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Improving Patient Safety and Quality:

**Implementing Effective
Venous Thromboembolism Prophylaxis Strategies
for BC Cancer Agency's Inpatients**

**Vancouver Centre
December, 2011**



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Appropriate use of Venous Thromboembolism Prophylaxis (VTEP) was the most highly rated of 79 safety practices based on its impact and effectiveness and therefore was considered:

THE NUMBER ONE SAFETY PRACTICE FOR HOSPITALS

(A comprehensive analysis of patient safety. Agency for Healthcare Research and Quality--AHRQ—2001)



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Background

- **Importance of clinical guidelines and protocols:**
 - Appropriate, standardized health care for specific clinical situations
 - Improve quality and efficiency; better health outcomes; reduce harm

- **Local, provincial, inter/national drivers of best/evidence-based practices:**
 - MoH Clinical Care Management Guidelines
 - Accreditation Canada—ROPs
 - Safer Healthcare Now



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“State of the Nation”: The Problem

- 480 hospitalized cancer patients evaluated in 2008 and 2010 over six month time frames - BCCA
- VTEP was not routinely provided to the majority of inpatients at BCCA, Vancouver Centre
- 15% (73/480) received appropriate VTEP
- Evidence estimates at least 90% of inpatient cancer patients would be eligible (high risk population for VTE)

(Abadi, Lee, Nam, Amos, Fung; UBC, BCCA and Vancouver Coastal Health, 2011).



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Aim

- **Increase number of eligible inpatients at Vancouver Centre—BCCA receiving VTEP to 100% by December 2011**
- **Reduce the incidence of VTE in this population**



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Team Members

- Hematologist – Dr. Agnes Lee
- Medical Oncologist – Dr. Howard Lim
- GPO – Radiation Oncology – Dr. Mike Mamacos
- Education Resource Nurse – Ms. Arlyn Heywood
- Clinical Coordinator – Ms. Janice Dirksen
- Director, Systemic Therapy – Ms. Mary Flaherty
- Pharmacists – Dr. Shirin Abadi and Ms. Crystal Amos
- Quality, Safety and Risk Management – Ms. Trish Hunt, Ms. Sue Fuller-Blamey



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Key Measures

■ Outcome

- Incidence of VTE inpatients measured by # positive CT scans for DVT/PE over number of scans ordered (not measured yet)

■ Process

- % inpatients who are assessed as eligible for VTEP and are placed on VTEP

■ Balancing

- Satisfaction of physicians re use of Admission PPO including VTEP checklist
- % Patients on VTEP provided with information--handout



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DEFINITIONS OF TERMS:

- Eligible inpatients for appropriate pharmacologic prophylaxis are all patients who do not have contraindications.
- Appropriate pharmacologic prophylaxis adherence is prescribing of dalteparin or heparin.

- Rate calculation:

Patients who have been prescribed appropriate prophylaxis
Eligible Patients

- Improvement: Increase in the rate
- Target rate: 100% eligible patients



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Change Concepts/Strategies

Reduce Classifications and Use Constraints:

Incorporate VTEP assessment and intervention checklist into a new Admission Pre-Printed Order to...

Optimize compliance through use of a form that makes the admission process easier/faster and safer—i.e. more legible and easier for staff to transcribe/process.



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DATA COLLECTION AND ANALYSIS

SAMPLING PLAN:

- Review all charts on unit at sampling intervals

DATA COLLECTION PROCEDURE:

- Review charts/all new admissions on inpatient unit of Vancouver Centre at intervals--Use of audit form and check for completion of PPO specifically:
 - Contraindications checked - yes/no
 - If no, dalteparin prescription checked - yes/no



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DATA COLLECTION PROCEDURE....

