Actuarial Assessment of Medicaid Managed Care Expansion Options

Prepared for:

Texas Health and Human Services Commission

December 15, 2003
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The amended information involved an updated calculation of the state administrative cost impacts in Appendix B. These administrative amounts changed the overall cost savings for the SSI Aged population. The figures for this population are updated in the balance of the report.

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I. OVERVIEW OF THE PROJECT

The Texas Health and Human Services Commission (HHSC) retained The Lewin Group (Lewin) to perform an actuarial assessment of the cost-effectiveness and feasibility of managed care expansion within the State's Medicaid program. The assessment includes an analysis of possible expansions within the Temporary Assistance for Needy Families (TANF) and TANF-like populations, which are comprised mostly of mothers and children, and the Supplemental Security Income (SSI) population, also referred to as the Aged, Blind and Disabled. Both populations are served, in different degrees, through various managed care plans in many of the State's urban and immediately surrounding areas (known as service delivery areas or SDAs). The TANF and TANF-like populations are mandated to be served within a managed care setting in the current SDAs. The SSI population is mandated into the STAR+PLUS managed care program in Harris County, and SSI recipients can voluntarily enroll in managed care in other SDAs.

In addition to studying the potential for cost-effective managed care expansion, Lewin was charged with determining the effects on pharmacy costs, which are not capitated, if the unlimited per month prescription policy were extended to the entire population of non-Medicare beneficiaries. Currently, adults not enrolled in managed care are limited to three prescriptions in any given month.

A. Goals of the Project

As in many other states, Texas is facing serious budget shortfalls at a time when medical costs and enrollment in the State's Medicaid program are increasing rapidly. The decrease in available funding combined with an increase in the demand for and cost of services require HHSC to seriously consider alternative mechanisms for delivering health care to its neediest populations in a more cost-efficient manner. Lewin has worked with HHSC to study the current state of health care delivery within the State's Medicaid program and determine the most cost-effective approach to providing this care in the future.

It is important to emphasize that our assigned focus is to cost out different approaches to expanding Medicaid managed care. The unavoidable reality is that achieving substantial cost savings in the Medicaid program involves reducing the Medicaid revenue received by the Texas provider community. Our report does not contain a rigorous analysis of the potential of these payment reductions to compromise the "safety net" in their communities. However, a political process exists to sort through which managed care options may be most appropriate to implement. This study is limited to providing the financial underpinnings as to what the cost impacts of each approach will be *if* they are successfully implemented.

That said, we also wish to emphasize that we are not modeling options that involve "cuts" to the program. The State is clearly not looking to dismantle its safety net, but rather preserve as strong a Medicaid program as possible within the budget constraints that exist. The most cost-effective approach from a short-term budgetary perspective would be to eliminate the Texas Medicaid program altogether, which is obviously not under consideration. In commissioning this engagement, HHSC is looking for approaches that can create the largest savings without further cutting eligibility, benefits, or provider payment rates.

The cost estimates involving managed care savings in this document are not intended to reflect savings achieved through price discounts, but rather savings that occur from truly *managing care* -- avoiding higher cost services and products when lower-cost, clinically appropriate services can be rendered, early identification and treatment of health problems, promoting wellness and healthy lifestyles, coordinating care effectively, limiting enrollees' freedom to navigate the health system based on their own perceptions of need, and limiting providers' ability to practice in a manner that is not sufficiently cost effective.

In the current fiscal climate, it can be assumed that the Medicaid fee-for-service program will aggressively work to access favorable unit prices, as evidenced by the recent imposition of an across-the-board provider fee cut. While there may be some limited opportunities for managed care organizations to squeeze further price savings out of the Medicaid program, the focus of this study is on the savings that can be achieved through care management efforts.

II. OPPORTUNITIES FOR EXPANSION OF MANAGED CARE

Texas currently ranks 43rd among the 50 states in terms of managed care penetration of the Medicaid program[1], with just 39 percent of its 2.7 million Medicaid beneficiaries enrolled in the STAR and STAR+PLUS managed care programs. The State may expand managed care in two ways:

- Geographic expansion of STAR HMOs, the PCCM, or STAR+PLUS beyond the current Service Delivery Areas (SDAs); and/or
- Expansion to include the SSI aged, blind, and disabled populations (outside Harris County).

A. Geographic expansion

1. Distribution of Beneficiaries and Expenditures

Despite its vast size and many very rural counties, 85 percent of the 20.8 million residents in Texas reside in metropolitan areas[2], including but not limited to the areas currently included in Medicaid managed care SDAs. Most Medicaid beneficiaries are likewise located in the urban centers and surrounding counties. Exhibit II-1 depicts the current SDAs along with a coded rating of urban versus rural for each county based on the Department of Agriculture's designations.

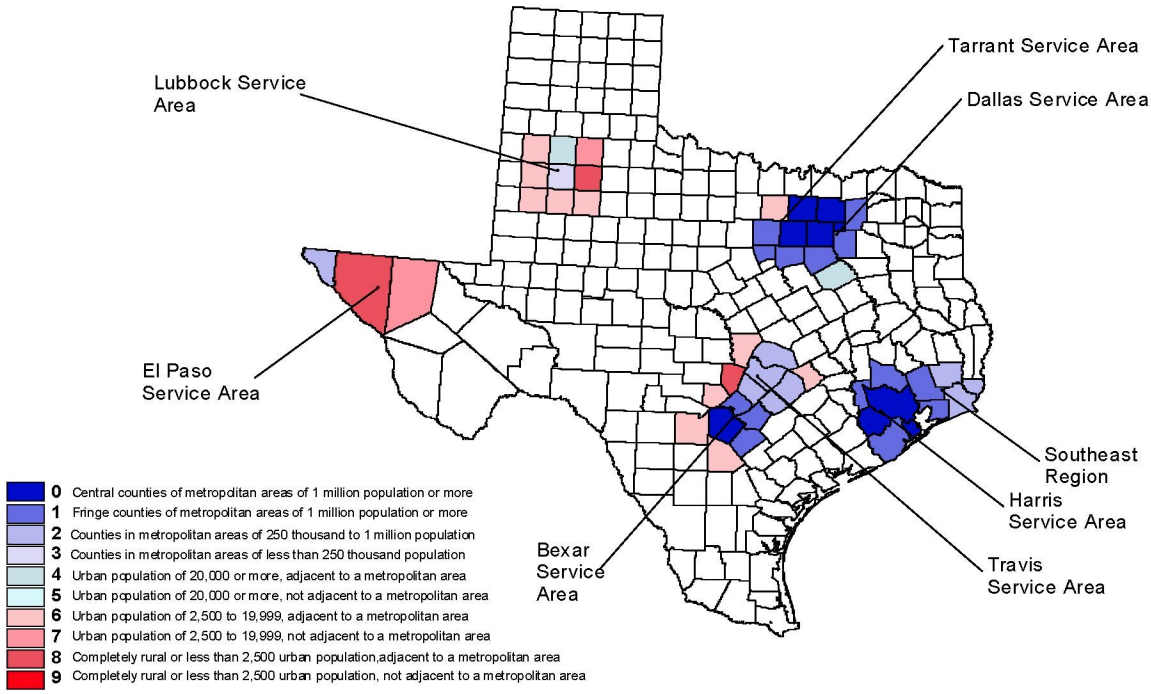
Currently, TANF beneficiaries are enrolled in either a STAR HMO or Texas Health Network, the PCCM program, on a mandatory basis in the 51 counties that comprise the 9 SDAs. These SDAs include most, but not all, of the State's primary metropolitan areas. More than 40 percent of the State's Medicaid beneficiaries reside outside these areas, as indicated in Table II-1.

Table II-1
Distribution of Statewide Medicaid Population by SDA

SDA	TANF	SSI	Total
Bexar	8.9%	10.2%	9.3%
Dallas	10.4%	11.4%	10.6%
El Paso	6.1%	3.8%	6.0%
Harris	17.8%	20.3%	15.2%
Lubbock	2.2%	1.8%	2.2%
Southeast	2.4%	3.3%	2.6%
Tarrant	6.3%	6.4%	6.4%
Travis	3.8%	3.8%	3.9%
SDA Total	**57.9%**	**61.0%**	**56.2%**
Non-SDA	**42.1%**	**39.0%**	**43.8%**

[1] Kaiser Family Foundation, State Health Facts. http://www.statehealthfacts.kff.org/.
[2] Kaiser Family Foundation, State Health Facts. http://www.statehealthfacts.kff.org/.

Exhibit II-1
Map of Existing Service Delivery Areas With Urban/Rural Designation



2. *Managed Care in Rural Areas*

Medicaid managed care is currently implemented in 18 rural counties within the present SDAs. However, there are significant challenges associated with expanding managed care to other rural counties.

First, there are relatively few health care providers in the rural counties. More than 20 percent of Texas counties are without a single hospital[3], and fully 88 percent of Texas' rural counties are classified as medically underserved areas (MUAs). This scarcity of hospitals and physicians limits health plans' ability to contract selectively and channel patients to lower cost, efficient providers.

At the same time, the lack of providers creates barriers to access. Patients in remote areas must drive long distances for specialty care and in some areas may find it difficult to obtain needed care at all. To the extent that existing providers in rural counties represent critical access facilities, their role as safety-net providers is threatened by managed care programs that place an emphasis on price discounting and shifting patients to less expensive settings. As a result, provider and advocacy communities often oppose managed care in rural areas. Resistance to managed care is not a given, however. In fact, a health plan representative noted that there did not appear to be strong resistance in the Lubbock SDA, which is arguably the most rural of the current SDAs, with only one of nine counties qualifying as a metropolitan area (where a

[3] Texas Medicaid Managed Care Review (2000), chapter 13.

metropolitan area is defined as having a rural designation code [RDC] less than or equal to 3). Furthermore, many Texas counties, though technically rural, have significant experience with commercial managed care.

Health plans are often reluctant to serve rural areas, as the limited number of providers can make development of a network problematic and the market may be unable to provide economies of scale achievable in more metropolitan areas. The potential market share may not support the plan's administrative costs. Furthermore, this market share may not be large enough to generate a substantial risk pool. Health plan reluctance may be at least partially remedied by the potential for existing health plans to expand to a new (and often contiguous) geographic area, as opposed to the development of stand-alone health plans in these expansion areas.

Finally, total costs of care in rural areas tend to be lower than in urban areas – due in part to reduced access to care - with the result that managed care simply has less opportunity to introduce cost savings. This, together with the constraints noted above, leads to potential diseconomies of scale for health plans or other managed care models if implemented in the most rural areas.

B. Eligibility Group Expansion

1. Potential Impact of Managed Care for TANF

States have generally found it to be more feasible to enroll their TANF populations into mandatory Medicaid managed care programs than their SSI populations, in part because the TANF population more closely mirrors the demographic composition of private sector health plans. But while the TANF population has been a focal point for most state Medicaid agencies, it may be the population whose costs can be least easily impacted by managed care.[4]

The TANF population lacks enrollment stability, which is a key driver of administrative costs in the managed care setting. Enormous resources must be expended in serving the TANF population simply to process and adjudicate enrollment and disenrollment activity. In Texas, where capitated health plans predominantly serve the TANF population, administrative costs (as a percentage of the capitation rates paid to the HMOs) average nearly 13 percent. In Arizona, where the Medicaid health plans also serve the SSI population, the administrative cost burden is below 8 percent (from which it can be inferred that the HMOs' administrative burden attributable to SSI is probably well below 8 percent in that state).

The retrospective eligibility that is awarded in the TANF and related populations also reduces potential savings, as, by definition, it is payment for services which have occurred in the past. Because of this, and the fact that the pharmacy benefit is carved out of managed care, virtually one-third of the spending in this eligibility category is not currently conducive to *any* form of Medicaid managed care.

Enrollment discontinuity also undermines the promise of managed care: namely, that by managing care effectively and efficiently, health care costs will decrease as a result of improved

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[4] For a useful discussion of the limitations of managed care for the TANF population, see *Medicaid Managed Care in New York: A Work in Progress*, United Hospital Fund, 2003.

health status and lower utilization of high cost services. With short-term enrollment the rule, health plans are unable to provide the case and utilization management that might otherwise lower health care costs.

Furthermore, the TANF population's health needs are primarily concentrated in maternity/delivery-related services, well child care, and minor episodic needs. Associated costs are more likely to increase than decrease if patients are managed properly; health plans aim to substitute preventive care for much more expensive, later-stage disease treatment. Even in the clinical areas in TANF where managed care interventions can make a significant savings impact (e.g., reducing the rate of high-cost neonatal cases), the nature of eligibility diminishes the savings potential. A common example is that many eligible pregnant women do not apply for Medicaid coverage until they deliver their child, in which case retrospective eligibility is granted to cover the obstetrical care and the newborn's admission. In such instances, there is no opportunity for managed care interventions to influence the birth-related costs, and there is limited opportunity to change the trajectory of costs for these neonates.

2. Potential Impact of Managed Care for SSI Population

The advocacy community is often strongly opposed to the inclusion of high-need (e.g., SSI) populations in mandatory managed care programs, arguing that this population is particularly vulnerable to bearing the brunt of cost containment approaches through reduced access to care and diminished health status. Provider stakeholders also tend to be averse to transitioning the SSI population, which accounts for a larger portion of their Medicaid revenues, into a managed care environment. However, there are some compelling arguments for taking an inclusive rather than exclusive approach to the SSI population in the design and implementation of Medicaid managed care initiatives.

First, the SSI population is much more stable than TANF with regard to Medicaid eligibility. This makes it far more worthwhile to implement interventions that have a long-term payoff in terms of improved health status – such as proactively conducting a comprehensive health needs assessment at the point of enrollment and developing individualized treatment and care coordination plans.

Second, this population is beset with chronic conditions more conducive to managed care savings than is the case with TANF. Disabling physical and mental health conditions create significant savings opportunities through providing needed services in the lowest-cost setting, through slowing, halting, or perhaps even reversing progression of chronic conditions, and through avoiding clinical "flare-ups" that lead to hospitalization and other costly treatments.

Finally, the SSI population simply involves the most money. Per capita costs are much higher for the Medicaid blind and disabled population (approximately $890 PMPM for fee-for-service eligibles during FY02) than for the TANF/TANF-related population (approximately $180 PMPM). The higher the per capita costs, the greater the opportunity for savings will be. [5]

[5] These PMPM costs include all Medicaid covered services, including nursing home and pharmacy which are carved-out of the capitated model.

