



Collaborative Care Model

Post-Acute Care / Long-Term care / Sub-Acute Care

Proposal

Definitions:

For the purposes of this proposal, we use definitions consistent with AMDA – The Society for Post-Acute and Long-Term Care Medicine:

- Post-Acute Care: Skilled nursing and Medicare Part A
- Long-Term Care: Custodial, nursing home care, private pay, or Medi-Cal
- Sub-Acute Care: Sub-set of the long-term care population requiring more complex clinical nursing care (examples: ventilator care, tracheostomies)

EXECUTIVE SUMMARY

The UC Davis Medical Center Collaborative Care Model is proposed as a primary medical care model using an advanced practice nurse and physician partnership. The partnership will manage medical and mental health issues for both UCD and non-UCD patient at select facilities where we choose to partner and establish formal agreements. In addition to medical care, we intend to provide education and training to the staff of partner facilities on topics such as geropsychiatry, wound care, and infection prevention. The benefits to the Medical Center will include improved access to medical care for the patients we serve, better clinical outcomes for our patients in the facilities, and cost savings through reduced readmissions, shortened length of stay in the hospital, and better discharge throughput to the facility. Readmission causes will targeted for both those resulting from the hospital discharge and those resulting from care received in the post-acute care facility, improving the information sent with a patient when readmitted to the hospital by the facility.

We propose contracting for 1.0 FTE of Nurse Practitioner time through the UC Davis School of Nursing (SON) and 0.6 FTE of Hospitalist physician time. In time, the SON will consider establishing faculty positions to participate in the program and merge teaching with clinical practice. A 6 to 12 month ramp-up period has been projected, requiring start-up funding of approximately \$165,000 for year one. Subsequent years may require supplemental funding for administrative time (estimated at \$67,000 for year two). Variances in volume, collections, and actual benefits expense may influence the actual amount required. The goal is to achieve

a profit in the operations of the program. Details follow in the *Proposal Details* section.

The implementation of the Collaborative Care Model will require administrative support for tracking performance and outcomes measures. There are is no explicit request for the administrative support in the proposal, but discussion and a decision on how the program is administered by or within the Medical Center will need to occur.

PROPOSAL DETAILS

Timeline for implementation, upon approval:

- 30-90 days: Complete operational deliverables 1 through 10.
- 91-270 days: First six months of program – ramp-up period.
- 271-450 days: Second six months of program – growth to steady state; complete operational deliverable 11.

Pro Forma Business Model:

The business model is presented in three sections: Visits, Revenue, and FTE / Start-Up costs. The **Visits Model** has assumes a steady state for the initial 3 facilities of ~90 visits per week, separated by admissions, follow up visits, and discharges.

Figure 1: Visits Model: Facilities, Assumptions, Volumes

Facility 1 - University Post-Acute Care (UPAC) Input Cells						
Facility 2 - Arden Post-Acute Care (APAC)						
Facility 3 - Norwood Pines (NP)						
Assumptions:						
1. Arden as largest volume						
2. TIME Admissions = 60 minute average; follow up visits = 20-30 minutes; discharge = 30 minutes						
3. ADMISSIONS UPAC - 5/wk; APAC - 9/wk; NP - 2/wk						
4. FOLLOW UP UPAC - 19/wk; APAC - 24/wk; NP - 16/wk						
5. DISCHARGES UPAC - 5/wk; APAC - 9/wk; NP - 2/wk						
	Monday	Tuesday	Wednesday	Thursday	Friday	Weekly totals
Morning	UPAC	NP	APAC	UPAC	NP	
Admits	1	1	2	2	1	7
Follow up	7	8	7	6	8	36
Discharge	2	1	2	2	1	8
<i>Morning Sub</i>	10	10	11	10	10	51
	Monday	Tuesday	Wednesday	Thursday	Friday	Weekly totals
Afternoon	APAC	UPAC	Admin	APAC	APAC	
Admits	3	2	0	2	2	9
Follow up	5	6	0	6	6	23
Discharge	2	2	0	2	2	8
<i>Afternoon Sub</i>	10	10	0	10	10	40
	Monday	Tuesday	Wednesday	Thursday	Friday	Weekly totals
Daily						
Admits	4	3	2	4	3	16
Follow up	12	14	7	12	14	59
Discharge	4	3	2	4	3	16
Total	20	20	11	20	20	91