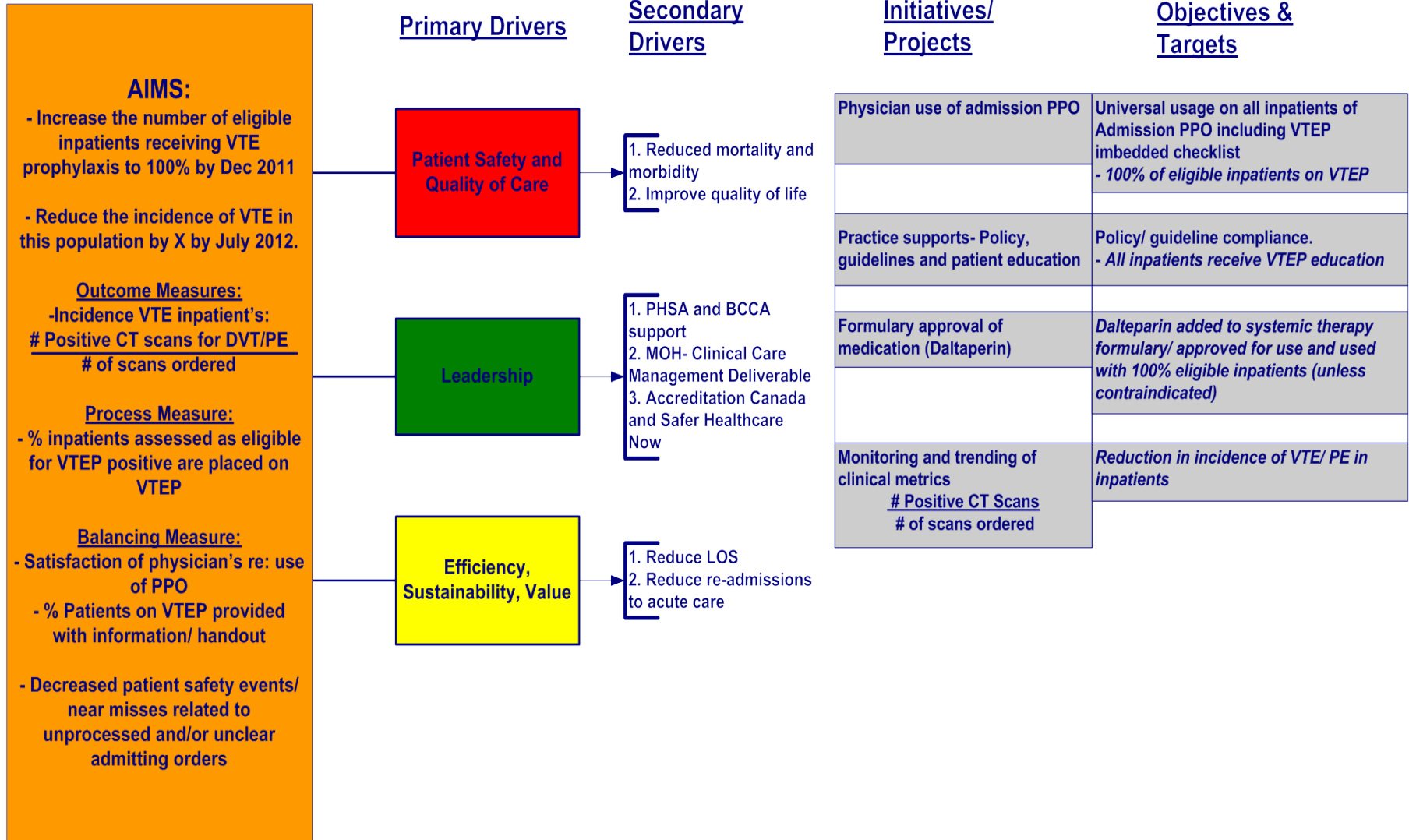
- Eligible patients = #total patients minus #patients with contraindications noted
- Count #eligible patients with no contraindications noted and dalteparin or heparin ordered

FREQUENCY:

- Daily x 1 week; Weekly x 1 month; monthly x 3 months; quarterly x 4; semi-annually.

Venous Thromboembolism Prophylaxis (VTEP) Project: BCCA Vancouver Centre Inpatients

11/14/2011



IMPLEMENTATION/ COMMUNICATION STRATEGY

Target Group	Strategy	Venue	Lead
Oncologists -Systemic/Medical -Radiation	Email to residents and GPOs; Highlight: 1. PPO and split in sections of chart; 2. dalteparin on formulary	Email Mention at Staff Meetings	Howard/Hagen, Mike/Mohamed
Nurses	Posters/ notices; discussion	On unit/ display Staff meetings VCC Nursing Integration	Arlyn/Karen Janes
Pharmacists	Printed materials; discussion	Email Newsletter Staff meetings	Crystal, Shirin
Unit Clerks	Inform/ discuss Add to chart pack	Unit	Janice
Patients	Patient Education Sheet	Handout Review/ questions as needed	Nursing
Leadership	Presentation/ Discussion and Approval	Quality Council	Trish