III. COST MODELING

A. Methodological Overview

Lewin's methodology is based on a simulation of FY02 Texas Medicaid costs, applying the estimated impacts of each managed care model to the following demographic groups:

- Three eligibility groupings – TANF and TANF-related populations, non-Medicare blind and disabled persons, and persons who are dually eligible for Medicare and Medicaid; and
- Ten geographic areas – the nine existing SDAs and the collection of 203 mostly rural counties that are not part of an existing SDA.

The medical cost simulation is driven by the strength of each managed care model's approaches to cost containment, applied through a detailed set of cost factors. The projected state agency and contractor administrative costs – as well as the contractors' profit needs – are then factored into the simulation to arrive at an overall comparison of PMPM costs associated with the different managed care models.

The formula used to calculate costs for each model is summarized below:

FFS Costs:		Baseline FFS PMPM Medical Costs
	+	State Administrative PMPM Costs Under FFS
	=	Total PMPM Costs for FFS
Managed Care Medical:		Baseline FFS PMPM Medical Costs
	x	Managed Care Cost Factor
	=	Managed Care PMPM Medical Costs
Managed Care Admin/Profit:		State Admin PMPM Costs Under Managed Care
	+	Contractor Administrative PMPM Costs
	+	Contractor PMPM Profit Requirement
	=	Managed Care PMPM Administrative/Profit Costs
Total Managed Care Costs:		Managed Care PMPM Medical Costs
	+	Managed Care PMPM Admin/Profit Costs
	=	Total PMPM Costs For Managed Care Model

Note that the estimates in this section *do not* include the following components, which are addressed in subsequent sections:

- Evaluating in further detail the 203 county-area that lies outside the existing SDA configuration to identify and model opportunities to create new SDAs and broaden existing SDAs;
- Cost impacts during the initial five years of implementation (the simulated costs in this section reflect ongoing annual savings impacts assuming each model has been in place for several years);
- The added costs of creating an unlimited pharmacy benefit;
- The cash flow impacts associated with moving persons from a FFS setting to a capitated setting;
- Sensitivity analyses of varying some of the key assumptions;
- The interplay of Medicaid managed care savings with other Medicaid cost containment initiatives that are being implemented; and
- Design variations in existing Medicaid managed care models that might enhance their savings potential.

B. Medical Cost Baseline

The initial step needed to conduct the simulation involved creating a baseline of FY02 FFS costs. Table III-1 presents these costs on a total dollar basis, and Table III-2 on the ensuing page converts these figures to a PMPM basis. In addition to the three eligibility category groupings and ten regional groupings described above, baseline costs were developed for seven medical service categories: inpatient hospital, outpatient hospital, professional, other medical, pharmacy, nursing home, and other long-term care.

Table III-1
Baseline Costs During FY02

TANF and TANF-Related

SDA	Baseline Inp. Hospital Expenditures	Baseline Out. Hospital Expenditures	Baseline Professional Expenditures	Baseline Other Expenditures	Baseline Pharmacy Expenditures	Baseline Expenditures
Bexar	$106,648,703	$43,665,896	$18,916,376	$69,922,793	$35,481,023	$274,634,790
Dallas	$207,816,075	$31,610,066	$32,543,847	$57,111,961	$36,137,342	$365,219,290
El Paso	$88,781,546	$16,491,021	$9,797,230	$25,512,189	$24,376,064	$164,958,050
Harris*	$294,456,363	$62,809,288	$30,554,534	$98,421,061	$55,289,484	$541,530,729
Harris Contiguous	$62,715,241	$14,834,282	$15,921,388	$31,080,732	$14,038,397	$138,590,040
Lubbock	$26,339,241	$8,513,884	$8,132,530	$16,768,988	$8,428,029	$68,182,673
SE Region	$35,872,028	$8,442,445	$7,434,766	$16,775,519	$12,654,609	$81,179,367
Tarrant	$131,243,754	$23,175,044	$24,907,056	$43,475,191	$21,930,430	$244,731,475
Travis	$53,035,436	$16,375,299	$10,945,581	$32,449,682	$11,398,356	$124,204,354
Non-SDA	$481,016,883	$199,504,576	$118,746,897	$332,533,492	$210,961,739	$1,342,763,587
Grand Total	$1,487,925,267	$425,421,802	$277,900,205	$724,051,608	$430,695,473	$3,345,994,356

* Harris SSI figures not available by service category due to capitated STAR+PLUS program. Figures for Harris are estimated to total approximately $900 PMPM simply to provide a sense of the magnitude of costs in this SDA. These Harris figures do not influence the modeling of expansion impacts.

SSI Blind and Disabled (Non-Medicare)

SDA	Baseline Inp. Hospital Expenditures	Baseline Out. Hospital Expenditures	Baseline Professional Expenditures	Baseline Other Expenditures	Baseline Pharmacy Expenditures	Baseline Nursing Home Expenditures	Baseline Other LTC Expenditures	Baseline Total Expenditures
Bexar	$54,933,796	$20,194,340	$14,206,882	$47,182,768	$34,034,945	$32,336,138	$15,500,313	$218,389,182
Dallas	$65,853,069	$15,821,662	$21,989,644	$38,496,692	$36,444,383	$35,965,923	$9,502,111	$224,073,485
El Paso	$21,539,256	$9,584,366	$6,099,615	$14,191,170	$14,951,729	$5,908,064	$4,379,911	$76,654,112
Harris*	$126,923,345	$21,082,187	$16,198,807	$57,646,253	$46,767,196	$60,039,404	$12,117,598	$340,774,790
Harris Contiguous	$29,371,278	$8,879,163	$8,127,519	$17,373,467	$12,083,883	$12,261,104	$2,973,941	$91,070,355
Lubbock	$9,897,285	$4,965,762	$3,782,323	$5,471,360	$7,442,046	$7,940,590	$2,008,238	$41,507,604
SE Region	$19,375,623	$8,515,539	$5,554,831	$10,753,871	$10,656,710	$13,829,042	$4,761,968	$73,447,584
Tarrant	$37,275,095	$14,566,226	$12,212,025	$21,909,935	$26,122,749	$33,909,627	$5,411,611	$151,407,269
Travis	$17,310,827	$8,676,691	$6,298,150	$13,485,125	$16,278,706	$16,080,520	$4,399,717	$82,529,736
Non-SDA	$214,704,148	$93,785,491	$74,264,353	$158,450,293	$174,149,572	$197,982,368	$87,082,193	$1,000,418,418
Grand Total	$597,183,724	$206,071,427	$168,734,149	$384,960,933	$378,931,920	$416,252,780	$148,137,602	$2,300,272,534

* Harris SSI figures not available by service category due to capitated STAR+PLUS program. Figures for Harris are estimated to total approximately $900 PMPM simply to provide a sense of the magnitude of costs in this SDA. These Harris figures do not influence the modeling of expansion impacts.

Aged and Other Medicare/Medicaid Eligibles

SDA	Baseline Inp. Hospital Expenditures	Baseline Out. Hospital Expenditures	Baseline Professional Expenditures	Baseline Other Expenditures	Baseline Pharmacy Expenditures	Baseline Nursing Home Expenditures	Baseline Other LTC Expenditures	Baseline Total Expenditures
Bexar	$4,747,691	$2,506,199	$5,672,249	$13,479,922	$66,067,835	$78,819,222	$40,162,439	$211,455,558
Dallas	$6,401,707	$1,885,583	$6,751,921	$14,040,944	$70,744,980	$108,908,597	$30,894,471	$239,628,202
El Paso	$3,983,771	$1,832,922	$4,594,405	$8,973,057	$29,023,945	$18,098,832	$20,537,303	$87,044,235
Harris*	$21,984,314	$904,637	$22,268,354	$56,688,030	$90,783,380	$93,733,885	$13,491,995	$299,854,597
Harris Contiguous	$2,241,228	$556,213	$2,599,156	$5,629,906	$23,456,949	$35,586,281	$8,275,409	$78,345,142
Lubbock	$961,977	$638,780	$1,721,368	$3,096,926	$14,446,325	$21,793,519	$6,883,364	$49,542,259
SE Region	$1,752,008	$628,189	$1,714,360	$4,863,369	$20,686,554	$33,163,584	$12,083,780	$74,891,845
Tarrant	$3,692,875	$1,427,054	$3,761,682	$8,242,664	$50,708,865	$85,476,681	$16,412,982	$169,722,802
Travis	$1,997,246	$933,181	$2,690,264	$5,798,618	$31,599,841	$52,241,694	$15,793,111	$111,053,956
Non-SDA	$30,224,228	$19,061,550	$38,765,988	$83,958,541	$338,055,051	$565,350,787	$340,732,665	$1,416,148,812
Grand Total	$77,987,047	$30,374,310	$90,539,746	$204,771,978	$735,573,726	$1,093,173,082	$505,267,518	$2,737,687,408

* Harris SSI figures not available by service category due to capitated STAR+PLUS program. Figures for Harris are estimated to total approximately $900 PMPM simply to provide a sense of the magnitude of costs in this SDA. These Harris figures do not influence the modeling of expansion impacts.

Note: Capitated costs and fee-for-service costs are included in TANF figures to attempt to fully portray FY02 cost levels in each SDA.

Table III-2
Baseline PMPM Costs (FY02)

TANF

SDA	Member Months	Baseline Inp. Hospital PMPM	Baseline Out. Hospital PMPM	Baseline Professional PMPM	Baseline Other PMPM	Baseline Pharmacy PMPM	Total Baseline PMPM
Bexar	1,656,138	$64.40	$26.37	$11.42	$42.22	$21.42	$165.83
Dallas	1,932,925	$107.51	$16.35	$16.84	$29.55	$18.70	$188.95
El Paso	1,138,045	$78.01	$14.49	$8.61	$22.42	$21.42	$144.95
Harris*	2,668,622	$110.34	$23.54	$11.45	$36.88	$20.72	$202.93
Harris Contiguous	620,882	$101.01	$23.89	$25.64	$50.06	$22.61	$223.21
Lubbock	401,848	$65.55	$21.19	$20.24	$41.73	$20.97	$169.67
SE Region	450,995	$79.54	$18.72	$16.49	$37.20	$28.06	$180.00
Tarrant	1,172,693	$111.92	$19.76	$21.24	$37.07	$18.70	$208.69
Travis	698,766	$75.90	$23.43	$15.66	$46.44	$16.31	$177.75
Non-SDA	7,770,531	$61.90	$25.67	$15.28	$42.79	$27.15	$172.80
Grand Total	18,511,445	$80.38	$22.98	$15.01	$39.11	$23.27	$180.75

SSI Blind and Disabled (Non-Medicare)

SDA	Member Months	Baseline Inp. Hospital PMPM	Baseline Out. Hospital PMPM	Baseline Professional PMPM	Baseline Other PMPM	Baseline Pharmacy PMPM	Baseline Nursing Home PMPM	Baseline Other LTC PMPM	Baseline Total PMPM
Bexar	263,236	$208.69	$76.72	$53.97	$179.24	$129.29	$122.84	$58.88	$829.63
Dallas	296,085	$222.41	$53.44	$74.27	$130.02	$123.09	$121.47	$32.09	$756.79
El Paso	98,880	$217.83	$96.93	$61.69	$143.52	$151.21	$59.75	$44.30	$775.22
Harris*	427,045	$297.21	$49.37	$37.93	$134.99	$109.51	$140.59	$28.38	$797.98
Harris Contiguous	100,037	$293.60	$88.76	$81.25	$173.67	$120.79	$122.57	$29.73	$910.37
Lubbock	46,829	$211.35	$106.04	$80.77	$116.84	$158.92	$169.57	$42.88	$886.37
SE Region	84,864	$228.31	$100.34	$65.46	$126.72	$125.57	$162.96	$56.11	$865.47
Tarrant	166,416	$223.99	$87.53	$73.38	$131.66	$156.97	$203.76	$32.52	$909.81
Travis	97,761	$177.07	$88.75	$64.42	$137.94	$166.52	$164.49	$45.00	$844.20
Non-SDA	1,009,778	$212.63	$92.88	$73.55	$156.92	$172.46	$196.07	$86.24	$990.73
Grand Total	2,590,931	$230.49	$79.54	$65.12	$148.58	$146.25	$160.66	$57.18	$887.82

Aged and Other Medicare/Medicaid Eligibles

SDA	Member Months	Baseline Inp. Hospital PMPM	Baseline Out. Hospital PMPM	Baseline Professional PMPM	Baseline Other PMPM	Baseline Pharmacy PMPM	Baseline Nursing Home PMPM	Baseline Other LTC PMPM	Baseline Total PMPM
Bexar	329,354	$14.42	$7.61	$17.22	$40.93	$200.60	$239.31	$121.94	$642.03
Dallas	346,732	$18.46	$5.44	$19.47	$40.50	$204.03	$314.10	$89.10	$691.10
El Paso	206,874	$19.26	$8.86	$22.21	$43.37	$140.30	$87.49	$99.27	$420.76
Harris*	414,980	$52.98	$2.18	$53.66	$136.60	$218.77	$225.88	$32.51	$722.58
Harris Contiguous	116,473	$19.24	$4.78	$22.32	$48.34	$201.39	$305.53	$71.05	$672.65
Lubbock	70,953	$13.56	$9.00	$24.26	$43.65	$203.60	$307.15	$97.01	$698.24
SE Region	90,248	$19.41	$6.96	$19.00	$53.89	$229.22	$367.47	$133.90	$829.84
Tarrant	214,460	$17.22	$6.65	$17.54	$38.43	$236.45	$398.57	$76.53	$791.40
Travis	139,466	$14.32	$6.69	$19.29	$41.58	$226.58	$374.58	$113.24	$796.28
Non-SDA	1,815,315	$16.65	$10.50	$21.35	$46.25	$186.22	$311.43	$187.70	$780.11
Grand Total	3,744,855	$20.83	$8.11	$24.18	$54.68	$196.42	$291.91	$134.92	$731.05

C. Medical Cost Containment Attributes of Each Model

The medical cost impacts of the managed care approaches were developed by considering the cost containment attributes. These attributes are depicted in Exhibits III-1 and III-2 on the following pages. Exhibit III-1 presents a summary of the ratings of each model, with the chart in Exhibit III-2 providing text that explains and supports the ratings. The ratings in these Exhibits use the following scheme. Note that these ratings reflect the potential performance of the model (not actual vendor performance) within the constraints of Texas' current program, contract requirements, and regulatory structure.

