

Measuring Impact & Value

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Utilization of Lean Six Sigma Methodology to Determine the “Feeder” Benefit of a Palliative Care Program to the Hospice Business Line

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Purpose

- Increased community need for palliative care poses financial challenges for hospice programs that are also providing palliative care services for chronic patients. Palliative Care program expenses (staffing, mileage, etc.) are often absorbed by the primary hospice business line as the Medicare B reimbursement is not sufficient to cover the costs.
- For strategic planning purposes we determined the value of the “feeder” benefit of the palliative care program (palliative care consults that convert to hospice admissions) to the hospice business line utilizing Lean Six Sigma Improvement Methodology

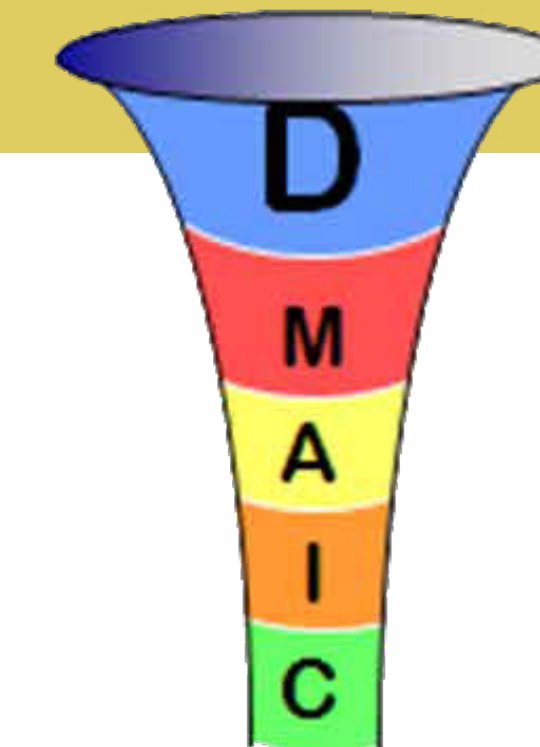
Method

- Lean Six Sigma is a systematic and focused team approach to solving problems and making decisions. This methodology focuses on removing waste (process variances) and utilizing a DMAIC (Define, Measure, Analyze, Improve and Control) roadmap to analyze process inputs/outputs and it’s relation to customer expectations.
- Each segment of the Palliative Care program was defined and analyzed over a six month period. This included Process Variable Maps, Failure Mode Effects Analysis, Statistical Data Analyses and data collection. Results identified opportunities for enhancing palliative care conversions resulting in a “break even” financial program outcome.

Results

- This is our first attempt at utilizing Lean Six Sigma methodology to analyze a healthcare program as it is more commonly used in a manufacturing environment. We were able to identify elements of our palliative care program that were in our control and could be adjusted.
- We also developed a tangible, financial measure of the “downstream revenue effect” of the palliative care program on the hospice business unit. This contribution margin per patient day was utilized to determine the strategic plan for our current palliative care program.
- In summation, we were able to validate the positive impact of a palliative care program that is designed with Lean Six Sigma principles. The Contribution margin was determined along with the total number of hospice days and compared against palliative care expense resulting in a “break even” financial impact.

Project Charter



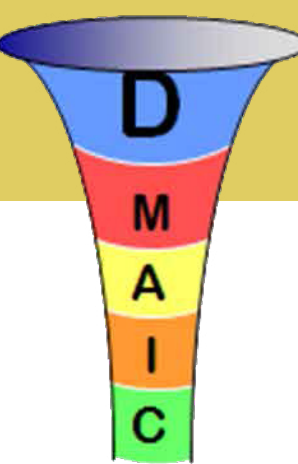
Objective:

- Identify the % palliative care conversions (palliative consults converting to hospice admissions) required to “break even” or reduce palliative care program deficit

Benefits:

