

Strategic Business Plan Palliative Expansion

Revised 4/11/2005

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Business case overview

Market

Palliative care is the comprehensive care of those with serious or life-threatening illnesses with a focus on the improvement of quality of life through the alleviation of pain and suffering. Palliative care includes the general approach to care that should be routinely provided to those with serious illness and also encompasses an approach to care provided by health care professionals with expertise in optimizing patients' quality of life.

Although its primary focus is comfort, palliative care occurs concurrently with life-prolonging and disease-modifying interventions. This perspective advocates for and facilitates communication between the health care team, patient, and family and incorporates psychosocial and spiritual care according to patient and family needs, beliefs and culture. Palliative care is not limited by the patient's expected prognosis or the goals of treatment but spans the continuum of care.

Palliative care programs offer patients and families better symptom management, more psychosocial care, and an alternative to aggressive treatment with expensive ancillary services or in intensive care units. While not limited to end-of-life care, palliative care provides a different approach to death and dying that is appropriate for some patients and families.

Current State

In response to these needs to provide patients with serious, life-threatening illnesses access to supportive whole person care, palliative care has grown in U.S. hospitals in the last 10 years. Formal palliative care programs are becoming an established feature in many academic medical centers. The Thomas Palliative Care Unit (TPCU) opened in 2000.

The TPCU has accomplished a number of goals since opening in 2000. We have attained a national reputation for the program and VCUHS; as one of six national Palliative Care Leadership Centers, we teach other health systems how to establish or expand their palliative care programs. Through this program we have mentored the pediatric department in this institution to initiate their own palliative care team. We have received the support of the state legislature, having passed a legislative resolution and a budget amendment establishing funds for us to provide clinical training in palliative care for health care professionals throughout the Commonwealth. Palliative care has also become

an important part of the research mission of VCUHS and the Massey Cancer Center.

Future State

This program expansion will allow the VCUHS to apply the Palliative Care Program Standard of Care to the identified populations throughout the Health System.

We will continue to be involved in legislative and policy activity locally and nationally which will impact palliative care and reimbursement issues.

Market Gap

Over 740 patients died at MCVH in CY 2004; 514 of them had a LOS of at least 3 days. Only 161 patients who died with LOS of at least 3 days died on the TPCU. The 353 who died elsewhere spent an average of 8.4 days in ICUs, for nearly 3,000 ICU days total. 64 patients spent more than 2 weeks in an ICU before dying there. Clearly these figures represent an opportunity for an expanded palliative care team to offer an alternative to ICU and other aggressive care for these patients who are no longer benefiting from such. For every patient who dies in the hospital, one could reasonably estimate that there are 2-3 others of similar complexity and need for palliative care (e.g., best possible symptom management) as well.

There is no outpatient palliative care or symptom control program in all of Virginia. We have begun a small program, integrated with Pain Management in Dalton Oncology Clinic, which sees an increasing number of patients. We have deliberately not grown that program due to lack of physician and APN staff. We estimate that we could average 15 weekly visits between Stony Point and Dalton, if the service were available. This represents a NEW market opportunity for VCUHS.

As an example of the kind of diagnoses we may see, we analyzed MCVH admissions with admitting diagnosis of hypovolemia and underlying diagnosis of cancer. MCVH has consistently had about 8 per quarter, with average LOS of 5 days each. An outpatient clinic that reduced that problem by one-half would avoid 15 to 18 admissions per year, and 75-100 hospital days. The clinical goal is to have patients, families, physicians and nurses more attuned to early signs of dehydration and volume depletion, treat it through outpatient infusions, and avoid ER admissions when the problem has become acute.

Operations

Current State

We have an 11 bed inpatient unit with 5 private and 3 semi-private rooms. A family room with kitchen is available on the unit. Our nursing FTEs total 14.8. Physician coverage includes 0.5 FTE physician and 1.5 FTEs of fellow coverage (fellows are supported by grant and philanthropic funding that is now ending). The advanced practice nurse, social worker and psychosocial CNS are shared with additional VCUHS units and programs. The Palliative Unit has a dedicated grant funded 0.5 FTE chaplain and a 0.2 FTE VCUHS chaplain.