●	Model fully implements the cost containment measure shown
⊙	Model employs a limited use of the cost containment measure shown
○	Model does not use the cost containment measure shown

Exhibit III-1
Summary Comparison of Cost Containment Features of Various Medicaid Managed Care Models

Medical Cost Containment Techniques	FFS	PCCM	EPO	HMO
General Attributes				
Controls and Channels Patient Volume	○	○	○	●
Eliminates Unnecessary Services	○	◎	◎	●
Uses Lower-Cost Services Where Available	○	◎	○	●
Vendor At Risk for Medical Costs	○	○	◎	●
Negotiates Favorable Prices	●	●	●	●
Specific Attributes				
Primary Care Physician Required	○	●	○	●
Prior Authorization for Costly Services	○	●	◎	●
Referrals Required for Outpatient Specialty Care	○	◎	○	●
Disease Management	◎	◎	◎	◎
Case Management	○	◎	●	●
Enrollee Outreach and Education	○	●	○	●
Can Pay for Uncovered Services on Exception Basis	○	○	○	●
Provider Profiling/Reporting, Accountability for Quality and Cost-Effectiveness	○	◎	◎	●

Key:	
●	Model fully implements the cost containment measure shown
◎	Model employs a limited use of the cost containment measure shown
○	Model does not use the cost containment measure shown

Exhibit III-2
Detailed Chart Comparing Cost Containment Attributes of Each Model

Medical Cost Containment Measures	FFS	PCCM	EPO	HMO
General Attributes				
Ability to Channel Patient Volume to Cost-Effective Providers	None – FFS program accepts all willing providers and has no patient channeling aspect. ○	Minimal – PCCM program accepts all willing providers and has no patient channeling aspect. PCPs that participate may receive higher patient volume. No hospital has ever been excluded from the program, although this threat exists in theory. ○	Minimal – On the surface an "exclusive" network exists. However, this model to date has been used only in rural areas and essentially all providers willing to accept Medicaid in those areas are included. ○	Medium to Strong – HMOs develop competitive provider networks and direct patient volume to those networks. However, Medicaid's low payment rates in many service categories (e.g., physician services) limits the ability of HMOs to leverage its patient channeling power – many providers do not want more Medicaid patient volume. ●
Eliminating Unnecessary Services	Minimal – FFS setting is highly vulnerable to unnecessary usage of services. ○	Some – Through PCP-driven model, PCCM program seeks to eliminate beneficiary freedom to self-refer throughout the delivery system for care and conducts utilization management. However, PCCM model is not designed to aggressively weed out unnecessary usage. ◎	Some – EPO model allows for centralized utilization control and can have favorable impacts if contractor bears the cost of unnecessary services. ◎	Strong – HMOs implement wide range of measures to identify and avoid unnecessary usage. They bear full risk of the cost of unnecessary care and are thus highly motivated. ●

Medical Cost Containment Measures	FFS	PCCM	EPO	HMO
Using Lower-Cost Services Where Available	None – FFS actually does the opposite, as its payment structure promotes care occurring at relatively high-cost settings. For example, low physician fee schedule and relatively adequate payments to hospitals promotes a shift in care away from office setting and towards institutional setting. ○	Some – Through PCP-driven model, PCCM program seeks to render more "front-line" services in lower-cost settings. However, PCPs and PCCM contractors do not have incentives to refer care to more cost-effective settings. ◉	Minimal – EPO model can contract with cost-effective specialists. But EPO is not oriented to shifting care to lower-cost providers; lack of PCP gatekeeper allows patients to gravitate to higher-cost settings. ○	Strong – HMOs seek to move services to lowest-cost setting and provider type. HMOs can also have some success in smoothing out payment anomalies between Medicaid providers (FFS can pay vastly different amounts for the same service depending on who provided the service.) ●
Negotiating Favorable Prices	State has significant leverage as one of the largest payers in the market, plus the fact that those covered by Medicaid would otherwise be uninsured. ●	PCCM program has been successful in securing discounts below FFS Medicaid rates for hospital inpatient services. ●	EPO relies on negotiated prices at or near Medicaid levels in securing network participation. ●	HMO can base its negotiated prices at or near Medicaid levels in securing network participation. ●

Medical Cost Containment Measures	FFS	PCCM	EPO	HMO
Specific Attributes				
Primary Care Physician Required	Beneficiaries do not choose a PCP and may be treated by any MD that accepts Medicaid patients. ○	Beneficiaries must select a PCP – PCPs may include: general practitioners, OB/GYNs, pediatricians. PCP receives the Medicaid FFS rates for services rendered, a $3/month case management fee. PCP is expected to: Assess members' medical needs; make referrals; coordinate care after referrals; make arrangements with home and community support services agencies; coordinate care with other entities that provide medical, nutritional, behavioral, educational and outreach services; and coordinate inpatient hospital care (pre-admit and discharge). Specialists and other providers can be paid without conferring with the PCP, simply by knowing who the enrollee's PCP is. ●	Beneficiaries do not select a PCP; PCP gatekeeper model is not used. ○	Beneficiaries must select a PCP. PCP is expected to: Assess members' medical needs, make referrals, coordinate care after referrals, make arrangements with home and community support services agencies, coordinate care with other entities that provide medical, nutritional, behavioral, educational and outreach services, coordinate inpatient hospital care (pre-admit and discharge). Adherence to PCP model is most stringent in HMO setting, where unique referrals are typically needed for other providers to obtain payment. ●

Medical Cost Containment Measures	FFS	PCCM	EPO	HMO
Prior Authorization for Inpatient Care	Prior authorization is not necessary. ○	Prior authorization is necessary. PCCM also receives notification of admission for non-emergent care to determine whether the care is medically necessary and to decide the length of stay. Hospitals indicate that PCCM prior authorization requirements are less stringent than HMOs. ●	Prior authorization is required. EPO also uses concurrent review and discharge planning to assure effective use of inpatient care. ●	Prior authorization is necessary. HMOs try to achieve inpatient cost-savings in many ways; their prior authorization process is deemed more stringent than PCCM techniques. ●
Referrals Required for Outpatient Specialty Care	Referrals are not necessary. ○	Patients need a referral for specialty care. However, the process is less formal and rigorous than in most HMOs (it suffices for the specialist to provide the referring PCP's ID number, so that requirement to obtain an explicit referral may possibly be sidestepped). ◉	There is no prior authorization of referral needed for physician services. Clients must obtain non-emergent care within the network. ○	Service-specific referrals are required for non-emergent care. Specialists cannot generate follow-up care, tests, surgeries, etc. without PCP approval and explicit referral number. ●
Disease Management (DM)	Procurement underway to implement DM for common chronic conditions (diabetes, CAD, congestive heart) and respiratory (emphysema, asthma) by 1/1/04. ●	DM will be implemented in January 2004, likely through an approach similar to FFS. ●	DM will be implemented in January 2004. ●	HMOs use variety of DM strategies, based on their own assessments of what is cost-effective to implement. Law requires DM as of Jan. '04 ●

Medical Cost Containment Measures	FFS	PCCM	EPO	HMO
Case Management (CM)	CM occurs in FFS for a few targeted populations. Some covered children receive CM through THSteps program. High-risk pregnant women receive CM through the Medicaid Pregnant Women and Infants program. ○	CM is accomplished primarily through PCPs, who are expected to provide CM within their $3 PMPM fee. PCPs may have little resources (or incentive) to fulfill this role effectively. Some additional case managers are available centrally to supplement PCP efforts where claims data triggers a referral. ●	EPO identifies high-risk, high-cost clients and targets CM to these individuals. ●	CM is used extensively by the HMOs. HMOs provide initial assessment of all new enrollees. CM interventions appear to be particularly strong in STAR+PLUS. ●
Enrollee Outreach and Education	The FFS program does not provide enrollee education or outreach services, with the exception of EPSD services for children and for women with high risk pregnancies. ○	The Texas PCCM program has an extensive enrollee education and outreach component. ●	The EPO model as currently structured does not rely on significant enrollee education and outreach. ○	HMOs implement a variety of enrollee education and outreach programs. ●
Vendor At Risk for Medical Costs	The vendor acts purely as a claims administrator and bears no risk. ○	The vendor conducts a range of cost containment programs but does not bear risk for the claims costs incurred by the PCCM enrollee. ○	No basis to evaluate this in Medicaid. In CHIP, since the 2nd year of the program, the vendor has been partially at risk for costs above a targeted capitation rate. ◉	HMOs are fully at risk for the medical costs of their enrollees, except for pharmacy services, which are carved out. ●

Medical Cost Containment Measures	FFS	PCCM	EPO	HMO
Provider Monitoring/Profiling, Accountability for Quality of Care and Cost-Effectiveness	FFS setting is very weak at fostering accountability and measuring provider performance. 	PCCM generates provider monitoring reports, including tracking ER usage. Reports are used only for informational/educational purposes. 	EPO model is conducive to provider profiling & monitoring. However, accountability is difficult to achieve in a system with no gatekeeper. 	HMO environment is conducive to extensive data reporting, profiling and monitoring, and (where necessary) provider sanctioning.

D. Discussion Of Managed Care Cost Factors

1. General Principles Used In Developing Cost Factors

The medical cost factors used to develop the cost estimates are all tied to FFS expenditure levels. Thus, the FFS setting receives a factor of 1.000 for all medical service categories and geographic regions. Table III-3 presents an example table of the cost factors used; the full set of cost factors is provided in Appendix A.

Note that the cost factors reflect the anticipated medical cost impacts of each Medicaid managed care model after it has been implemented for several (roughly five) years. The savings impacts of each managed care approach in the earlier years are delineated in Section VII.

The key considerations used in developing the cost factors are broadly described immediately below. The subsequent narrative then delineates the considerations used in developing the specific factors for each medical service category.

The largest medical cost savings will occur in the capitated HMO setting. As identified in Exhibits III-1 and III-2, the HMO model adopts the widest set of measures to contain health care costs, and implements these measures most aggressively due to the financial risk the capitated health plans accept. Conversely, the PCCM contractor is not at financial risk, and this model does not involve patient channeling (e.g., all Texas hospitals in PCCM market areas contract with the PCCM program). As such, the PCCM model is not anticipated to be able to achieve the medical cost savings that can occur through capitated health plans. However, the Texas PCCM program does implement a variety of techniques (most notably the primary care gatekeeper model, prior authorization for inpatient care, and an extensive enrollee outreach program) that can be expected to achieve meaningful cost savings versus the fee-for-service setting. Cost factors for the PCCM model have typically been set midway between the HMO savings factor and the FFS factor of 1.000 for the TANF and TANF-related population, and two-thirds of the way between the HMO factor and 1.000 for the SSI blind and disabled population.

Higher PMPM costs create larger savings opportunities. In general, the higher the per capita costs for a given population, the greater the cost savings are projected to be. Larger cost savings percentages are thus projected for SSI than for TANF, and slightly larger savings within a given medical service category are often assumed in geographic regions with relatively high PMPM baseline costs.

Table III-3
Example of Cost Factors Used

SDA	STAR+PLUS Inp. Hospital Medical Factor	STAR+PLUS Out. Hospital Medical Factor	STAR+PLUS Professional Medical Factor	STAR+PLUS Other Medical Factor	STAR+PLUS Pharmacy Medical Factor	STAR+PLUS Nursing Home Medical Factor	STAR+PLUS Other LTC Medical Factor	Total STAR+PLUS Medical Factor
Bexar	0.700	0.865	1.100	0.790	0.850	0.950	0.900	0.835
Dallas	0.700	0.915	1.100	0.840	0.850	0.950	0.900	0.851
El Paso	0.700	0.815	1.100	0.840	0.850	0.950	0.900	0.832
Harris*	0.700	0.915	1.100	0.840	0.850	0.950	0.900	0.828
Harris Contiguous	0.700	0.840	1.100	0.790	0.850	0.950	0.900	0.827
Lubbock	0.700	0.815	1.100	0.865	0.850	0.950	0.900	0.856
SE Region	0.700	0.815	1.100	0.840	0.850	0.950	0.900	0.846
Tarrant	0.700	0.840	1.100	0.840	0.850	0.950	0.900	0.855
Travis	0.700	0.840	1.100	0.840	0.850	0.950	0.900	0.857
Non-SDA	0.900	0.890	1.100	0.890	0.925	0.975	0.900	0.932

Managed care savings opportunities are more limited in rural areas. The cost factors are generally much higher outside the existing SDAs, to take into account that the providers in these counties are often in a monopoly position whereby they have little incentive to contract with managed care entities and adhere to these programs' cost containment approaches. The HMO model, which relies heavily on its ability to direct patient market share to its provider delivery system, is expected to be much less cost-effective in rural areas than in urban areas.

The optimal long-term managed care approaches will not involve price discounts. The cost factors used in this report do not look to the managed care models to achieve price savings, but rather to achieve savings by truly *managing care*. As indicated by the low level of Medicaid unit prices (nationally as well as in Texas) versus other payers, and the corresponding low levels of participation among physicians, it is not necessarily desirable to drive down Medicaid prices. Such an approach simply reinforces the notion that Medicaid is a "second class" coverage program – one that providers should avoid participating in if possible.

In addition, Medicaid agencies do not need the managed care industry to drive down prices – they are fully capable of achieving this in the fee-for-service setting. The across-the-board Medicaid payment reduction recently enacted in Texas provides evidence of this phenomenon.

2. Discussion Of Factors Used By Medical Service Category

Inpatient Hospital Services

Inpatient hospital services comprise the largest component of medical spending for the TANF and TANF-related population, representing 44 percent of costs, and also the largest component for non-Medicare SSI (26 percent of costs). Virtually all managed care models strive to lower inpatient expenses, as these services represent the high-cost end of the acute care continuum.

Managed care programs can influence inpatient costs in at least three ways – by negotiating favorable prices, reducing the number of admissions that occur, and lowering the average length of stay.[6] While Texas is one of the few Medicaid programs that pays hospitals at or near cost, the cost factors in the projections are not based on obtaining price discounts from any hospitals. If hospital price savings are deemed necessary or desirable, they can be imposed in the fee-for-service setting, as is occurring with the recent 2.5 percent rate reduction. However, Medicaid fee-for-service programs tend to pay significantly different amounts for the same service at different hospitals. Thus, it should be possible for some managed care plans (particularly the HMO model where some control over patient volume can be exerted) to achieve price savings by directing care away from relatively high-cost facilities and towards lower-cost hospitals.

