

January 27, 2012

Excerpts from the North Central EMS Institute Community Paramedic Innovation Challenge Collaborative's CMMI Healthcare Innovation Grant Program Application Form and Related Spreadsheet

Savings Calculations

Health Care Innovation Challenge Financial Plan				
	Year 1	Year 2	Year 3	3-Year Total
Number of Program Participants	75	150	300	525
Baseline				
Total PBPY Cost of Care of Program Participants	\$6,581	\$6,971	\$7,419	\$7,171
Total Affected Spend	\$493,575	\$1,045,650	\$2,225,700	\$3,764,925
% Reduction in Total Cost of Care from Funding	-96.56%	-96.62%	-96.67%	-96.50%
\$ Reduction in Total Cost of Care from Funding				\$ (3,633,317)
Proposed Expansion				
Number of New Participants Targeted	4,135	8,650	14,675	27,460
Baseline				
Total PBPY Cost of Care of Program Participants	\$17,539	\$18,644	\$19,912	\$19,155
Total Affected Spend	\$72,523,765	\$161,270,600	\$292,208,600	\$526,002,965
% Reduction in Total Cost of Care from Funding	-95.95%	-96.03%	-96.10%	-96.06%
\$ Reduction in Total Cost of Care from Funding				\$ (505,267,174)

5.2 Financial Plan and Model Sustainability

Financial Plan: The CP financial plan is based upon the CP program in Eagle County, CO, operated by the WECAD. The program collected information on the clinical outcomes it prevented, while in full operations for six months in 2012. The CP model is very cost effective since it eliminates high cost facilities such as hospitals, nursing homes, and emergency departments and high cost resources such as ambulances and physicians.

Over a six-month period in 2011, WECAD's program served 22 patients through 65 home visits and prevented 58 physician office visits, 8 ambulance transports, 8 emergency department visits, 1 inpatient admission, and 182 skilled nursing facility days. To calculate cost savings, several data sources were used including: 1) local hospital data (2010 cost report) from Vail Valley Medical Center for the cost per inpatient admission; 2) local skilled nursing facility data (2010 cost report) from Grand River Hospital District for the cost per day of skilled nursing stays; 3) Medical Expenditure Panel Survey Statistical Brief #318, which provided a national physician and emergency department visit average for 2008 (local data was not available); 4) US Government Accountability Office May 2007 report (GAO-07-383) entitled "Ambulance Providers: Costs and Medicare Margins Vary Greatly," for cost of ambulance transport.

WECAD's prevented visits were multiplied by the cost per visit obtained from the sources above, to come to a prevented cost calculation for a six-month period. This was then annualized and compared to: 1) annualized data on the cost of a CP (salary and benefits) for the 65 visits; 2) the cost of transportation (calculated at an average round-trip of 20 miles multiplied by the IRS rate of 55 cents per mile); and 3) an overhead factor of 50% of the cost of the paramedic to account for miscellaneous items such as scheduling, supplies, etc. The annualized cost of prevented care for these 22 patients was \$195,846. The annualized cost of care provided by the CPs was \$5,171, for a total cost savings of \$190,675, representing a 97% reduction in costs. The actual spreadsheet of calculations including service prevention definitions and primary clinical data are available upon request.

The data from the WECAD program served as the basis of our calculations for Years 1-3 of the savings portion of the Financial Plan. The data was segregated into high resource users and average resource users representing the categories broken out above. For year 1, it was calculated that the high resource users would increase to 2 from 1 and that the average resource users would increase to 73. Because the ratio of high resource users to average resource users dropped from the current period to year 1, the cost per beneficiary per year dropped. We believe that the number of high resource users in the area served by the WECAD program is fairly limited and it would take longer to incorporate these users into the program; therefore, a slower increase was projected from current to year 1 for this category. For the remaining two years the rate of growth was calculated to be the same for these 2 categories. Another adjustment made was for inflation. In 2010, according to the National Health Expenditures report, US healthcare spending grew at only 3.9%. They cited the recession as one of the primary causes. They also pointed out that the rate of growth for hospital services nearly doubled that of the physician and clinical services. For this reason, slower inflation was predicted to gradually increase through year 3. Also, a lower inflation rate was projected for the average resource user group, since this group would use more of the clinical services. The calculations for the expanded population matched that of the current program, except that the high resource category was increased to 10% of the total patients served since the program would have a much wider reach and aims to handle more of the high cost cases where the cost savings is most marked.

Once baseline calculations were established, the cost of the CP program was calculated serving the same population. For the calculation for the current program, the same calculation on cost per visit was used as described above for this program: the cost of the CP (salary and benefits) for an estimated one hour per visit, the cost of overhead at 50%, and the cost of travel at an average of 20 miles round trip multiplied by the IRS rate of 55 cents. Visits were also segregated between the high resource users and the average resource users to recognize that the high resource users require many more visits per patient. The patient population was expanded in the same way as the baseline. The only change in Years 1-3 was that the overhead factor was increased to 75% to recognize that more overhead would be required as the patient population grows. The inflation factor was also adjusted because we are using lower cost clinical services, which historically have grown at a lower rate than the higher cost hospital services. Then for the program expansion, the same calculations were used as described above for the cost calculation, except that the overhead factor was increased to 200%, again to reflect the increased cost of serving a much larger patient population. Also, the high resource category was calculated at 10% of the

patient population as in the baseline. The per beneficiary cost was calculated for the CP program. This cost was divided into the baseline to get a percentage reduction for each year.

Sustainability: Each of the expansion sites will need a sustainability plan that is tailored to their individual circumstances, and we will expend considerable effort in each of the three years to assist and lead them in this important task. The CP model will be sustainable by 1) documenting value, importance and cost-savings, 2) showing impact on health outcomes, and 3) demonstrating the model on a large scale for public and private insurers to see value.

The Health Care Economist will exclusively work with insurers to make this case and secure future reimbursements for participating providers. The Health Care Economist will carry out the following tasks: meet with the Center for Medicare and Medicaid Services to introduce the CP model; set up measurements to evaluate benefits and cost savings; develop a State by State strategy to introduce the model and reimbursement criteria; follow the creation of ACO and CCO models and introduce model for reimbursement; and introduce and pass legislation to authorize reimbursement.

Beginning fall 2012, the Director of the TAC will lead the formation of a National Collaborative on Payer Systems. Representatives will include: CMS, Medicaid, Private Insurance, national associations and advocates for Physicians, Nurses, and EMS Providers. The group will work with public and private payer sources to determine methods of standard financial reimbursement for CP services.