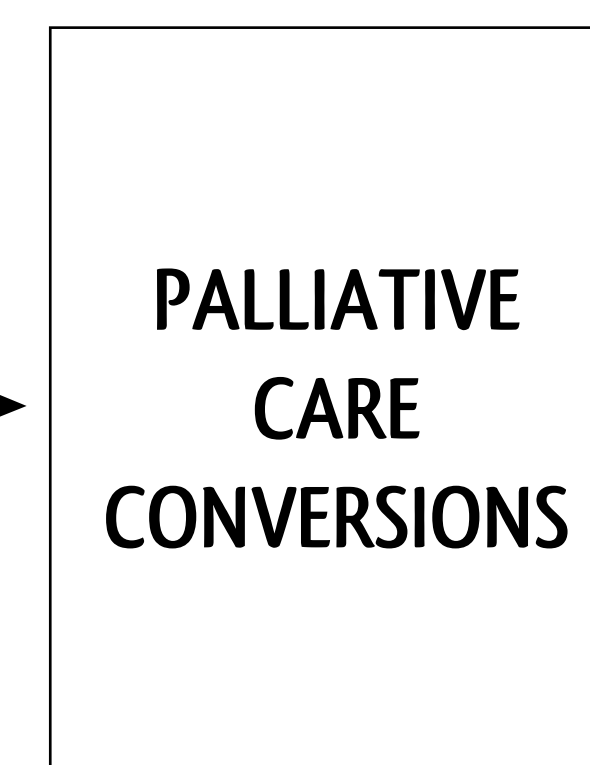
- Determine financial benefit of palliative care program as “feeder” to hospice business unit. Projected “break even” revenue is \$219K/year

High Level Process Map

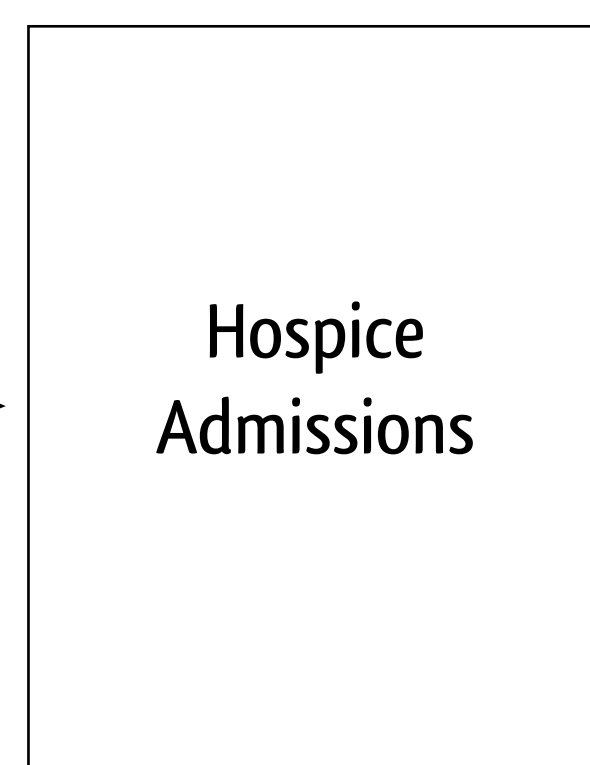


INPUTS

Competition
Physician
Patient
Case Management
Vendor
Finances
Timing of Referral

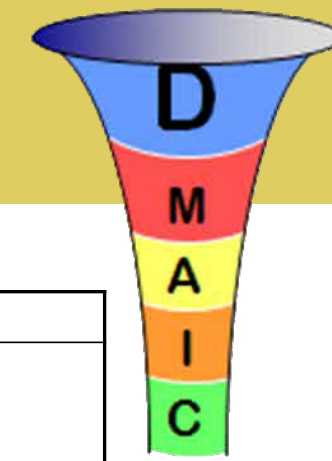


OUTPUTS



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Cause & Effect Matrix

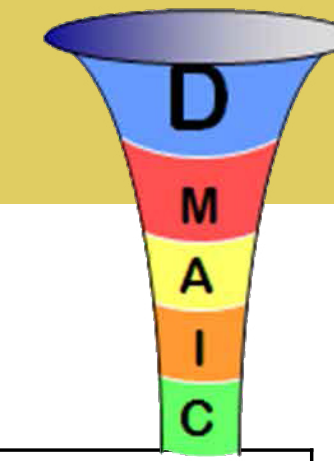


Palliative Care Conversions

Process Step	Process Inputs	Rating of Importance to Customer >>			Control vs. Uncontrolled	Total
		10	8	10		
1 Referral	Referral Sources	9	3	9	C	204
2 Referral	Method of Notification	9	1	9	C	188
3 Referral	Time of referral received	9	1	9	UC	188
7 Referral	Marketing	9	1	9	C	188
8 Provider Assignment	Provider Availability	9	1	9	C	188
20 Implementation of Goals	Discharge planning of hospital patients	9	1	9	UC	188
14 Goals of care determined	Experience of provider	9	3	3	C	144
5 Referral	Visit scheduling	9	1	3	C	128
15 Goals of care determined	Receptivity of pt/family	9	1	3	UC	128
18 Implementation of Goals	Receptivity of pt/family	9	1	3	UC	128
9 Provider Assignment	Patient Location	3	1	9	UC	128
21 Implementation of Goals	Availability/response time of hospice team	9	1	1	UC	108
4 Referral	Pt location	3	1	3	UC	68
6 Referral	Med rec/ pt info procurement	3	1	3	UC	68
11 Visit Occurs	Length of visit	3	1	3	UC	68
12 Visit Occurs	Complexity of case	3	1	3	UC	68
13 Visit Occurs	Family Availability	3	1	3	UC	68
16 Goals of care determined	Complexity of case	3	1	3	UC	68
17 Goals of care determined	Collaboration with other involved providers	3	1	3	UC	68
19 Implementation of Goals	Collaboration with other involved providers	3	1	3	UC	68
10 Visit Occurs	Initial vs follow-up	1	1	1	UC	28
Total		127	25	101	0	