A wide variety of managed care techniques can be deployed to lower the admission rate, including promotion of wellness and preventive services, prior authorization of admissions, and effective management of chronic conditions to prevent health crises and flare-ups from occurring. Length of stay can be downwardly influenced by managing the patient's health prior to admission (e.g., prenatal care can help limit the need for extremely costly and lengthy neonatal intensive care unit services), and by conducting concurrent utilization management once a hospital admission occurs.[7]

The most aggressive cost factor used in the modeling is 0.700 for the SSI Disabled/Blind population under the STAR+PLUS HMO model in large urban areas, which represents a 30 percent savings. This factor is driven by the following considerations:

- The SSI Medicaid-only population creates particularly large Medicaid savings opportunities, due to the high level of PMPM inpatient costs, the chronic nature of the illnesses of this population and the stability of Medicaid eligibility/enrollment in this group.
- The STAR+PLUS model has achieved a 22.2 percent reduction in inpatient admission volume in Harris County, based on findings from a forthcoming study by Dr. Sema Aydede.[8] Lewin believes that a larger percentage savings can occur on overall inpatient expenditures for the Medicaid-only SSI population through ALOS reductions for the admissions that occur. While the hospitals already have an incentive to lower ALOS in the case-based system, Lewin anticipates that the capitated health plans will be able to achieve considerable ALOS reductions and that the health plans will be successful in structuring their payment terms to capture at least some of the associated savings.

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[6] Reductions in ALOS may not bring about savings unless the underlying per case payments that are negotiated are adjusted to reflect ALOS reductions, or unless the payment method switches from a per case to a per day basis.

[7] Note that a reduction in ALOS cannot always be assumed to result in a commensurate percentage reduction in inpatient expenditures, particularly in the obstetrical and surgical arenas. For example, a surgical stay might be reduced from ten days to five days due to managed care interventions, but the payment impacts might be much less than 50 percent because the hospital's costs for this admission are "front-loaded" (including surgery room and recovery room expenses).

[8] "The Impact of Care Coordination on the Provision of Health Care Services to Disabled and Chronically Ill Medicaid Patients," Sema K. Adede, Ph.D., Institute for Child Health Policy. The study was completed in August 2003, publication date and placement is not yet known.

The STAR model is projected to save slightly less than the STAR+PLUS model on inpatient costs for the Medicaid-only SSI population, as the STAR+PLUS approach appears to be more comprehensive in the scope of its interventions for the high-need enrollees who are relatively frequent users of inpatient care.

For TANF, the inpatient cost factors in the SDAs range from 0.800 to 0.875. While TANF inpatient savings opportunities are more limited than SSI, substantial reductions are achievable through avoiding high-cost neonatal cases (and avoiding some unwanted pregnancies altogether through education and outreach efforts), reducing length of stay, and preventing admissions for ailments that can occur frequently in this demographic group -- such as asthma, infections, and minor surgeries that can be performed on an outpatient basis.

Outpatient Hospital Services

Managed care approaches can achieve substantial reductions in various outpatient hospital services. For example, the previously cited STAR+PLUS study found that the STAR+PLUS enrollees utilized 38.5 percent fewer emergency room visits than a demographically equivalent FFS control group.[9] Also, because Medicaid payment levels are typically higher for services rendered in the outpatient hospital setting than when similar services are provided in physician offices, freestanding laboratories, and other sites, substantial savings opportunities often exist in shifting the location of care away from the outpatient hospital setting. Limiting the savings potential in this area is the fact that many of the instances in which managed care programs avert inpatient care involve substitution of care in the outpatient hospital setting (e.g., same day surgery).

The largest percentage cost savings assumed is a cost factor of 0.815 for the STAR+PLUS model in the Lubbock and Southeast Region SDAs (which had particularly high baseline PMPM outpatient hospital costs).

Professional Services

This category primarily includes physician and diagnostic services. In the baseline data, this medical service category represents less than 10 percent of overall PMPM costs for both the TANF and SSI populations.

In Texas, the physician fee schedule was estimated to represent 77.6 percent of Medicare allowed charges.[10] Because Medicaid is such a low payer of physician services, Medicaid managed care programs have a strong incentive to increase the volume of services rendered in the physician practice setting (versus outpatient hospitals and clinics where reimbursement is usually much higher). Many Medicaid managed care organizations pay physicians above the Medicaid fee-for-service rates to try to secure a strong delivery system and promote more office-based care. The $3 monthly case management fee paid in the PCCM program (and by some of the HMOs) in Texas is indicative of this contracting approach.

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[9] Ibid.

[10] Lewin Group study, "Comparison of Physician and Dental Fees Paid by State Medicaid Programs," 2001. Texas ranked 28th among all states in terms of its Medicaid physician fees as a percentage of Medicare allowed charges.

Thus, Professional Services is not a medical category where PMPM savings will typically occur. Lewin has estimated PMPM costs to be higher in the managed care setting, with the PMPM cost factors generally ranging from 1.050 – 1.150.

Other Medical Services

This category includes a wide variety of miscellaneous services, of which the largest dollar-volume subcategories are DME, Home Health, Ambulatory Surgical Center Services, THSteps Medical and Dental Services, Mental Health Rehabilitation Services, Texas Education Agency – State Provides, MHMR Cost Managerial Services and FQHCs. Collectively, this category involves substantial Medicaid costs, representing 22 percent of TANF and 17 percent of non-Medicare SSI PMPM expenditures in the FFS setting. Because the PMPM costs are rather high in this category, and because it is envisioned that HMOs can lower the usage of many of these services (and in some cases, such as durable medical equipment, shift usage towards lower-cost items), savings of 15–20 percent versus FFS are projected for this model.

Pharmacy Services

Pharmacy represents 13 percent of TANF and 16 percent of non-Medicare SSI PMPM expenditures in the FFS setting. While pharmacy costs are carved out of all the existing Medicaid managed care programs in Texas, data Lewin analyzed suggest that there are significant "spillover impacts" on these expenditures for persons enrolled in the HMO model.

HHSC provided Lewin with detailed pharmacy data by SDA , age group (over and under 21), eligibility category (TANF and Related, SSI – Medicaid only and SSI – Medicaid and Medicare eligible) and delivery model (STAR+PLUS, STAR HMO, PCCM and FFS). We evaluated the differences in pharmacy expenditures, number of prescriptions, and mix of utilization of brand versus generic drugs. We then made several different comparisons of PMPM costs for persons enrolled in each model (HMO, PCCM and FSS) to develop the spillover factors.

TANF

In most SDAs, Medicaid beneficiaries can choose between the PCCM and HMO models. However, in three SDAs – Southeast, Travis and Tarrant – beneficiaries do not have the option to choose between the two models. Specifically, TANF enrollees in the Southeast SDA are members of the PCCM program, while TANF enrollees in Travis and Tarrant are served through the HMO model. Outside of the existing SDAs, TANF beneficiaries are part of the FFS system. To develop spillover factors to apply to the FFS base data, Lewin compared the TANF PMPM pharmacy costs in the managed care models to the pharmacy PMPM cost in the FFS model for the TANF population under 21 years of age. We chose to compare the PMPMs for this population (rather than the total population) because the adult PMPMs are heavily influenced by the three-drug limit in effect in the FFS program. Specifically, PMPM pharmacy costs for the adult population in managed care are generally greater than those for the adult population in FFS because those in managed care do not have a limit on the number of prescriptions they can receive per month.

Upon comparison of the under 21 population, we found that the PMPM pharmacy cost in FFS was very similar to the PMPM pharmacy cost in the Southeast (PCCM) program. The Southeast PMPM cost was $17.44 compared to $17.37 in FFS. Given this very similar result, we set the

spillover factor for PCCM at 1.000 for the TANF population, which assumes that enrollment in the PCCM has no effect on PMPM pharmacy costs. To derive a pharmacy spillover factor for the HMO model, we calculated a weighted average pharmacy PMPM for Travis and Tarrant counties and compared that weighted average to the FFS pharmacy costs. The pharmacy PMPMs in Travis and Tarrant were approximately 40 percent less than those in the FFS program ($17.37 in FFS versus $10.47 under the HMO model). This comparison would suggest a significant spillover effect due to enrollment in an HMO; however, we chose a more conservative factor spillover factor of 0.80 to account for any potential underlying differences between these two populations. Outside of the existing SDAs, we used a factor of 0.90 to reflect the expectation that capitated models will have less impact in rural areas.

SSI

We have assumed no long-term pharmacy savings from managed care for dual Medicare/Medicaid eligibles, due to the newly-enacted Medicare drug benefit that will be primary to Medicaid coverage. While Medicaid will likely remain responsible for some of the dual eligibles' pharmacy costs, we chose to take a conservative approach and assume no savings from managed care for the pharmacy benefit for dual eligibles.

The Medicaid-only SSI population differs from the TANF population in that enrollment into a managed care plan (HMO or PCCM) is voluntary for persons in the existing SDAs. Like the TANF populations, however, those who enroll in managed care do not have a limit on the number of prescriptions they are allowed per month. Therefore, there is a strong incentive for those SSI beneficiaries with high prescription drug needs to enroll in a managed care plan, likely causing a selection issue when analyzing pharmacy costs in most of the existing SDAs. The only area in which managed care is mandatory (and thus avoids any selection issues) is Harris County, where the STAR+PLUS program serves almost 100 percent of SSI beneficiaries through the HMO model. However, it is difficult to compare the adult SSI population in FFS and managed care because adults in the managed care program do not have the 3-prescription limit, as do the adults in the FFS program. Therefore, to develop a spillover factor, we compared the under 21 STAR+PLUS PMPM with the under 21 FFS PMPM, as children have no prescription limits regardless of their managed care status. Again, costs for the STAR+PLUS population were approximately 40 percent less than for the FFS population ($51.24 versus $86.78). However, we chose a more conservative factor of 0.85 in the existing SDAs to account for the potential differences in the populations, especially considering the large pharmacy PMPM differences between children and adults in this population. Outside the existing SDAs, we used a factor of 0.925.

Most STAR+PLUS participants are enrolled in the HMO model, as only a small fraction of the eligible population has the choice between the HMO and PCCM models. Therefore, we could not make a direct comparison of the SSI population to calculate a pharmacy spillover factor. In lieu of that comparison, we choose the 1.000 factor developed for the TANF population and assumed that the PCCM model would not cause any spillover effects in the pharmacy benefit.

Nursing Home Services

Long-term care nursing home costs are also carved out of the capitated setting, with the exception of the first four months of a nursing home admission in the STAR+PLUS program. No impact of managed care on nursing home costs is therefore projected, with the exception of a small (five percent) savings through the STAR+PLUS model.

The STAR+PLUS plans have a financial incentive to utilize alternatives to institutionalization, and their efforts should have some impacts in avoiding – or at least delaying – some nursing home admissions. However, it will take a particularly long time for these savings to emerge when the STAR+PLUS model is newly introduced in a geographic area. At the point of program implementation, it will be difficult to achieve any meaningful savings on the existing body of institutionalized persons. In addition, roughly half of the Medicaid beneficiaries who utilize nursing homes for long-term care purposes "spend down" to Medicaid after being institutionalized (or right at the point of being institutionalized) and do not present an opportunity to a Medicaid managed care organization to delay or avoid the admission. For a Medicaid managed long-term care initiative being developed in another state, Lewin estimated nursing home savings to reach 10.8 percent in Year 15 of the initiative, with no savings occurring in the first year and a gradual accumulation of savings thereafter.

Other Long-Term Care Services

These services include :

- **Community Based Alternatives (CBA Waiver):** The CBA program provides home and community-based services to adults age 21 and over who qualify for nursing facility care. Services include adaptive aids and medical supplies, adult foster care, assisted living services, emergency response services, minor home modifications, occupational and physical therapy, personal assistance services, respite care, and case management.
- **Primary Home Care Services (PHC):** PHC is a Medicaid-reimbursed, non-technical, but medically related personal care service prescribed by a physician as a part of a client's plan of care. The client must be a TANF or SSI Medicaid recipient, or be determined eligible for Medical Assistance Only under 1929(b) provisions of the Social Security Act.
- **Day Activity and Health Services (DAHS**): DAHS XIX provides daytime services weekdays to Medicaid-eligible clients residing in the community in order to provide an alternative to placement in nursing facilities or other institutions.

Most of the expenditures in the other long-term care category for the SSI blind and disabled population are in CBA and PHC; each is approximately 45 percent of the total costs. CBA comprises over 50 percent of the other long-term care services for the aged and dual eligible population.

E. Administrative Cost Estimates

Each of the managed care and FFS options that exist in Texas' Medicaid program have administrative costs associated with operating them. For example on the FFS side, the State experiences costs associated with paying FFS claims and managing the claims processing

contract. On the managed care side, the State also incurs costs related to claims and encounter processing and contract management, as well as other vendor costs, such as the internal administration charged by HMOs. The magnitude of these administrative costs can vary based on several factors, including but not limited to the number of persons served, the type of managed care model, the efficiency of the vendor, and the structure of the contract.

For each of the populations and service delivery models (i.e., FFS, STAR+PLUS, STAR HMO, and PCCM) Lewin developed administrative cost estimates. The development of the cost estimates is divided into two parts: administrative costs incurred directly by the State and, where applicable, administrative costs internal to HMO operations. This section provides a brief overview of the administrative costs considered, while a detailed derivation of the costs is provided in Appendix B.

1. Administrative Costs Incurred Directly by the State

The administrative costs incurred by the State were calculated based on information provided by staff at HHSC. The costs include those associated with vendor contracts with the following vendors:

- ACS (formerly, NHIC and Birch & Davis) - claims and encounter processing, as well as administering the PCCM program;
- MAXIMUS - enrollment broker services; and
- ICHIP – EQRO services.

We also included the estimated personnel cost to the State associated with managing the contracts for these vendors. In addition to these contractors, the State directly employs case management staff to coordinate care for the Aged, Blind & Disabled populations. While it has not typically been our experience that the implementation of managed care results in the direct elimination of state staff, according to estimates from HHSC, 380 regional case management and associated positions are anticipated to be eliminated as a result of expanding the current STAR+PLUS program. We did not assume that any other state positions would be eliminated as a result of managed care expansion. Table III-4 outlines the PMPM amounts, by risk group and by program, of the administrative costs incurred directly by the State.