Quality Outcomes

VCUHS took part in the UHC “Palliative Care 2004” Benchmarking Project. This study measured complex chronic care to assess appropriate interventions. The study groups included: 1)Heart Failure Group – DRG 127 (heart failure); 2)Cancer Group – DRG 82 (respiratory neoplasms), DRG 203 (malignant hepatobiliary system/ pancreas), DRG 172 (digestive malignancy), DRG 274 (malignant breast disease), DRG 346 (malignancy male reproductive system), DRG 10 (nervous system neoplasm); 3)Human Immunovirus Group – DRG 489 (HIV); and 4)Respiratory Group – DRG 475 (respiratory system diagnosis with ventilator support), DRG 483 (tracheostomy with mechanical ventilation). These DRGs were then condensed into 4 diagnostic categories: heart failure, cancer DRGpool, HIV, and respiratory DRG pool. These groups represented patients with serious, life-threatening illness who might benefit from palliative care in the hospital.

The results for the VCUHS showed six out of eleven performance measures below the median. The same parameters were used for measuring patient outcomes on the TPCU. The results showed that patients on the TPCU scored higher than the median in 9 out of the 11 performance indicators. (Appendix A). The difference is attributable to: the use of Symptom Assessment Scales to note symptoms; the attention to fixing symptoms; the use of algorithms to standardize care; expert, high volume practitioners; and the multi-disciplinary approach.

Future State

The unit bed count will remain the same. The number of Palliative versus Medicine patients in those beds will increase from 4.5 to 6.5 each day. The consult team will increase consult visits from 15 to 25 consults per week. The outpatient clinic will have 15 outpatient visits per week. This will be accomplished with the addition of:

- 1.0 FTE Medical Physician
- 1.0 FTE Fellow
- 1.0 FTE Advanced Practice Nurse

Quality Outcomes

The Palliative Care Consult Team will be available for symptom management for ongoing issues at any point in the hospitalization. By providing training and consultation in symptom management, the consult team will address the areas of need identified in the UHC Benchmarking Study. Early consultation within 48 hours, for identified populations, will be a key parameter for achieving symptom management and the resulting high patient and family satisfaction and improved quality of life. Our plan also includes changing some of the functions in Cerner, including the addition of triggers to better achieve defined goals for symptom management and discharge planning.

VCUHS can be in a position to substantially increase the level of symptom control for our patients. The institution's performance on UHC key performance measures can be greatly improved. Support from VCUHS through the expansion of the Palliative Care Consult Team will allow the service to grow, resulting in the right care at the right time for a larger number of patients.

Operations Gap

Add support for three positions to the Palliative Care Team: 1 medical physician, 1 fellow (existing), and 1 advanced practice nurse.



Financial

Current State

Direct admits to the TPCU are profitable, generating over \$340,000 in total margin in FY04. Patients from other services (e.g., Oncology, Pulmonary, Neuro Surgery, Cardiology, General Medicine, Neurology, and Trauma Surgery) are transferred to the unit after the PC team has facilitated clarification of goals or a change in the plan of care. These transfers are treated at much lower cost than on previous services, with cost-avoidance averaging over \$900,000 per year in total costs, or nearly \$500,000 in direct costs.

For example, in FY04 and the first six months of FY05, 285 patients transferred from other units to the TPCU. They spent an average of 9.4 days on other units prior to transfer, and 5.3 days on the TPCU. Their average cost on the TPCU was approximately \$1300 a day less than it was on the other units. Even if one takes a more conservative approach, using direct cost instead of total cost, we would still estimate almost \$500,000 in direct cost-avoidance per year for transfers. This savings is projected to increase to \$1.1 million in direct cost-avoidance by FY07 with program expansion.

FY04 and FY05 (six months) Adult Inpatient Payor Mix Comparison

Primary Payor Category	PCU		All patients		Gen Med	
	Admits	Admits %	Admits	Admits %	Admits	Admits %
Commercial						
HMO/PPO						
Medicaid						
Medicaid – Managed Care						
Medicare						
Other						
Self Pay/Indigent						
Trigon Mngd Care						
Trigon TSI						
Total						

Information redacted

Future State

Expanding the palliative care consult team will increase hospital consults and clinic visits by 35%. The average daily census of patients on the palliative care service and the TPCU will increase from 4.5 to 6.5. Transfers from the ICUs to the TPCU reduce the use of ICU beds by giving suitable patients a setting where they will receive appropriate care. This allows the VUCHS to better utilize

ICU beds and decrease the need for emergency department diversions. The consult team also assists with initiating direct admission from the emergency department, decreasing their congestion.

