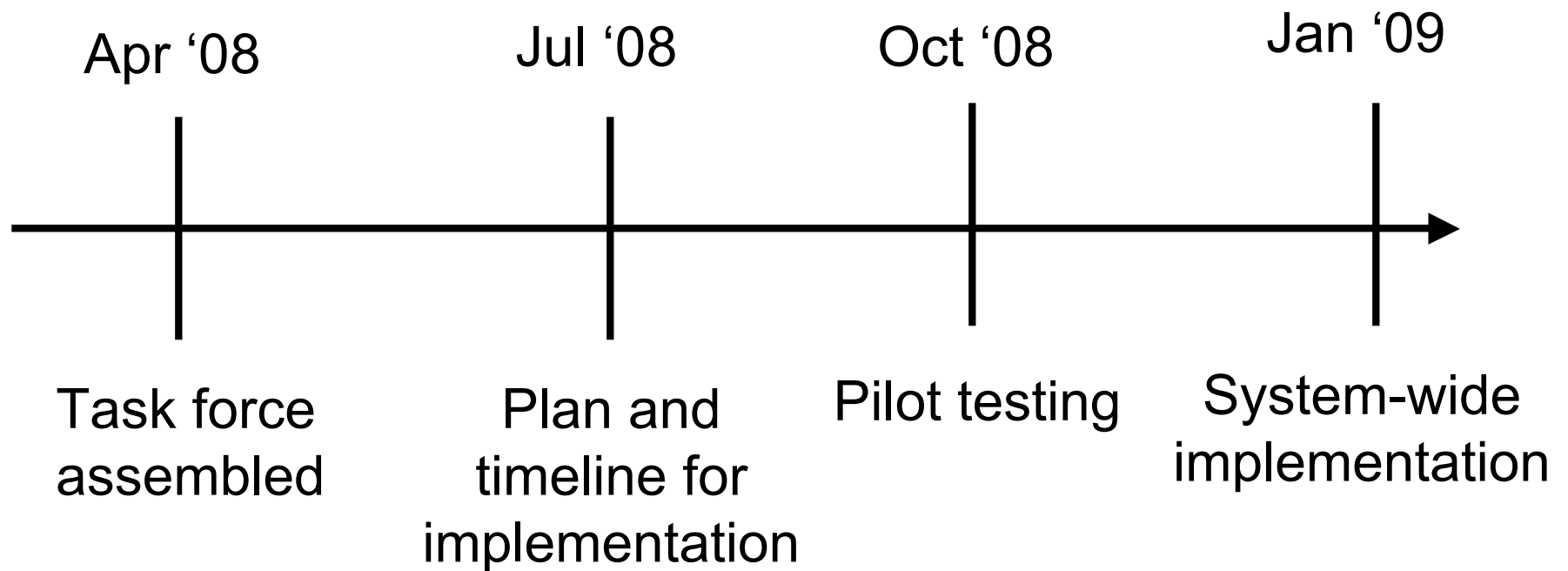
National Patient Safety Goals

- Developed by The Joint Commission to promote specific patient safety improvements using expert Advisory Group
- Focus on problem areas and describe solutions; promotes system wide solutions
- Asses compliance via Periodic Performance Reviews and on-site surveys
- Non-compliance can result in loss of TJC accreditation

NPSG 3E

- Reduce the likelihood of patient harm associated with the use of anticoagulation (AC) therapy
- Applies only to organizations providing AC therapy
- New approach to implementation with one year phase in and defined milestones at 3, 6, 9 months and full implementation by January 2009

NPSG 3E Milestones



Elements of NPSG 3E

- A1: Defined AC management program to individualize care
- A2: Use of oral unit dosed products & pre-mixed infusions when available
- C3: When pharmacy services provided, warfarin is dispensed in accordance with established monitoring procedures

Elements of NPSG 3E

- C4: Use of approved protocols for initiation & maintenance of AC therapy appropriate to med used, condition treated and potential for drug interactions
- C5: For warfarin initiation a baseline INR is available and for all warfarin patients a current INR is available and used to monitor and adjust therapy
- C6: Dietary notified of all warfarin patients & responds via established food/drug interaction policy