Focal Points

Initial FMEA

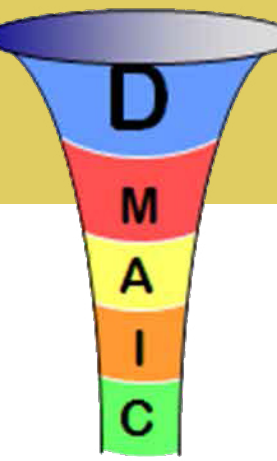


Process/Product Failure Modes & Effects Analysis (FMEA)

Process Step	Key Process Input	Potential Failure Mode	Potential Failure Effects	Potential Causes	Current Controls	Actions Recommended	Resp.	Actions Taken
Referral	Method of Notification	Information not received; visit not done	service is delayed; may impact future referrals	Current notification is not distinct for palliative consults	non existent at present	text with email response	PC Mgr	Determine alert system flow, educate involved parties
Referral	Referral Source	No referral	No hospice conversions; productivity	Competition; Marketing strategy (lack of); physician buy in	non existent at present	marketing plan, education	Phys Education, Marketing	Develop education plan; monitor referrals
Referral	Marketing	No referral	No hospice conversions; productivity	Competition; Marketing strategy (lack of); physician buy in	non existent at present	marketing plan, education	Marketing Director/PC manager	Develop marketing plan; monitor referrals
Conversions	Patient/CG acceptance	Not admitted to hospice	Loss of hospice conversions	Physician/ARNP narrative	non existent at present	Physician/ARNP follow up with patient	Medical Director	Develop script and educate medical team
Conversions	Patient/CG acceptance	Not admitted to hospice	Loss of hospice conversions	Pt/Family not ready	non existent at present	Education and follow up with patient	Director of Education	Develop education materials for patients/caregivers
Conversions	Patient/CG acceptance	Not admitted to hospice	Loss of hospice conversions	Pt not appropriate for hospice but appropriate for rehab	non existent at present	Education and follow up with patient	COO/ Medical Director	Follow up by ARNP in NH/ALF
Goals of Care determined	Provider Experience	Inadequate skill set	Delay in or failure to determine goals of care	Provider communication difficulty	non existent at present	Provide additional training	PC Medical Director	Develop a program specific to needs of individual provider and monitor