Table III-4. Summary of PMPM Administrative Costs

Population	FFS	STAR+PLUS	STAR HMO	PCCM
Blind & Disabled	$ 7.68	$ 4.62	$ 8.69	$ 15.20
Aged	$ 6.74	$ 4.62	N/A	N/A
TANF & Related	$ 2.48	N/A	$ 4.20	$ 9.99

Appendix B provides a detailed description of the derivation of these administrative costs.

2. *Administrative Costs Associated with an HMO Model*

The State must provide an administrative and profit allowance to private HMO contractors that serve Medicaid enrollees. The amount of the allowance (as a percentage of overall costs) depends on several variables. For example, administrative cost percentages are influenced heavily by the amount of money expended on medical costs; the greater the medical costs, the larger the base over which fixed costs can be spread. In addition, the efficiency of the HMO's operations also affects the amount of administrative allowance necessary.

Lewin developed administrative cost percentages for each risk group for each of the two HMO scenarios - STAR+PLUS and STAR HMO – where applicable. Table III-5 outlines these administrative estimates.

Table III-5. HMO Administrative Percentages

Risk Group	STAR+PLUS HMO	STAR HMO
Blind & Disabled	8.0%	9.5%
Aged	11.5%	15.0%
TANF & Related	N/A	10.5%

These administrative cost estimates contain several key assumptions and were developed by reviewing financial data in Texas and in other state Medicaid programs. The administrative percentages reflect our "steady state" analysis, which assumes that HMOs have overcome any implementation hurdles and are operating on a efficient, long-term basis.[11] These estimates are in line with administrative expenditures seen in other states for similar populations and costs. They are not as aggressive as the most administratively efficient HMOs in Medicaid (e.g., as seen in Arizona), but they do reflect administrative allowances less than what some current Texas contractors are reporting (e.g., in FY02 all HMOs in Texas averaged approximately 13.2 percent administration for the TANF and TANF-related populations). Lewin believes these administrative targets are feasible for Texas Medicaid plan, and still lower figures may be achievable), but recognizes that significant changes may have to be made by health plans in order to achieve this level of administrative efficiency.

F. HMO Profit Requirements

The simulation of HMO costs is built upwards on the basis of what are deemed to be efficiently managed medical costs as well as efficient administrative costs coupled with a reasonably adequate enrollment level that offers administrative scale economies to occur. The health plans will not do business with HHSC without a realistic opportunity to achieve a favorable operating margin, particularly considering the downside financial risk that these organizations bear. It is therefore necessary to factor into the cost estimates a profit margin for the capitated

[11] The modeling effort reflects true administrative costs and does not factor in the recently enacted premium tax. This 1.75 percent tax may appear in the Medicaid health plans financial statements as an increase in administrative spending.

contractors. Throughout these estimates, an operating surplus of two percent of capitation revenue is included in the estimates for the capitated models (STAR and STAR+PLUS).

Note that the profit for the PCCM and EPO contractors is built into the PMPM administrative costs in the previous subsection. Thus, no additional profit allocation is needed to fully reflect the expected costs under these managed care models.

G. Summary of Cost Estimates

Appendix C presents the detailed results of the FY02 simulation comparing the cost-effectiveness of different managed care models for different population groups and geographic regions. These results are summarized in Table III-6.

Table III-6 indicates that substantial savings are possible by extending Medicaid managed care to the SSI blind and disabled non-Medicare population, with much more modest savings opportunities involved in implementing managed care for the remaining FFS population subgroups. For the blind and disabled non-Medicare subgroup, annual savings of $83 million are projected through implementing the STAR+PLUS model throughout the existing SDAs (this figure does not include the savings this model is already achieving in Harris County). Lewin has conducted a more detailed analysis of the non-SDA area and has identified several potential new and expanded SDA configurations where savings appear to be possible. These assessments are presented in Section V. An additional $47 million in annual savings is deemed possible through STAR+PLUS implementation in these new and expanded SDA configurations.

The most difficult and limited savings opportunities lie in extending managed care to the TANF and TANF-related populations outside of the existing SDAs. Looking at the 203 county non-SDA area as a whole, Lewin projects that TANF offers roughly a breakeven proposition in the out-years for the PCCM model, with none of the other models operating in a financially viable manner. However, savings appear to be possible in the new and expanded SDA regions presented in Section V. Similarly, no savings are projected for aged and other Medicare-eligible recipients outside of the existing SDAs when viewing this region as a whole; however, some savings opportunities for Medicare/Medicaid dual eligibles exist in selected regions as identified in Section V.

Table III-6. Summary Of Annual Savings From Managed Care Expansion*

	Number of Counties	Most Cost-Effective Model	Annual Savings ($ millions, FY02 simulation)	Percent Savings
SSI Blind/Disabled, NON-Medicare				
Existing SDAs*	51	STAR+PLUS	$83.4	8.6%
Remaining Counties**	203	STAR+PLUS/ PCCM	$46.5	4.8%
Subtotal, SSI Blind/Disabled	254		$129.9	
Aged and Other Medicare				
Existing SDAs*	51	STAR+PLUS	$5.1	0.5%
Remaining Counties**	169	STAR+PLUS/ None	$3.8	0.3%
Subtotal, Aged and Other Medicare	254		$8.9	
TANF and TANF-Related				
Existing SDAs*	51	PCCM and STAR (no change)	$0	0.0%
Remaining Counties**	203	PCCM/ None	7.0	0.5%
Subtotal, TANF and TANF-Related	254		7.0	
Total, All Populations	254	Mixed	$145.8	

No further savings are projected in existing mandatory Medicaid managed care markets, which include Harris County for the SSI population and all SDAs for TANF.

* Reflects federal and state share of savings.

** Assumes managed care model identified in the table is implemented in the new and expanded SDA configurations presented in Section V. PCCM is implemented in the remaining non-SDA counties for the SSI blind and disabled population and no managed care model is implemented in the remaining non-SDA counties for Aged and TANF populations.

IV. SENSITIVITY ANALYSES OF VARYING KEY ASSUMPTIONS

A. Sensitivity Analyses of STAR+PLUS Model

The cost simulation has shown that significant savings can be achieved in the SSI blind and disabled non-Medicare population through the STAR+PLUS model. Since more than 50 percent of the overall savings generated in our simulation can be attributed to implementing STAR+PLUS in the existing SDAs, some sensitivity analyses were focused on the STAR+PLUS model alone.

1. Variations on Inpatient Hospital Cost Factor

Inpatient hospital services comprise the largest component of medical spending for the SSI blind and disabled population (26 percent of costs). In the initial simulation, the STAR+PLUS model was attributed 30 percent savings (cost factor of 0.700) on inpatient hospital costs based on findings that STAR+PLUS has reduced inpatient admission volume 22.2 percent in Harris County (and because further savings are possible through length-of-stay reductions and channeling patient volume to lower-cost facilities). Since inpatient hospital services account for a large part of overall medical spending for the SSI population, a small change in the cost factor can account for sizable increases or decreases in the overall medical costs. A 10 percentage point increase and decrease in the SSI STAR+PLUS inpatient cost factor were modeled to frame the impact of this variable on Medicaid savings. These sensitivity assessments, shown in Table IV-1, assume that the inpatient component of the capitation rate paid to the health plans would match the various health plan cost levels being modeled.

Table IV-1. Summary of Variations on Inpatient Cost Factor, SSI Blind and Disabled, STAR+PLUS Model

Existing SDAs (Exclude Harris County)	20% Inpatient Savings	Best Estimate (30% Inpatient Savings)	40% Inpatient Savings
Cost Factor	0.800	0.700	0.600
Annual Savings ($ millions, FY02 simulation)	$57.9	$83.4	$109.0
Percent Savings	6.0%	8.6%	11.3%

Table IV-1 indicates that each percentage point movement in the inpatient cost factor for STAR+PLUS impacts annual savings by approximately $2.5 million, if the STAR+PLUS model is expanded throughout the existing SDAs.

2. Variations on PCCM Cost Factor

In the best estimate model, the PCCM model cost factors were set two-thirds of the way between the STAR HMO factor and 1.000 for the SSI blind and disabled population. If the PCCM model's medical cost savings were able to move much closer to those being achieved in the HMO model , PCCM would be able to achieve similar savings as the STAR+PLUS model due to its lower administrative costs. Moving the PCCM model cost factors to one-third of the way between

STAR HMO and 1.000, the PCCM model created savings much closer to the $83 million STAR+PLUS model savings in the existing SDAs (excluding Harris County), as shown in Table IV-2.

Table IV-2. Summary of Shift in PCCM Cost Factors, SSI Blind and Disabled

Existing SDAs (Exclude Harris County)	Best Estimate Model	Shift Toward HMO Model
Average Total Cost Factor	0.964	0.928
Annual PCCM Savings ($ millions, FY02 simulation)	$25.8	$60.3
Percent Savings	2.7%	6.3%

B. Variations on Administrative Costs

While each of the managed care models creates savings on medical costs compared to FFS, managed care models have higher administrative costs than FFS. The total savings created by managed care can be affected greatly by the level of administrative costs, especially for the STAR+PLUS and STAR HMO models. Table IV-3 displays the effect a 25 percent increase or decrease in PMPM administrative costs can have on the estimated managed care savings. Note that HMO profit margins remain at two percent under all these administrative cost scenarios.

Table IV-3. Effect of Administrative Costs on Annual Savings*

	Most Cost-Effective Model	25% Decrease in PMPM Administrative Costs	Best Estimate Model	25% Increase in PMPM Administrative Costs
SSI Blind/Disabled				
Existing SDAs*	STAR+PLUS	$97.4	$83.4	$38.8
Remaining Counties**	STAR+PLUS/ PCCM	$52.5	$46.5	$39.9
Subtotal, SSI Blind/Disabled		$149.9	$129.9	$108.7
Aged and Other Medicare				
Existing SDAs*	STAR+PLUS	$14.2	$5.1	($4.8)
Remaining Counties**	STAR+PLUS/ None	$7.8	$3.8	($0.5)
Subtotal, Aged and Other Medicare		$22.0	$8.9	($5.3)
TANF and TANF-Related				
Existing SDAs*	PCCM and STAR (no change)	$0	$0	$0
Remaining Counties**	PCCM/ None	$11.7	$7.0	2.3
Subtotal, TANF and TANF-Related		$11.7	$7.0	2.3
Total, All Populations	Mixed	$183.6	$145.8	$105.7

No further savings are projected in existing mandatory Medicaid managed care markets, which include Harris County for the SSI population and all SDAs for TANF.

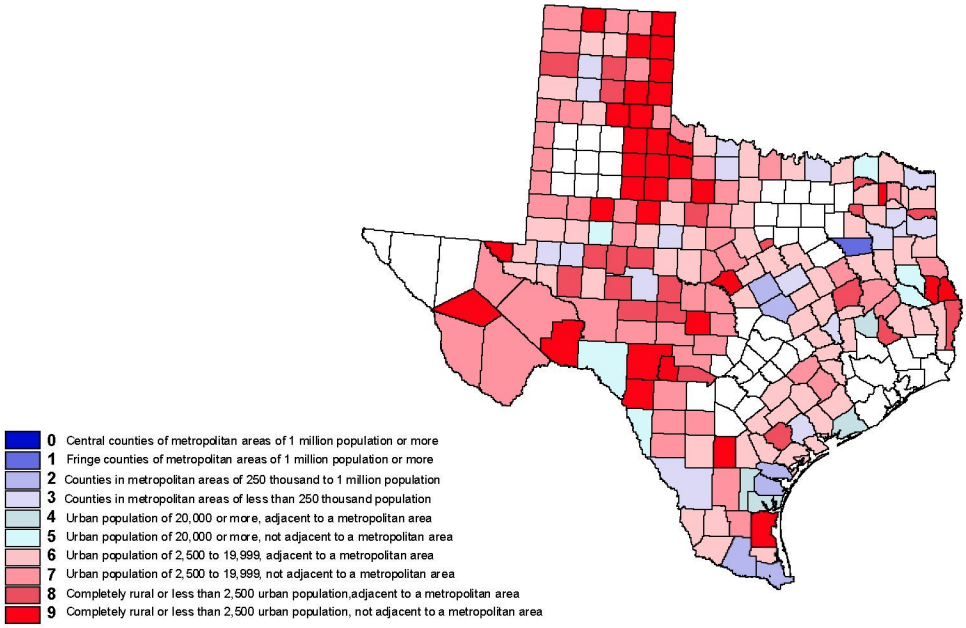
* Dollars are in millions for FY02 simulation and reflect state and federal share of savings.. Values for the "Best Estimate Model" column correspond to Table III-6.

** Assumes managed care model identified in the table is implemented in the new and expanded SDA configurations presented in Section V. PCCM is implemented in the remaining non-SDA counties for the SSI blind and disabled population and no managed care model is implemented in the remaining non-SDA counties for Aged and TANF populations.

V. ANALYSIS OF GEOGRAPHIC EXPANSION

There is substantial variation among the 203 counties that are not in managed care. As the map (Exhibit V-1) below shows, these counties range from mid-size urban areas to remote frontier areas. To determine the cost-effectiveness of expanding managed care in these 203 counties, Lewin modeled the cost-effectiveness of both extending existing SDAs and of developing wholly new SDAs around the largest remaining urban areas.

Exhibit V-1
Urban/Rural Designations of Non-SDA Counties



First, scenarios were developed for modeling that reflect appropriate groupings of counties into potential procurement areas. As part of this process, counties contiguous to existing managed care counties were first appended to existing SDAs. Significant remaining population centers representing potential opportunities for expansion of managed care were then identified and grouped with surrounding counties to develop hypothetical SDAs. As a result of this initial process, the SDAs developed were: Waco, Corpus Christi, Tyler/North East Texas, Wichita Falls, and Laredo.

Factors considered in the initial assessment of which counties to include in the extended and hypothetical SDAs were:

- county-level data on population density;
- availability of health care providers;
- presence of commercial managed care plans;
- inclusion in CHIP HMO service areas;

- rural designation code (an indicator developed by the Department of Agriculture to classify counties on a scale as urban to rural on a scale from 0 to 9);
- Medicaid enrollment; and
- observable geography.