The **Revenue Model** calculates the projected revenue, after overhead, available for salary and program expenses. Follow up visits are projected at 40% for a higher

level complexity and 60% lower level. The model accounts for distribution between physician and NP billing (NP charges are at 85% of total charges), with an overhead rate of 32%. The billing overhead may be less depending upon which tax structures apply. At steady state we anticipate revenue-after-overhead of approximately \$285,000 per year.

Figure 2: Revenue Model: Charges, Collections, Net Revenue

ANNUALIZED PROJECTIONS																
	Annual Totals	CPT	Charge Rate	Overhead rate	Distribution of Charges (%)		Collection Rate (as % of charges)		Charges		Collections (at 80% of charges)		Overhead		Net Revenue (after OH)	
					Phys	NP	Phys	NP	Phys	NP	Phys	NP	Phys	NP	Phys	NP
Admits	832	99306	\$173.15	0.32	100%	0%	1	0.85	\$144,061	\$ -	\$115,249	\$ -	\$36,880	\$ -	\$ 78,369	\$ -
Follow up	1248	99310	\$141.37	0.32	0%	100%	1	0.85	\$ -	\$149,965	\$ -	\$119,972	\$ -	\$38,391	\$ -	\$ 81,581
Follow up	1820	99309	\$95.16	0.32	0%	100%	1	0.85	\$ -	\$147,213	\$ -	\$117,770	\$ -	\$37,686	\$ -	\$ 80,084
Discharge	832	99316	\$109.85	0.32	0%	100%	1	0.85	\$ -	\$ 77,686	\$ -	\$ 62,149	\$ -	\$19,888	\$ -	\$ 42,261
Total	4732								\$144,061	\$374,864	\$115,249	\$299,891	\$36,880	\$95,965	\$ 78,369	\$203,926
										\$518,924.54		\$415,139.63	\$132,844.68			\$282,294.95

The **Cost Model** shows the projected year 1 costs, taking into account the ramp-up of the program, and a steady state projection for year 2. The actual required funding support both in the ramp up period and steady state may vary based upon benefit rates, collections/overhead, volume of patients seen, and billing patterns.

Figure 3: Cost Model: Assumptions, Ramp-up Year, Steady State

Assumptions:									
Months 1-3: Average 30% of projected volume per month for ramp-up.									
Months 4-9: Average 75% of projected volume per month for ramp-up.									
Month 10 on: Average 100% of projected volume per month.									
Start-up Costs: Materials at \$1000.00, training for UCD Providers at \$12,000.00 (incl. registration, travel, hotel for AMDA training)									
Year 1: Ramp-up Period									
	FTE	Total Collections:	OH (32%)	Revenue available for salary	Salary	Benefits (@40%)	Total Sal/Ben expense	Salary stipend required	% Salary covered by Clinical Revenue
Months 1-3:	1.6	\$31,135.47	\$9,963.35	\$21,172.12	\$62,500.00	\$25,000.00	\$87,500.00	\$66,327.88	24%
Months 4-9:	1.6	\$155,677.36	\$49,816.76	\$105,860.61	\$125,000.00	\$50,000.00	\$175,000.00	\$69,139.39	60%
Month 10 on:	1.6	\$103,784.91	\$33,211.17	\$70,573.74	\$62,500.00	\$25,000.00	\$87,500.00	\$16,926.26	81%
Start up Costs:		-	-	-	-	-	-	\$13,000.00	-
	1.6	\$290,597.74	\$92,991.28	\$197,606.46	\$250,000.00	\$100,000.00	\$350,000.00	\$165,393.54	56%
Year 2: Steady State									
	FTE	Total Collections:	OH (32%)	Revenue available for salary	Salary	Benefits (@40%)	Total Sal/Ben expense	Salary stipend required	% Salary covered by Clinical Revenue
12 months:	1.6	\$415,139.63	\$132,844.68	\$282,294.95	\$250,000.00	\$100,000.00	\$350,000.00	\$67,705.05	81%