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Project Milestones Achieved

- Patient population to receive VTEP confirmed; exceptions and contraindications confirmed
- Developed Admission PPO/checklist with VTEP checklist imbedded; companion policy, guideline, and patient information/education sheet
- Cost benefit analysis presented. Anticoagulant--dalteparin—confirmed/approved by the BCCA Systemic Therapy Committee
- Educated/communicated: Physicians, pharmacists, nurses, patients
- Implemented policy & guidelines, PPO form mid Aug 2011
- Audit Compliance: mid Aug—Dec 2011

Target Progress Report and Results Sheet

Team Name: BCCA Venous Thromboembolism Prophylaxis

Date: August – October, 2011

Department: 5th Floor Inpatient Unit, VCC, BCCA

Total pts/eligible patients

Team Leader: Trish Hunt

Measure	Baseline N = 15/14	Target	Week 1 n = 16/8	Week 2 n = 17/6	Week 3 n = 18/10	Week 4 n = 15/12	Final N=66/36	% change
Dalteparin/alternate prescribed	13% 2	100% of eligible pts.	88% 8	67% 4	100% 10	100% 11	78% 33	76%
Not prescribed; no contraindications			1	2			3	
Dalteparin not prescribed due to CI								
Contraindications (CI)								
High risk bleed			1		1	1	3	
Uncontrolled HTN								
Platelet Count <			2		1		3	
Bleeding disorder/ coagulopathy								
LP/epidural/spinal booked								
LP/epidural/spinal received								
Heparin induced thrombocytopenia								
Hypersensitivity to LMWH								
Other: Already on therapy; LOS < 24 hrs; Patient refusal			2, 2, 0		0, 2, 0	1, 0, 0	3, 4, 0	



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Patient Education: Blood Clots—A Risk for Cancer Patients

- **What you need to know**
- **Why this is important for you**
- **Deep vein thrombosis; pulmonary embolism**
- **Way to reduce risk of developing a blood clot**
- **Signs and Symptoms**
- **What to do in event of symptoms**
- **Further Information: If you have any questions or concerns, you can call HealthLinkBC at 811 to speak with a nurse at any time 24/7. Translation services are available.
You can also check out www.healthlinkbc.ca/healthguide.stm and type in “Deep Venous Thrombosis” or “Pulmonary Embolism” in the SEARCH box.**



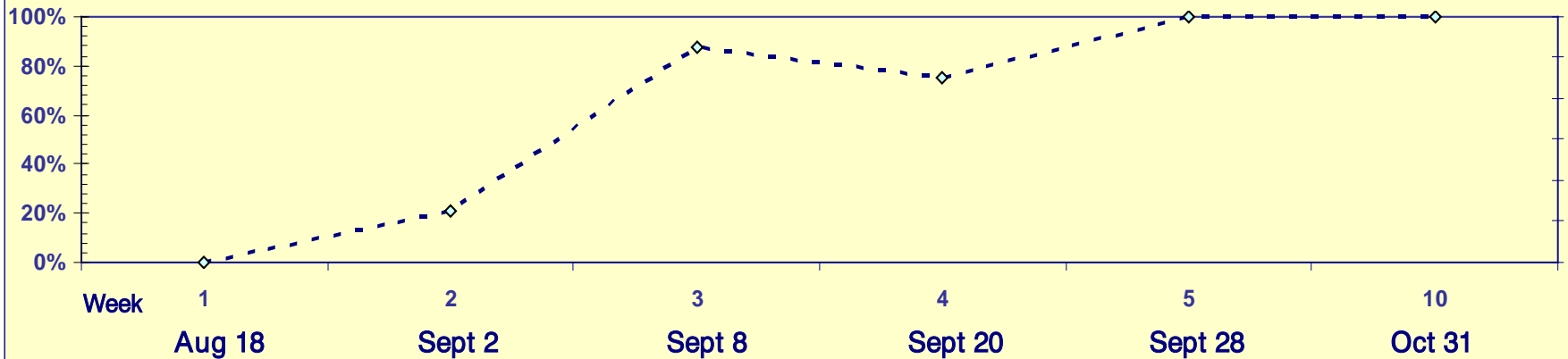
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Results so far

BCCA--VCC Inpatients on VTE Prophylaxis August to October 2011
Implemented August 18, 2011





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Critical Success Factors: Lessons Learned

- **Interdisciplinary team**
- **Right stakeholders at the table**
- **Collaborative and cohesive**
- **Committed and engaged**
- **Attention and adherence to deliverables & timelines**
- **Strong patient safety culture**
- **Valuing and practicing standard work**
- **Leadership support**



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Thank you 😊

Questions and Discussion

**Copies of Policy & Guidelines, Pre-
Printed Order and Patient Education
Forms Available**