Elements of NPSG 3E

- A7: Programmable infusion pumps used for continuous IV heparin administration
- C8: Policy to address baseline & ongoing lab tests for heparin and LMWH therapies
- C9: Education provided regarding AC therapy to staff, patients & families

Elements of NPSG 3E

- C10: Patient/family education includes importance of follow-up monitoring, compliance issues, dietary restrictions, & potential for ADEs & interactions
- A11: Organization evaluates AC safety and practices

Clarian Response

Prior to release of NPSG 3E, Clarian Metroplex provided AC for:

- 3998 warfarin pts/yr
 - Pharmacist managed: 30%
 - Physician managed: 70%
- 3727 therapeutic enoxaparin pts/yr

Clarian Response

Audit of metroplex practice to NPSG 3E revealed several compliance gaps. Most notably in documentation:

Parameter	Physician	Pharmacist
Patient Education	20%	80%
Documented Goal INR	22%	83%

Clarian Response

- Metroplex Data Analyzed
- Time for full compliance estimated
- Three models presented to Medical Executive Committee
 - Current model with MDs responsible for all performance elements for 70% of patients and pharmacy for 30%
 - Full Pharmacy Dosing service with pharmacy 100% responsible
 - Hybrid with Pharmacy responsible for majority of patients with “op out” option for MD

Clarian Response

Assessment of Metroplex anticoagulation related workload revealed:

- 4000 warfarin pts/yr
- 3700 enoxaparin pts/yr
- 9015 additional pharmacist hours/yr
- 5 new FTEs
- \$550,000

Continuous Clarian Response

- Devise warfarin, enoxaparin, fondaparinux, and heparin dosing guidelines
- Develop pharmacists training and competency assessments
- Create intranet AC page
- Provide multiple educational venues for providers
- Perform quarterly quality improvement analyses

Quality Improvement Data

Parameter	Physician	Pharmacist
Days to therapeutic INR (mean)	4.33 days	6.32 days
Time in therapeutic range (mean)	3.35 days	2.88 days
Goal INR achieved (%)	57.5%	73.5%
INR >4 (%)	11.1%	7.5%
Outpatient follow-up arranged and documented (%)	48.6%	50%

Quality Improvement Data

Parameter	Clin Spec Pharmacist	AC Pharmacist
Days to therapeutic INR (mean)	6.13 days	6.46 days
Time in therapeutic range (mean)	3.09 days	2.8 days
Goal INR achieved (%)	38.9%	63.6%
INR >4 (%)	6.25%	9%
Outpatient follow-up arranged and documented (%)	35.2%	63.6%

The Joint Commission
2010 Hospital Accreditation Program
National Patient Safety Goals

NPSG.03.05.01

Reduce the likelihood of patient harm associated with the use of anticoagulant therapy.

- Applies to hospitals that provide AC therapy and/or long term AC prophylaxis where expectation is lab values for coagulation outside the normal range
- Does not apply to short term prophylactic AC where lab values expected to remain within or close to normal

Elements of Performance

NPSG.03.05.01

1. Use only oral UD products, pre-filled syringes or premixed bags when available (for peds prefilled syringes should only be used if specifically designed for children).
2. Use approved protocols for the initiation and maintenance of AC therapy.
3. Before starting warfarin assess baseline coagulation status; use a current INR to adjust therapy and document in medical record.
4. Use authoritative resources to manage potential food and drug interactions for warfarin patients.

Clarian Monitoring

- All AC safety practices monitored quarterly:
 - Time to achieve therapeutic INR
 - # INR outside therapeutic range
 - # Patients readmitted with INR above 4, DVT, PE or bleed
 - # Patients with baseline labs ordered
 - # Patients with documented AC education

Elements of Performance

NPSG.03.05.01

5. When heparin is used as continuous IV, use programmable pumps in order to provide consistent and accurate dosing.
6. Establish a written policy for baseline and ongoing lab tests for heparin and LMWH

Elements of Performance

NPSG.03.05.01

7. Provide education regarding AC therapy to staff, patients and families including:
 - Importance of follow-up monitoring
 - Compliance
 - Drug-food interactions
 - The potential for ADEs and interactions
8. Evaluate AC safety practices, take action to improve practices & measure the effectiveness of those actions in a time frame determined by the organization.