To refine these hypothetical SDAs and further determine which counties might be viable HMO markets, we identified six markers of managed care suitability with which to eliminate counties from the final scenarios used for modeling. These markers are generally indicative of population size, health care availability, and receptivity to managed care:

- total population greater than 30,000;
- county rural designation code no greater than six;
- population to land area ratio of at least 10;
- minimum of 0.4 physicians per thousand;
- minimum 0.02 hospitals per thousand; and
- no fewer than five commercial HMOs.

All but three of the counties already in managed care in eastern Texas meet at least five of these six criteria. Applying these criteria resulted in elimination from the model of many counties which had initially appeared to be potential candidates for expansion. For example, neither the Wichita SDA nor the Laredo SDA and the surrounding Rio Grande Valley met the criteria, and they do not appear to provide a sufficient regional hub to support a new procurement.

Mapping the results of the geographic analysis indicated that the counties identified for potential expansion are not widely dispersed but are located in and around urban areas. In order to assure contiguous and compact service areas, several final adjustments were made to the revised SDAs by adding "connector counties." In these cases, the auxiliary counties are close to meeting five of the six criteria and appear to be reasonable candidates for managed care expansion.

It is worth noting that in the western part of the state, the majority of Medicaid managed care (MMC) counties do not meet the criteria for expansion used above. For example, the existing Lubbock SDA appears to contradict the assumptions made above. Of the nine counties in the Lubbock area, a full seven do not meet five of the six criteria, the average rural county code is six and the average number of commercial HMOs is three. But while these counties would not have been selected using the above methodology, 56 percent of Medicaid recipients in the Lubbock area choose an HMO over the PCCM option. While this does raise the potential that managed care may in fact be viable in other rural areas of the state – such as the counties surrounding Odessa, San Angelo, Amarillo, and Abilene -- our analysis indicates that it is less likely to be cost-effective in these areas.

The following map (Exhibit V-2) illustrates the reconfigured SDAs used for modeling.

Exhibit V-2. Potential Expansion/Reconfiguration of SDAs

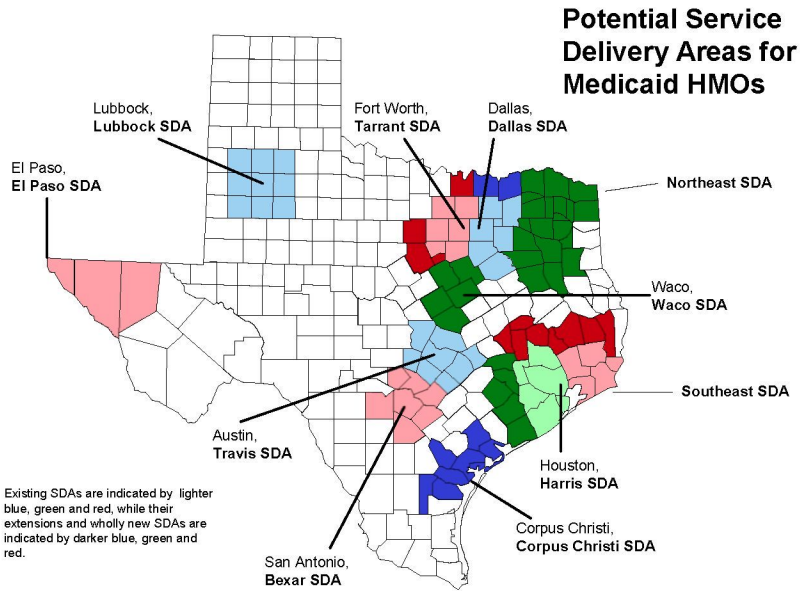


Table V-1 presents the number of beneficiaries and potential savings associated with the reconfigured SDAs. Lewin estimates that enrolling SSI beneficiaries in these additional counties in a STAR+PLUS model would increase annual savings over the base case by $30.9 annually.

Table V-1. Summary of Savings from Expanded and New SDAs
(all figures in millions of $)

Population Group	Expansion Area	Savings from STAR+PLUS HMO	Savings from PCCM	Number of Beneficiaries
TANF	Corpus Christi	NA	$3.7	571,478
	Waco	NA	$0.1	327,791
	Northeast	NA	$1.7	579,308
	Extended SDAs	NA	$1.5	412,928
	Subtotal		$7.0	1,891,505
Blind & Disabled	Corpus Christi	$8.2	$2.7	107,097
	Waco	$5.1	$1.2	69,800
	Northeast	$12.6	$3.4	149,564
	Extended SDAs	$5.0	$1.4	92,539
	Subtotal	$30.9	$8.7	418,995
Aged/Other Medicare	Corpus Christi	($0.4)	NA	156,040
	Waco	$1.4	NA	98,673
	Northeast	$2.4	NA	236,769
	Extended SDAs	$0.4	NA	151,292
	Subtotal	$3.8	NA	642,774
Total, All Populations		**$34.7**	**$15.7**	

The savings associated with implementing managed care for the TANF population are much lower than for SSI, $7 million annually across all expanded areas. At the same time, the magnitude of these savings in each market is such that consideration should be given to whether inclusion of the TANF population is necessary to assure sufficient plan participation in these markets, as well as to offsetting implementation costs for the PCCM.

While this geographic analysis is a rough first pass at assessing feasibility, it does not assure that managed care can be successfully implemented in the areas shown above. The purpose of this analysis is primarily to establish a reasonable basis for cost estimates in different regions. This approach does not account for the wide range of market considerations – in addition to cost-effectiveness - which should appropriately influence decisions to implement managed care. These considerations could include the number of commercial and Medicaid health plans competing in the market, and whether plans will be serving multiple areas; implementation costs; data on local health care quality and access to care; and the likely impact of managed care expansion on major providers.

VI. COST IMPACTS OF CHANGES TO THE PHARMACY BENEFIT

Pharmacy costs are a key consideration in determining the impact and viability of expanding the STAR+PLUS program beyond Harris County, as well as in designing any modifications to the managed care pharmacy benefit that may be advisable should expansion occur. Currently, the pharmacy benefit in the Medicaid FFS program limits the number of prescriptions per month to three for the adult population, while the pharmacy benefit provides unlimited prescriptions for adult Medicaid recipients who enroll in managed care plans. (Medicaid recipients under the age of 21 may receive unlimited prescriptions regardless of FFS versus managed care status.) For both the FFS and managed care populations, the allowed day supply per prescription is quite liberal compared to the majority of state Medicaid managed care programs, at 180 days versus the more common 34-day supply limit.

An expansion of STAR+PLUS, a mandatory Medicaid managed care program for the SSI population currently operating in Harris County only, would add a substantial number of SSI recipients to Medicaid managed care in Texas, providing them access to unlimited prescriptions if the current managed care prescription benefit design is maintained. The interviews and analyses we have conducted to date to evaluate the pharmacy cost impact of such an expansion are discussed below.

A. Interviews with HHSC Staff

The Lewin Group interviewed key state Medicaid officials knowledgeable about the Medicaid pharmacy benefit regarding the "interaction effect" of a three prescription limit and a 180-day supply allowance. That is, Lewin explored the degree to which "staggering" of prescriptions occurs such that, for example, three 180-day supply prescriptions may be filled in one month, with an additional three 180-day supply prescriptions filled the following month, and so on. Such staggering of prescriptions would have the effect of functionally nullifying the three-prescription limit, in that an individual could have valid prescriptions for up to eighteen different medications in any given month . Understanding this interaction effect is important to discerning the degree to which the FFS pharmacy benefit truly differs from the managed care pharmacy benefit and, in turn, how a shift of the SSI population into managed care would affect overall Medicaid pharmacy costs.

Interviewees have indicated that, to a large degree, adult individuals in the FFS program are obtaining needed prescriptions via the staggering approach described above. However, many less sophisticated recipients are likely forgoing some prescribed medications or paying for them out-of-pocket. It is the perception of HHSC staff that physicians and pharmacists often work with Medicaid clients to help assure they obtain essential prescriptions by staggering and/or by "reversing out" the least expensive pharmacy claims when prescription limits are hit, thus assuring Medicaid coverage for at least the most expensive prescriptions. Due to the wide difference in the prices of various prescriptions, Medicaid is likely paying the vast majority of the claims costs even for many high-need persons who are not taking advantage of the 180 day supply by "staggering" their medications. For example, a person taking six medications each month, three of which are brand drugs at an average cost of $120 and three are generics at an average cost of $20, would have only half of their drugs paid for by Medicaid. However, if

Medicaid pays for the three brand drugs, Medicaid would be covering 86% of this person's total drug costs.

In short, information obtained from interviews suggests that the FFS three-prescription limit is not truly limiting recipients to only three medications a month. Our data analyses support this contention, as described below.

B. Analysis of HHSC Pharmacy Data

Lewin has analyzed pharmacy data and reviewed pharmacy data reports supplied by HHSC to compare pharmacy costs and utilization per member per month (PMPM) observed among the FFS SSI adult population versus the mandatory STAR+PLUS FFS adult population versus the voluntary STAR SSI adult population. Table VI-1 summarizes findings from the prescription data for blind and disabled SSI recipients age 21 and over living in the community, i.e., not in nursing homes. (Data for aged SSI recipients—those age 65 and over—were not included in the analyses as, with few exceptions, these individuals are dual eligibles and therefore not eligible for unlimited prescriptions.)

Table VI-1
Prescription Utilization and Costs, SSI Blind and Disabled Adult Population, by Program Type

	Program	Avg. Scripts/Client	Avg. $/Client	Avg. $/Script
Unlimited Prescriptions Allowed	STAR+PLUS	4.12	$305.76	$74.25
	STAR	5.03	$360.46	$71.65
	Subtotal, Managed Care	4.50	$328.38	$73.17
3-Script Limit	FFS*	2.77	$252.88	$91.21
	Subtotal, FFS* and STAR combined	3.22	$274.33	$87.31

* Includes data for FFS blind and disabled adults in counties currently served by STAR only.

As shown in Table VI-1, rates of pharmacy utilization and cost (average monthly scripts per client and average monthly costs per client) are higher in the voluntary STAR program than in the mandatory STAR+PLUS program. A couple of explanations for this difference appear plausible. First, HHSC has indicated that, since the voluntary STAR SSI population is not enrolled in managed care plans on a capitated basis, there is little management of their care – certainly less than the level of care management inherent in the STAR+PLUS program. Another potential explanation is that there is likely a biased selection into the voluntary STAR program, such that those with the greatest prescription needs are drawn to managed care because of the unlimited prescriptions allowed. Nationally, there has not been large-scale enrollment into HMOs on a voluntary basis in the Medicaid arena, and in Texas the non-risk structure of the

STAR SSI program is such that the HMOs are not seeking to increase their SSI enrollment. It is not clear why SSI eligibles would voluntarily join STAR HMOs except to get the unlimited drug benefit, as the HMO model otherwise offers the same benefits with more restrictions.

Regardless of the explanation, the STAR+PLUS population represents the most appropriate population to be compared to the FFS population, since as a mandatory program STAR+PLUS is not subject to adverse selection *and* this is the model of managed care expansion being considered for the SSI population.

When comparing STAR+PLUS rates of pharmacy utilization and costs to rates observed in the FFS population, one might initially conclude that the utilization—and therefore the costs—of drugs per recipient would increase approximately 49 percent (i.e., the percentage by which 4.12 scripts exceeds 2.77 scripts) if STAR+PLUS were expanded to the counties where STAR is currently operating. However, closer analysis reveals the following:

- The average *cost per client* in STAR+PLUS exceeds the average cost per client in FFS by only 21 percent. This is due to the higher average cost per prescription in the FFS program than in the STAR+PLUS program. It is possible that this higher cost per prescription in FFS may result from a longer average day supply under FFS. While the 180-day supply is allowed under managed care as well as under FFS, the need to obtain a longer day supply in order to stagger prescriptions and thus obtain more than three medications per month is not present in managed care, since there is no limit on the number of prescriptions that may be filled.
- If one looks at the prescription data for the FFS program and the STAR program combined (which may be the more appropriate basis for comparison, particularly if there is adverse selection into the STAR program and favorable retention by the FFS program), the cost-per-client differential between this group and the STAR+PLUS group gets even smaller – just 11 percent higher in STAR+PLUS.

These findings support the qualitative input received from HHSC staff, namely that the three prescription limit in FFS, when combined with a 180-day supply allowance, has the effect of providing coverage for what approaches an unlimited number of prescriptions. Thus, the cost impact of expanding STAR+PLUS with its current pharmacy benefit design is likely to be significantly smaller (11 percent is Lewin's best estimate in geographic areas where STAR+PLUS is implemented) than might previously have been expected.

It may be possible to reduce this cost differential even further by reducing the day supply allowed to a 34-day supply, as is the practice in most other state Medicaid programs. One of the pitfalls of having a high supply limit such as 180 days is that the full supply of the medication may not be consumed before the recipient requests another prescription of either the same or a similar drug. For example, if a 180-day supply of an expensive psychotropic is dispensed, but the recipient switches to a new drug after 25 days due to side effects or ineffectiveness, 155 days of the expensive drug are wasted. This is one of the reasons that most insurers usually do not authorize long-term supplies of medications, especially for people with chronic conditions, until after an initial test period is completed. Another difficulty with a high supply limit in the case of Medicaid programs is that recipients may be receiving prescription drugs that cover them beyond the duration of their Medicaid eligibility (and therefore beyond the State's financial

responsibility for their care). However, an offsetting issue is the additional fill fees that must be paid for the higher prescription volume that occurs under a 34 day supply. For purposes of these estimates, we have assumed the impact of the shorter day supply to be budget-neutral (i.e., the savings would be offset by the additional fill fees).

C. Simulated Cost Estimates

The impacts of changes to the pharmacy benefit were estimated for all Medicaid recipients not dually eligible for Medicare coverage. These estimates were applied to the simulation of actual FY2002 costs such that the results could be compared with the broader managed care savings impacts. The added costs of the unlimited drug benefit are estimated in Table VI-2 for the TANF and TANF-related population and in Table VI-3 for the blind and disabled (non-Medicare) population.

Based on the preceding analyses, Lewin estimates that an unlimited pharmacy benefit will increase PMPM pharmacy costs by 11 percent for the blind/disabled (non-Medicare) population throughout the existing SDAs. Costs are projected to be 16 percent higher outside the existing SDAs, where less restrictive forms of managed care are likely to be implemented. For the TANF and TANF-related populations, the estimated percentage is much smaller (1.5 percent) because all children already receive an unlimited drug benefit.