Palliative Care projections, MCVH

	FY03	FY04	FY05 (projected based on 6 months)	FY06 (projected with expansion)	FY07 (projected with expansion)	FY08 (projected with expansion)
total cases	471	419	464	620	724	724
direct admits	253	206	246	305	384	384
transfers	218	213	218	315	340	340
PCU days	2,525	2,018	1,744	2,330	2,721	2,721
Avg PCU LOS	5.36	4.82	3.76	3.76	3.76	3.76
Charges, direct admits (fully loaded)						
Total cost, direct admits (fully loaded)						
Mixed reimbursement, direct admits						
Profit (loss), direct admits						
Average profit (loss) per direct admit						
Direct Cost avoidance for transfers	\$ 577,268	\$ 660,434	\$ 660,434	\$ 954,839	\$ 1,030,505	\$ 1,030,505
Average cost avoidance per transfer	\$ 2,648	\$ 3,101	\$ 3,030	\$ 3,030	\$ 3,030	\$ 3,030

Notes

Growth in FY06 of 5 more consults per week in 2nd quarter, 10 in 3rd quarter, 15 in 4th quarter, all billable; 780 more in FY07 forward
 Growth in FY06 of 2 more admissions per week in 2nd quarter, 4 in 3rd quarter, 6 in 4th quarter; 332 more in FY07 forward
 Projected LOS, ratio of direct admits to transfers, and profit (loss) all based on actual FY04 and FY05 figures
 Cost avoidance = differential in direct cost per day, PCU versus prior units, times number of PCU days after transfer
 Projected total cost includes \$90,000 additional personnel in FY06 forward
 Assumed no net gain or loss from inflation in costs relative to inflation mechanisms in contracts

Palliative Care projections, MCVP

Description	Adj. Work RVU Base Reimbursement	Adj. Practice Base Reimbursement	Adj. Malprac Base Reimbursement	Total Adj. Base Reimbursement	Work RVUs
Non Gov't Inpt Consults, level 4	\$				
Non Gov't Established visits, level 4	\$				
Non Gov't Subsequent hospital care, level 2	\$				
Gov't Subsequent hospital care, level 2	\$				
Gov't Inpt Consults, level 4	\$				
Gov't Established visits, level 4	\$				
Total Gross Practice Plan Receipts	\$				
Total Net Practice Plan Receipts	\$				
Payment to Hospital (75% of PE RVUs)					
<hr/>					
Incentive Plan conversion factor					
Clinical Compensation					
<hr/>					
Practice Plan Revenue (adjusted for 10% estimated indigent payor mix)					
<hr/>					
Salary					
Fringe (24%)					
Fellow					
Taxes 20% (Dean's and MCVP)					
DOIM Overhead (13.8%)					
Total Costs					
<hr/>					
Total Need					

Academic

Current State

The palliative care program has become a local, regional, and national leader in academic palliative care. We were recognized by the Robert Wood Johnson and Milbank Funds as one of nine Pioneers in Palliative Care. We are among the finalists for the American Hospital Association “Circle of Life” Award given to the leading palliative care program in the country. Our faculty teach nationwide at major meetings and seminars, and have lectured extensively at other NCI-designated Cancer Centers.

Research activity

In a few short years, research has become a major focus of the Thomas Palliative Care Unit. Massey Cancer Center has over \$ 5.6 million in Cancer Control Funding, \$1.56 million from NCI, \$2.43 million from other NIH sources, and \$211,000 from ACS.

Grants funded include the following: \$10,000, VistaCare Foundation, randomized controlled trial of nebulized entanyl; \$300,000, Project on Death in America Faculty Scholar Awards for Pat Coyne and Laurel Lyckholm; \$750,000, RWJ-CAPC Palliative Care Leadership Center; \$30,000, Massey Pilot Trial, for Robin Matsuyama PhD to investigate use of palliative care by minorities and medically underserved.

