

15.777 Healthcare Lab: Introduction to Healthcare Delivery in the United States

Prof. Retsef Levi | Fall 2018



Reducing Length of Stay (LOS) following Elective Carotid Endarterectomy (CEA) Surgeries

- - Objectiv

Resulting Scope &

Hypotheses

- SVS wanges provide its members added value; focus on actionable research
- LOS is easily measured; reducing it has high financial benefit

Elective CEA

Identify actionable, operational/administrative contributors (non-clinical, non-demographic) and underlying drivers of LOS

-- 3-legged discovery process pointed to candidates prolonging -- LOS (hypotheses) Literature Review Database Exploration On-Site Visits & Interviews MGH Beth Israel SWH



Social & non-clinical factors

✓ Awareness (Scheduling, Incentives)



Carotid arteries located in the n



--- Dedicated survey enabled layering operational/administrative data with LOS for hy<u>potheses testing</u>



---Results

Hypotheses	Testing		
Patients pre-existing demographic information, pre- existing clinical status & events that occur during surgery can explain the variance in length of stay	No individual demographic, clinical or procedure events variables were good predictors of post-operative LOS		
Existence of a Clinical pathway reduces LOS	No correlation was found between existence of clinical pathway and LOS		
Surgeon-patient and inner-department communication reduces LOS	LOS was not correlated with timing of discharge planning with nursing staff nor with the existence of a pre-op package; Not enough variance in discharge planning with the patients to test		
Social, non-clinical factors increase LOS	No correlation was found between the social situations described and LOS		
Scheduling optimization reduces length of stay	Not enough variance in LOS awareness when scheduling to test		

-- Top Recommendations

Adding timestamps (date and time) for admittance and discharge to the registry

Examining the magnitude of social-related additional night in the hospital followed by a pilot to address them

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Conducting surgeon-level studies in addition to facility-level studies in order to identify more opportunities to reduce LOS

Society for Vascular	~	<pre>> Our</pre>	🔎 — — Special	
Surgery (SVS) National non-protit medical society	N I	r Team	r Thanks	Mike Benedetto
 Voluntary 	i	Or Dan • Ron Margalit • Michal Zisman-Margalit		Nicholas Renegar
 Advance excellence & innovation 	i			Jens Jorgensen
 5.800+ professionals 	- I			MGH Vascular Surgery Dep.
 400+ medical centers 	l			BWH Vascular Surgery Dep.
 Maintain non-EMR registries (research databases) 	I			BIDMC Vascular Surgery Dep.
	/		` <u>`</u>	SVS Analytics team