Summary Findings, TANF and TANF-Related Population

The vast majority of TANF and TANF-related beneficiaries already receive an unlimited drug benefit, by virtue of being children and/or being enrolled in a managed care program in the existing SDAs. Table VI-2 contains TANF and TANF-related enrollment data as of November 2002. As can be seen, only approximately 6.4 percent of the total TANF and TANF-related population currently falls under the 3-prescription limit.

Table VI-2
TANF and TANF-Related Enrollment, November 2002

TANF/TANF-Related Sub-Population	Enrollment	Percent of Total TANF/TANF-Related Enrollment
Non-Medicare Related TANF Children (all unlimited scripts)	374,201	20.5%
Non-Medicare Related TANF Adults *FFS (3-script limit)* *Managed Care (unlimited scripts)*	 68,432 48,988	 3.7% 2.7%
Pregnant Women *FFS (3-script limit)* *Managed Care (unlimited scripts)*	 48,612 50,527	 2.7% 2.8%
Newborn Children	123,401	6.8%
Expansion Children	531,600	29.2%
Federal Mandate Children	575,732	31.6%
Total TANF/TANF-Related ***Total w/ 3-script limit***	**1,821,493** ***117,044***	**100%** ***6.4%***

Based on Lewin's analyses, the total annual pharmacy spending among non-SDA adults who are subject to the 3 drug limit is approximately $25 million (after subtracting rebates).

We believe that minimal additional costs would occur if the non-SDA population were enrolled in HMOs, due to the large spillover savings impacts that this model has achieved in the SDAs. However, we do not believe there is a realistic likelihood that the HMO model can be successfully implemented throughout the non-SDA region. Assuming that the PCCM model is the strongest feasible managed care option for TANF outside the existing SDAs, we estimate that the unlimited drug benefit would result in increased pharmacy costs of 20 percent for the non-SDA TANF adults. This percentage figure translates to an annual added cost of $5 million.

Summary Findings, Blind and Disabled (Non-Medicare) Population

Table VI-3 indicates that a statewide extension of an unlimited drug benefit for the blind/disabled (non-Medicare) population would create $40.4 million in annual post-rebate costs (using the FY02 simulation – inflation trending would lead to greater added costs by the time this change could be implemented). The target population of Medicaid-only SSI adults is assumed to represent 85% of all Medicaid-only pharmacy costs (with SSI children comprising the remaining 15%). Within this target population, added costs of 16% are projected in each SDA. This percentage is midway between the 11 and 21 percent costs derived earlier in this chapter. Added costs of 20% are assumed in the non-SDA region, where less aggressive managed care models are likely to be implemented.

Table VI-3. Costs of Unlimited Drug Benefit, Medicaid-Only SSI Population

SDA	Baseline Pharmacy Expenditures (Pre-Rebate)	Baseline Adult Pharmacy Expenditures (Pre-Rebate)	Added Cost of Unlimited Drug Benefit (Pre-Rebate)	Baseline Adult Pharmacy Expenditures (Post-Rebate)	Added Cost of Unlimited Drug Benefit (Post-Rebate)	Assumed Model
Bexar	$34,034,945	$28,929,704	$4,628,753	$22,854,466	$3,656,715	STAR+PLUS
Dallas	$36,444,383	$30,977,726	$4,956,436	$24,472,403	$3,915,585	STAR+PLUS
El Paso	$14,951,729	$12,708,970	$2,033,435	$10,040,086	$1,606,414	STAR+PLUS
Harris*	$46,767,196	$39,752,117	$0	$31,404,172	$0	STAR+PLUS
Harris Contiguous	$12,083,883	$10,271,300	$1,643,408	$8,114,327	$1,298,292	STAR+PLUS
Lubbock	$7,442,046	$6,325,739	$1,012,118	$4,997,334	$799,573	STAR+PLUS
SE Region	$10,656,710	$9,058,203	$1,449,313	$7,155,981	$1,144,957	STAR+PLUS
Tarrant	$26,122,749	$22,204,337	$3,552,694	$17,541,426	$2,806,628	STAR+PLUS
Travis	$16,278,706	$13,836,900	$2,213,904	$10,931,151	$1,748,984	STAR+PLUS
Non-SDA	$174,149,572	$148,027,136	$29,605,427	$116,941,437	$23,388,287	PCCM
Grand Total	$378,931,920	$322,092,132	**$51,095,488**	$254,452,784	**$40,365,435**	

* The blind and disabled (non-Medicare) population in Harris County already receives an unlimited prescription drug benefit through the STAR+PLUS managed care program.

VII. MANAGED CARE SAVINGS BY YEAR DURING INITIAL FIVE YEARS OF IMPLEMENTATION

The figures in Section III derive expected annual savings levels after the managed care models have been in effect for several years. If managed care were fully implemented statewide in the most optimal configuration represented in Table V-1, the annual savings progression across the first five years is shown in Table VII-1. Savings are estimated to reach a steady state in Year 5. All these figures reflect FY02 dollar values.

The key assumptions in these figures are that no savings will be achieved in the initial year for the TANF and Aged/Medicare populations, with savings gradually and evenly progressing to the Year 5 level thereafter. For the Blind/Disabled (non-Medicare) population, the medical cost savings were assumed to reach 60 percent of their steady state level in the initial year of implementing the managed care interventions, with performance increasing by ten percentage points in each subsequent year. STAR+PLUS health plan target profits were reduced in the early years below the Year 5 two percent target (e.g., 0.4 percent in Year 1, 0.8 percent in Year 2, etc.), reflecting a mutual investment between the health plans and HHSC in achieving a successful, long-term financial partnership.

Table VII-1
Annual Progression of Savings
(all figures in millions of $)

	Year 1	Year 2	Year 3	Year 4	Year 5
TANF (outside existing SDAs)	$0.0	$1.8	$3.5	$5.3	$7.0
Blind & Disabled, Existing SDA	$34.4	$46.6	$58.9	$71.2	$83.4
Blind & Disabled Non-SDA	$17.3	$24.6	$31.9	$39.2	$46.5
Aged & Other Medicare, SDA	$0.0	$1.3	$2.6	$3.8	$5.1
Aged & Other Medicare, Non-SDA	$0.0	$1.0	$1.9	$2.9	$3.8
Total Savings	**$51.7**	**$75.3**	**$98.8**	**$122.4**	**$145.8**

There will also be some one-time developmental costs associated with expanding managed care to any new population. There are some developmental economies in expanding managed care (versus creating new programs altogether). However, expansion will nonetheless require some significant developmental efforts. Where capitation contracting is used, for example, a major procurement effort will be required, as well as capitation rate-setting. These developmental costs are anticipated to be $3 to $5 million for full statewide implementation. While HHSC will realize an exceptional "return on investment" for these developmental costs over time, these costs should be netted against the savings figures.

VIII.CASH FLOW IMPACTS OF CAPITATION CONTRACTING

As quantified in previous sections of this study, moving additional persons into a capitated setting will create savings on an incurred cost basis for many Texas Medicaid populations. The PMPM costs are projected to be lowered, for example, by approximately 6.3 percent for the SSI blind and disabled population by moving from the fee-for-service coverage setting to the STAR+PLUS Medicaid managed care model in the existing SDAs.

However, a transition of persons (and their corresponding Medicaid spending) from the fee-for-service setting to a capitated environment creates an adverse cash flow situation. On average under fee-for-service, a time lag of two to three months occurs between the date of service and the date the payment is made. Under capitation, the payments are typically made prospectively (e.g., the capitation check is sent out during the first week of October to pay for October health care coverage).

The interplay between making payments on a fee-for-service and capitation basis is depicted in detail in Appendix D. These calculations, as summarized in Table VIII-1, portray a scenario in which the capitation rates are set to achieve a five percent savings in incurred costs. Under this scenario, converting a population into a capitated setting would lead to an adverse cash flow impact for that population during the first year. If capitation payments are made in the same month as the time period to which the coverage applies, payments during the first year under a capitated program would be approximately 11 percent higher than the payments that would have been made in the FFS setting. After the first year, the cash flow and incurred costs more closely parallel one another.

One policy option would be to delay the capitation payments to the health plans by one month. This would eliminate most, but not all, of the adverse initial year cash flow impact of converting to capitation – reducing payments from 111 percent to 102 percent of FFS. Several states, including New York and Connecticut, have adopted this approach.

Table VIII-1
Cash Flow Impacts of Moving From Fee-For-Service To Capitation

	Capitated Payments As Percentage Of Fee-For-Service Costs		
Implementation Year	Incurred Basis	Cash Basis, Payments Made In Same Month	Cash Basis, Payments Made In Subsequent Month
Year 1	95.0%	111.4%	102.1%
Year 2	95.0%	95.7%	95.3%
Year 3	95.0%	95.7%	95.3%
Year 4	95.0%	95.7%	95.3%
Year 5	95.0%	95.7%	95.3%

Note also that there is a short-term cash flow advantage to the opposite situation, where a capitated population is moved back into the FFS setting. Table VIII-2 portrays a scenario whereby incurred costs are equal between the capitated and FFS settings, but where the policy change moves persons out of capitation and into FFS. In such a situation, there would be a 15 percent cash flow savings during the initial year of this change.

Table VIII-2
Cash Flow Impacts of Moving From Capitation To Fee-For-Service

Implementation Year	Incurred Basis	Cash Basis, Payments Converted To Fee-For-Service
Year 1	100.0%	85.3%
Year 2	100.0%	99.3%
Year 3	100.0%	99.3%
Year 4	100.0%	99.3%
Year 5	100.0%	99.3%

Another mechanism to improve the State's cash flow dynamics related to capitation contracting includes withholds. Minnesota, for example, currently withholds five percent of every capitation payment to its Medicaid health plans. The withhold funds collected during a given calendar year are returned in July of the ensuing year, subject to the health plan's performance in meeting specified benchmarks. A similar withhold model, with or without the performance-based component for returning withholds, might be something HHSC wishes to consider.

IX. COST EFFECTIVENESS OF SINGLE-MODEL VERSUS MULTIPLE MODELS

Where capitation is used, Lewin believes it is in HHSC's best interest to rely solely on the capitated model, as opposed to creating competition between a fee-for-service approach (e.g., PCCM) and the capitated approach for the same population. While the "combination model" involving HMOs and PCCM is currently used for the TANF and TANF-related population in several SDAs, this approach poses several challenges.

Provider Preference. All other things equal, providers will almost always prefer a fee-for-service payer to an HMO. Because HMOs deploy the strongest array of medical cost containment methods (and do so most aggressively given their at-risk status), this model is particularly unattractive to the provider community.

Enrollee Preference. There appears to be little reason for an enrollee to select an HMO option if a FFS alternative is available. In most instances, the HMO option represents the same benefits as FFS, access to the same or fewer providers as FFS, and more restrictions on the enrollees' care-seeking behavior. (On the surface PCCM poses the same primary care gatekeeper requirements as HMOs, but it is much easier under PCCM for patients to self-refer to other providers than is the case in the HMO setting.)

Limited Ability To Capture/Control Market Share. Given the above issues regarding provider and enrollee preferences, the HMOs are ill-positioned in a combination model environment to capture and control market share. For the HMO model to be most effective, it needs this leverage both in contracting with providers and in promoting cost-effective behavior within the contracted delivery system.

Selection Bias. The combination model setting also creates capitation rate-setting challenges, as strong potential exists for the HMO enrollee population to have different average health status than the FFS enrollees. Addressing the selection bias issues effectively is not a small challenge, and in many situations (e.g., the national Medicare+Choice program in the Medicare managed care arena) the selection bias has completely eliminated the intended program savings. Note that a July 2003 study "Access to and Quality of Care in the STAR Program: Waiver Report," prepared by Elizabeth Schenkman of the Institute for Child Health Policy found that the STAR PCCM program may attract a less healthy population than those enrolling in STAR HMOs. For example, 11% of PCCM enrollees were deemed to have "significant acute conditions" versus only 6% of HMO enrollees. In addition, 17% of PCCM enrollees were deemed to have chronic conditions versus 6% of HMO enrollees.

While Lewin is not recommending a change in approach for the existing SDAs, we believe that the HMO and PCCM models should not be used simultaneously for the same population under any expansion initiative. Where sufficient capitation contractors can be secured to provide for adequate enrollee choice and program stability[12], and where capitation is deemed to be the

[12] Two health plan options are minimally required by CMS to provide adequate enrollee choice, although some waivers have been obtained to utilize a single-contractor model in rural areas in other states. Many Medicaid agencies seek to contract with at least three health plans where possible, since having only two health plans gives each of those plans considerable leverage in their dealings with the state (e.g., if they drop out, they can force the state to discontinue mandatory enrollment into the capitated setting).

most cost-effective approach, making any form of FFS option available would not appear to be in the State's best financial interests. Where the capitated model is deemed to be most cost-effective, competition between capitated health plans is deemed to be more cost-effective than competition between some capitated plans and some FFS plans.

X. OTHER IMPENDING CHANGES TO THE TEXAS MEDICAID PROGRAM

The savings in this study were derived through a simulation against fiscal year 2002 cost levels and reflect the fee-for-service setting's costs at that point in time. In response to the current budget challenges Texas is facing, HHSC is in the process of implementing several initiatives that are expected to lower FFS cost levels, including across-the-board cuts in provider reimbursement, implementation of a preferred drug list (PDL), and implementation of a comprehensive disease management initiative. Texas is also instituting a premium tax on capitation payments, which will apply to HHSC payments to Medicaid health plans. A brief summary of the primary implications of these initiatives is provided below to put the savings estimates for this study in context.

A. Provider Reimbursement Cuts

The provider reimbursement cuts are not projected to meaningfully influence the annual savings levels of managed care, as the managed care savings factors developed herein are driven predominantly by savings through care coordination (as opposed to price discounts). Similarly, while changes in provider reimbursement may lead to short term distortions in capitation rates or the ability of the PCCM and health plans to negotiate hospital discounts, these impacts are likely to wash out relatively quickly over the course of a year or two and are not anticipated to affect the long term potential for savings of either model.