Grants applied for, and under review: NCI R-21, Sandra Barker PhD PI, randomized controlled trial of animal assisted therapy; NCI R-21, Tamara Orr RN PhD PI, randomized controlled trial of symptom assessment and algorithms to improve symptom management in the outpatient clinic; ACS Mentored Research Scholar Award, James Khatcheressian MD PI, use of Cerner Information System to monitor and correct prescribing practices for supportive care; Jessie Ball DuPont Fund, Jennie Webb-Wright MD PI, establishment of rural palliative care program at VCU’s Rappahannock General Hospital Cancer Outreach program; NIH-AHRQ Tom Smith, MD co-PI, \$1.5 million, palliative care use and impact at 6 large medical centers.

Educational Activity

We actively teach housestaff, medical and all other students the principles and practice of palliative care. Coyne, Smith, Lyckholm, Cassel, Hager and others all speak at their national forums on how to establish palliative care programs and provide quality care.

Future State

Research activity

We have been successful with a modest number of grant applications. We are anticipating having at least one successful R01 or R21 or ACS grant by October 2005. Since few randomized controlled trials have been done in palliative care, the research field may need time to adjust to the methods used in the Cancer Pain Trial (TS, PI) and accept that randomized trials are possible and needed. The goal is to have VCU be the national leader in palliative care research by 2008.

Successful cancer control research, of which palliative care is a large component, will be key to the success of the Massey Cancer Center achieving NCI designation as a Comprehensive Center, the first in Virginia.

Educational Activity

We have just been successful in gaining state support for teaching palliative care to practicing professionals, the first such program in the nation. We will succeed in this program and likely expand it to include standardized, high volume, care using algorithms at more sites. We will continue to teach at national and international meetings and publish in high impact journals such as the Journal of the National Cancer Institute, Journal of Palliative Medicine, Journal of Clinical Oncology, and the Wall Street Journal.

Academic Gap

The main issue is time. We have the mentors, track record, and skills. If we are too busy seeing patients and teaching, we will not have time to successfully compete in an increasingly competitive funding area.

Requirements to fill the gap

We need the clinical help referenced above. We have a first-tier cancer center research organization in Massey, and will not need additional resources.



Implementation Plan

Task	Responsible Person(s)	FY06	FY07	FY08
Hire MD				
Hire Fellow				
Hire APN				

Task	Responsible Person(s)	Date
Expand Consultation service	Palliative Care Consult Team	9/05
Cerner Revisions	Hager/Smith	6/05
Expand Outpatient clinic	Coyne/Hager/Lyne/Smith	9/05

Success Measurements – FY 2006

Measure	Goals	Responsible Persons
Outpatient visit	780	Palliative Team
Consults	520	Palliative Team
Inpatient visits	624	Palliative Team
UHC Benchmark	Outperform median for defined population	Palliative Team
Total margin for direct admits	\$312,000	Palliative Team
Cost avoidance-Direct cost	\$955,000	Palliative Team



Appendix A

VCU follow-up study re: UHC "Palliative Care 2004" Benchmarking Project

Appendix A: PC service provides better care than VCU average, on 9 of 11 measures: "Matched" series of 20 patients admitted to PCU

Key Performance Measure	Best Quartile	Median	VCU Adm Date 10/02-9/03	VCU PC Adm Date 1/04-9/04
Pain assessment within 48 hours of admission	100%	98.5%	97.6%	100%
Use of a numeric scale to assess pain	93.1%	85.2%	85.2%	75%
Pain relief or reduction within 48 hours of admission	81.5%	78.3%	77.8%	82.4%
Bowel regimen ordered with opioid therapy order	66.7%	59.1%	63.6%	95%
Dyspnea assessment within 48 hours of admission	98%	95%	100%	100%
Dyspnea relief or reduction within 48 hours of admission	86.2%	80%	78.6%	100%
Document patient status within 48 hours of admission	31%	15.6%	17.1%	95%
Psychosocial assessment within 4 days of admission	40%	17.8%	9.8%	40%
Patient/family meeting within 1 week of admit (discussion must include planning and/or preferences for discharge)	69%	40.5%	0%	70%
Plan for discharge disposition documented within 4 days of admit	64.3%	55%	43.9%	90%
Discharge planner / social services arranged services required for disch	81%	75%	68.3%	95%

Prepared by Alice Hagenmueller, Feb 2005