Figure 4: Salary Model: NP and Physician

FTE:		REVENUE: Annualized (52 weeks)				SALARY EXPENSE:			UCDMC EXPENSE:	
Nurse Practitioner	FTE	Total Collections:	OH (32%)	Revenue available for salary	Salary: NPII (9147) Step 8.0	Benefits (@40%)	Total Sal/Ben expense	Salary stipend required	% Salary covered by Clinical Revenue	
Clinical FTE:	1.0	\$299,890.99	\$95,965.12	\$203,925.87	\$130,000.00	\$52,000.00	\$182,000.00	(\$21,925.87)	112%	
Sub-Total NP	1	\$299,890.99	\$95,965.12	\$203,925.87	\$130,000.00	\$52,000.00	\$182,000.00	(\$21,925.87)	112%	
FTE:		REVENUE: Annualized (52 weeks)				SALARY EXPENSE:			UCDMC EXPENSE:	
Physician	FTE	Total Collections:	OH (32%)	Revenue available for salary	Salary:	Benefits (@40%)	Total Sal/Ben expense	Salary stipend required	% Salary covered by Clinical Revenue	
FTE:	0.6	\$115,248.64	\$36,879.56	\$78,369.08	\$120,000.00	\$48,000.00	\$168,000.00	\$89,630.92	47%	
Sub-Total MD	0.6	\$115,248.64	\$36,879.56	\$78,369.08	\$120,000.00	\$48,000.00	\$168,000.00	\$89,630.92	47%	
FTE:		REVENUE: Annualized (52 weeks)				SALARY EXPENSE:			UCDMC EXPENSE:	
Program Totals	FTE	Total Collections:	OH (32%)	Revenue available for salary	Salary	Benefits	Total Sal/Ben expense	Salary stipend required	% Salary covered by Clinical Revenue	
FTE Totals	1.6	\$415,139.63	\$132,844.68	\$282,294.95	\$250,000.00	\$100,000.00	\$350,000.00	\$67,705.05	81%	

Deliverables:

This next section outlines the deliverables for the program, broken out by Operational, Physician, and Nurse Practitioner deliverables.

Operational Deliverables:

1. Contract or hire physician(s) and nurse practitioner(s).
 - a. Include methodology for Z-payments for both physicians and nurse practitioners for clinical earnings above clinical salary expense.
2. Inter-professional team training for the UCDCM physician and NP providers.
3. Develop Practice Standards, including systems for team communications, including protocols and processes.
4. Engage each partner facility to get agreement on UCD staff following up with non-UCD physician patients in the facility.
5. Meet with facilities to define their needs and to establish processes and scope of services.
6. UCD Physicians to complete competency training with the California Association of Long Term Care Medicine (<http://www.caltcm.org/>).
7. Create schedule.
8. Develop a process for taking call (include appropriate training and protocols for call).
9. Physicians and NPs develop process protocols for:
 - a. Acute management
 - b. Chronic management
 - c. Emergency management
 - d. Management of new patients
 - e. Opioid prescribing
10. Establish billing processes for professional fee billing.
11. Develop audit and compliance measures and reporting.

Physician Deliverables:

12. Understand regulatory and quality reporting requirements of facilities.
13. Provide initial comprehensive visit – history, physical examination, assessment, and formulation of a care plan – w/in 72 hours.
14. Provide ongoing medical oversight.
15. Submit accurate and complete billing abstracts on a timely basis.
16. Participate in development of educational programs.

Nurse Practitioner Deliverables:

17. Understand regulatory and quality reporting requirements of facilities.

18. Sees patients (may see prior to physician); coordinates with physician on activity – when will the physician be there to see the patient.
19. Reviews orders; may make changes to orders, appropriate changes to lab orders and medications.
20. Address immediate needs of patient until physician gets there for visit.
21. For follow up, the NP is communicating with the attending physician on the actions being taken.
22. Provide QI training to the facilities.
23. Submit accurate and complete billing abstracts on a timely basis.