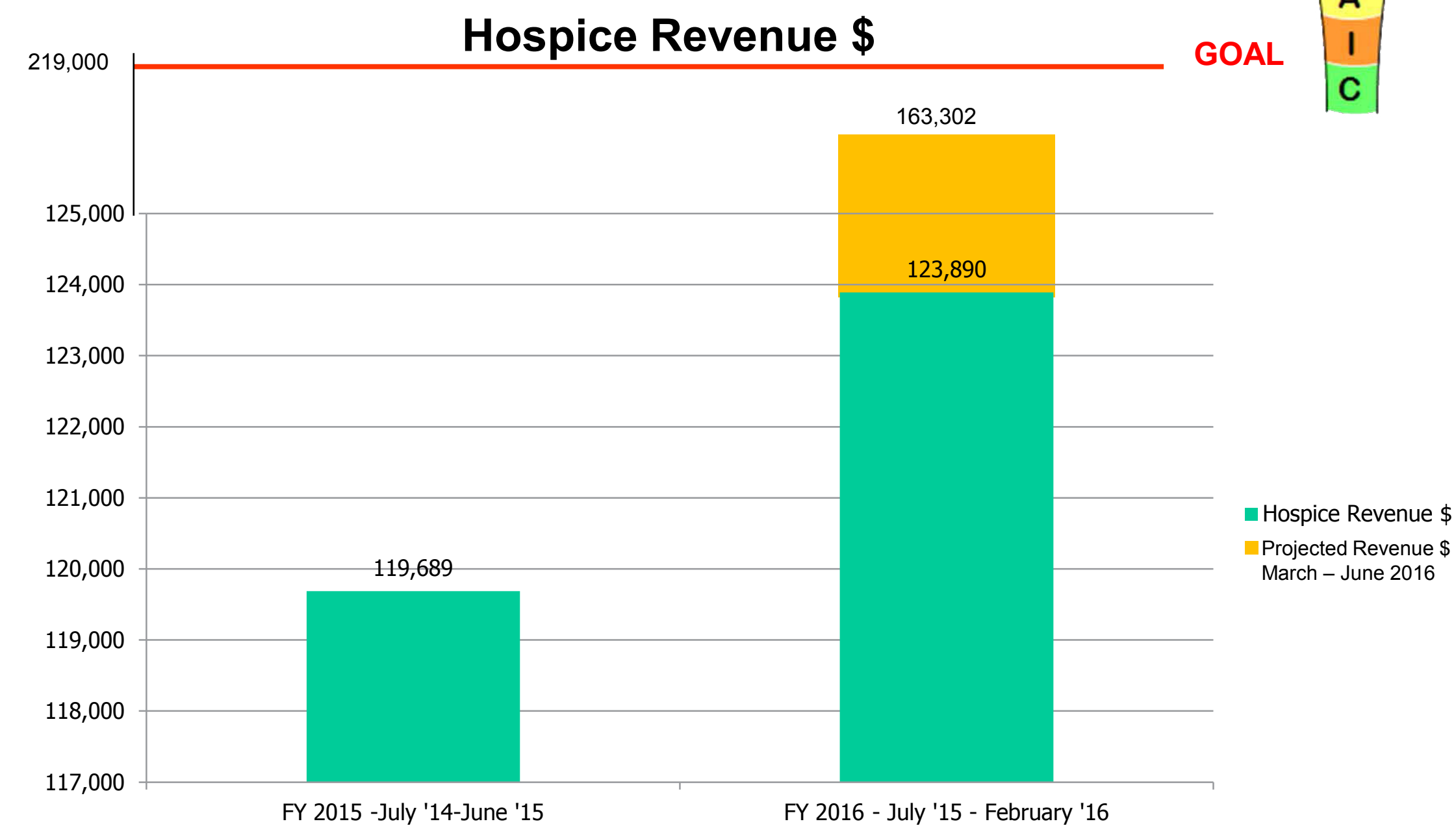
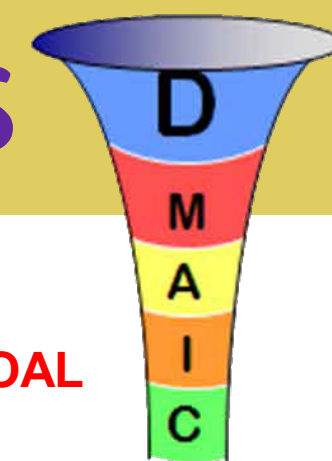
Focal Points

Measurement System Analysis

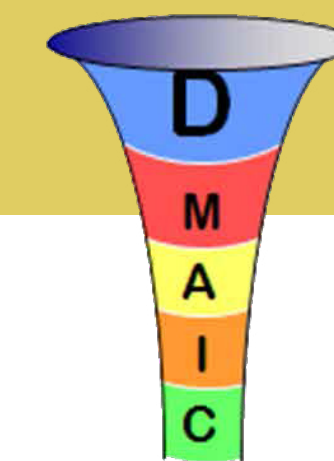


- To determine hospice revenue generated by palliative care conversions:
- Total # of hospice days x \$60.91 (contribution margin/day)
- Net deficit for the palliative care program is \$219K/yr (2015).
- LSL= 300 hospice days (minimum necessary to break even/yr (300 x \$60.91) x 12 = \$219K

Valuation of PC Conversions

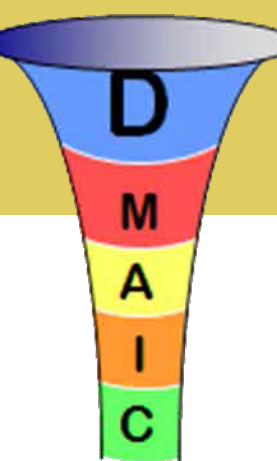


Control Plan



- Each control has a designated owner
- Training logs and data collection will be monitored by each designated owner for each palliative care ARNPs and physicians
- Palliative care conversions (hospice days) will be tracked monthly
- Designated ARNPs and physicians are dedicated to this project initiative and not shared across business units

Follow-Up Projects



- Establish productivity standards for palliative care consultation
- Expand palliative care program to include ALFs/NHs to increase access and palliative care conversions
- Integrate quality measures to enhance clinician's potential to increase palliative care conversions
- Monitor palliative care conversions for regulatory compliance to support hospice admission/appropriateness