B. Preferred Drug List

HHSC estimates that implementation of the PDL will reduce pharmacy costs for all Medicaid beneficiaries by up to $150 million annually. At the same time, moving beneficiaries into managed care settings is anticipated to create some "spillover" savings in pharmacy costs even though pharmacy is carved out of the capitated program. These savings result simply from improved management of the patient's other health care services. Similar savings have been documented in the reduction of pharmacy costs for the SSI population enrolled in STAR+PLUS.

Of the $89 million total savings created by the extension of the STAR+PLUS model to existing SDAs, projected pharmacy savings were $20 million. Much of these savings could coincide with the savings that will occur under a PDL for the aged, blind and disabled population in the SDAs. Savings will occur under either initiative – but should not be "double-counted."

C. Disease Management

HHSC is currently in the midst of implementing a comprehensive disease management (DM) initiative for the fee-for-service program that is scheduled to begin in January 2004. State savings will be guaranteed by the DM vendor for up to 5 percent of baseline claim costs for enrolled beneficiaries. HHSC estimates that net savings from the DM fee-for-service initiative will range from $8.2 million to $25 million over three years.

As with managed care expansion, the vast majority of the projected disease management programs' savings will come from the blind/disabled population. Of the total estimated savings under the proposed expansion option, 95 percent, or approximately $3.6 million in annual savings, is anticipated to come from reducing the cost of care for the blind and disabled

– and could overlap with savings attributed to managed care expansion. HHSC also anticipates that disease management may save up to $0.2 million annually for the rural TANF population. However, to the extent that the rural TANF population is enrolled in a PCCM, DM is likely to achieve the same savings as it would in the FFS setting.

In addition, HHSC is required by law to implement disease management in STAR (for the PCCM and MCOs) and CHIP, by January 2004. These savings are anticipated to be in the range of $1 to $4 million annually; they are lower as this initiative will be directed primarily at TANF and related populations with fewer chronic diseases, and because some of the health plans have some form of disease management already under way.

To the extent that fewer beneficiaries are enrolled in fee-for-service and more are enrolled in the PCCM program as a result of managed care expansion, projected savings for the first, fee-for-service DM initiative will be lower while savings projected for the STAR/ PCCM initiative will be higher. However, overall the net level of savings attributed to the TANF and related populations is unlikely to change if both initiatives are assessed jointly.

D. Premium Taxes

A premium tax of 1.75 percent has been enacted, which will apply to all health insurance premiums (including capitation payments made by HHSC to STAR and STAR+PLUS health plans). The health plans participating in STAR and STAR+PLUS will be required to pay these taxes; however, the effect of these taxes has not been factored into Lewin's modeling.

XI. POSSIBLE MODIFICATIONS TO EXISTING MANAGED CARE MODELS

Our study of the Texas Medicaid program has identified several ways to strengthen the existing program. The current HMO model is less effective than in other states in containing costs for three primary reasons: prescription drug costs are carved out; high-risk, high-cost populations are excluded; and it competes with the PCCM. Other sections in this report address the second and third of these issues. A comprehensive assessment of the first is beyond the scope of this study, but is addressed briefly below. In addition, Lewin has been asked to conduct, as a separate study, a broad analysis of the Texas Medicaid program's pharmacy data to provide some insights into the potential impact of moving to a pharmacy carve-in model in the HMO program. The results of this analysis, as well as a discussion of the factors contributing to the cost differences between a carve-in and carve-out model, will be presented in a separate report.

In addition, this section briefly addresses a potential approach for strengthening the PCCM model: employing performance-based contracts with primary care providers. While this option may hold significant savings potential, the savings levels cannot be reliably estimated without further delineation of the design features and more extensive data analyses than are possible under the scope of this study. This opportunity is therefore described purely in a conceptual form.

A. Pharmacy Carve-In For HMO Model

Prescription drugs have always been "carved out" of the capitated Medicaid managed care programs in Texas. Lewin believes that inclusion of pharmacy in the capitated benefits package (when the capitated model is used) could well be the most cost-effective option available. Managed care organizations in other states often rely heavily on pharmacy data to better manage overall patient needs, thus it is quite possible that managing pharmacy can enable capitated health plans to better contain the costs of other services.[13]

Also, two recent Lewin studies indicate that PMPM pharmacy costs themselves are lower in the capitated setting – even after accounting for the larger rebates that are available only in the FFS Medicaid setting.[14,15] Capitated health plans appear to be managing the mix and volume of drugs more cost-effectively than is occurring in the Medicaid FFS environment. Finally, carve-outs create the potential for various parties to manage "their" health care cost components aggressively, but perhaps to the detriment of taking a global view as to what is the most cost-effective for each enrollee.

As stated above, outside the scope of this study HHSC has engaged Lewin to assess the cost impacts of a pharmacy "carve-in" for all capitated Medicaid managed care programs. It is

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[13] It is technologically possible for health plans to obtain and utilize the pharmacy data to better manage overall enrollee health needs. However, the carve-out model puts this data outside the normal flow of information that the Texas HMOs are accustomed to using. Health plans that are at-risk for prescription drugs tend to draw upon this information extensively.

[14] " Comparison of Medicaid Pharmacy Costs and Usage between the Fee-for-Service and Capitated Setting," The Lewin Group, January 2003.

[15] "Analysis of Pharmacy Carve-Out Option in Arizona," The Lewin Group (November 2003). Both these studies were funded by the Center for Healthcare Strategies and can be obtained at no charge online at www.chcs.org

expected that this follow-on study will demonstrate that additional savings are possible by including pharmacy as a capitated benefit.

B. Performance-Based PCCM Contracts With Primary Care Providers (PCPs)

A weakness of the PCCM program's design is that the PCPs receive a $3 case management fee regardless as to whether they are exceptionally conscientious, cost-effective care coordinators, or whether they make minimal effort to fulfill their obligations. A potential design modification that HHSC might wish to consider would involve seeking to motivate the participating PCPs to perform more cost-effectively, and reward them with a substantial share of the savings created if these efforts are successful.

One possibility would be a sliding scale case management fee, e.g., replacing the $3 payment with a payment that has a minimum of $2 for each PCP but which could be much higher (e.g., possibly even above $10 in some instances) based on the collective cost containment performance of the PCCM program and on the individual performance of the PCP. Shared savings targets/arrangements could be developed based on overall PMPM claims costs, on the volume and mix of prescription drugs, on inpatient admission rates, ER visit rates, or other cost, quality, and access measurement factors.

XII. SUMMARY OF FINDINGS

A. Overview of Cost Savings Opportunities

Significant cost savings opportunities of more than $145 million per year exist through expanding the role of managed care in the Texas Medicaid program. If some of these savings are used to finance an unlimited pharmacy benefit for all non-Medicare covered beneficiaries statewide[19], which is projected to create increased annual costs of $45.4 million, approximately $100 million in annual net savings can still be achieved if Medicaid managed care is fully and optimally implemented.

Many Texas Medicaid beneficiaries are served in the traditional, unmanaged FFS setting. Virtually all the Medicaid managed care models considered in this study – STAR+PLUS HMO, STAR HMO, PCCM, and EPO – hold the potential to achieve sizable savings against an unmanaged baseline.

The key savings opportunities are summarized in Table XII-1. The figures in Table XII-1 are "benefits neutral," meaning they do not include any costs for enhancing the pharmacy benefit in conjunction with managed care expansion. The net savings that would occur if the managed care initiatives are coupled with an unlimited pharmacy benefit are presented later in this section.

[19] This unlimited benefit regarding the number of covered prescriptions would be coupled with a maximum 34 days supply for any given prescription.

Table XII-1
Summary Of Annual Savings From Managed Care Expansion

	Existing SDAs	Outward Expansion of Existing SDAs	New SDAs	Remaining Rural Counties	Total
TANF-and TANF Related					
Alternative 1*	PCCM and HMO (No change)	PCCM	PCCM	None	
	$0	$1.5	$5.5	$0	$7.0
Alternative 2*	PCCM and HMO (No change)	HMO	HMO	PCCM	
	$0	$1.2	$4.5	($6.6)	($0.9)
SSI					
	STAR+PLUS	STAR+PLUS	STAR+PLUS	PCCM	
	$83.4	$5.0	$26.0	$15.5	$129.9
Aged and Other Medicare					
	STAR+PLUS	STAR+PLUS	STAR+PLUS	None	
	5.1	$0.4	$3.4	$0	$8.9
Total All Eligibility Categories					
Total (Alternative 1)	**$88.5**	**$6.9**	**$34.9**	**$15.5**	**$145.8**
Total (Alternative 2)	**$88.5**	**$6.6**	**$33.9**	**$8.9**	**$137.9**

No further savings assumed for populations where mandatory Medicaid managed care has already been implemented (e.g., through all existing SDAs for TANF, and Harris County for SSI Blind/Disabled).

* Cost savings for TANF may vary based on options chosen for SSI. Alternative 1 depicts the most cost-effective approach viewed in isolation, but Alternative 2 may be the most cost-effective overall, despite incremental costs shown above.

B. Discussion of Expansion Issues in Each Population Subgroup

1. SSI Population In Existing SDAs

This is the population where the largest savings opportunities are deemed to exist. If the STAR+PLUS model were implemented throughout the existing SDAs (a 51 county area), it is estimated that annual savings of $83 million would occur once this model is firmly established for the Medicaid-only population. While all managed care models could achieve large savings, the STAR+PLUS approach, which includes LTC services, is projected to far surpass the annual savings that could be achieved for the Blind and Disabled population by the STAR HMO model ($52 million), PCCM ($26 million) or the EPO model ($24 million). The STAR+PLUS model is the only model that is projected to produce savings through serving the dually eligible population $5.1 million.

2. SSI Population Outside Existing SDAs

Outside the existing SDAs, Lewin has identified several areas where the SSI population is projected to be most cost-effectively served through the STAR+PLUS model. Three potential expansion SDAs have been configured (in the Corpus Christi, Northeastern Texas, and Waco areas), in which STAR+PLUS is projected to generate $26 million in annual savings for SSI. These STAR+PLUS savings are roughly twice the projected savings that would occur for this population under any of the other managed care models. Similarly, Lewin has estimated that STAR+PLUS can yield an additional $5 million in annual savings by extending several existing SDAs further outward.

The STAR+PLUS model is not deemed to be the most cost-effective approach for the SSI population in Texas' most rural areas (the 150 county area that lies outside of both the existing and the expanded SDA configurations). In fact, the capitated models are projected to create net costs rather than savings in serving this market segment. In these areas, however, it is anticipated that the PCCM model can save $16 million annually, which is the most cost-effective option. The PCCM model is not projected to yield savings for the rural dual eligible population, largely because persons with Medicare coverage cannot be mandated to adhere to a primary care gatekeeper model. However, it may be useful programmatically to enroll the dual eligibles in PCCM (perhaps adjusting downward the $3 case management fee for this subgroup), to achieve some coordination of care and utilization management.

3. TANF Population In Existing SDAs

Lewin found that the STAR HMO and PCCM approaches will yield virtually identical PMPM costs for the TANF population in existing SDAs. There are two issues that could break this tie in the HMOs' favor, and one opportunity for enhanced PCCM savings, however. The first is the 1.75 percent premium tax that will be levied against the health plans. This will result in additional state revenues that cannot be captured via the PCCM model. Second, we expect that our pharmacy carve-in assessment will find that additional savings can be achieved in the capitated model by including pharmacy as a capitated service rather than a carve-out. In addition, we believe some enhancements could be made that would strengthen the cost-containment performance of the PCCM model, as described in Section XI.

4. TANF Population Outside Existing SDAs

In the most rural areas (e.g., the 150 county area outside all existing and potential expansion SDAs), none of the models are projected to yield meaningful savings. The capitated model (STAR HMO) is projected to yield large losses for this subgroup, and the PCCM model is projected to yield losses of a few million as well. However, if the PCCM model is going to be implemented in these rural areas for SSI, it makes programmatic sense to include the TANF and TANF related programs in the PCCM expansion initiative. There would be economies of scale regarding network development for the PCCM contractor, and additional administrative operating economies of scale for the contractor seem likely if both TANF and SSI beneficiaries are enrolled. In addition, the disease management initiatives might be more successful in these most rural areas under a primary care gatekeeper model than under a pure fee-for-service structure.

In the expanded SDAs (both the three new SDAs and in the extended SDA configurations), we are again uncertain as to which model will ultimately prove most cost-effective for the TANF population. Our modeling suggests that the PCCM model is slightly more cost-effective than the STAR HMO model. However, the most important savings opportunity in these markets lies in implementing STAR+PLUS for the SSI population, and using the STAR HMO model for TANF (in lieu of PCCM) may be a valuable means of achieving this larger fiscal objective. As a result, Table XII-1 illustrates savings associated with two potential alternatives for the TANF population. Alternative 1 is the most cost-effective viewing each population subgroup in isolation. Alternative 2, which would maintain the HMO model for TANF in urban areas and expand the PCCM for that population in rural areas, is shown as having a marginal cost; its reliance on the HMO model, however, may in fact lead to equal or greater cost-savings than those shown in Alternative 1 by maximizing scale economies and creating incentives for health plans to participate in the program.

C. Offsetting Costs of Unlimited Pharmacy Benefit

The costs of extending an unlimited prescription drug benefit statewide to the non-Medicare TANF and SSI populations are presented in Table XII-2. The savings estimated in the table assume that the increased benefit will be coupled with a maximum 34 day supply limit. As the table illustrates, the cost associated with providing this unlimited benefit statewide for the TANF and SSI blind and disabled (non-Medicare) population is $45.4 million annually, resulting in net annual managed care savings of $100.4 million.

It is important to note that the $45 million cost of the unlimited drug benefit is somewhat misleading, in that enrolling the expansion population into a capitated model will create significant spillover pharmacy savings. Of the $130.7 savings created by managed care expansion, $19.6 million is attributable to pharmacy spillover savings for the expansion enrollees. The actual cost of the unlimited drug benefit is therefore $25.8 million ($45.4 minus $19.6).

Table XII-2
Summary Of Annual Savings From Managed Care Expansion, Including Expanded (Unlimited) Rx Benefit
(all figures in $ millions, simulated against FY02 cost levels)

	Annual Managed Care Savings	Annual Costs Of Unlimited Rx Benefit Coupled With 34 Day Maximum Supply	Annual Managed Care Savings Net Of Expanded Pharmacy Coverage Costs
SSI Blind/Disabled			
Existing SDAs*	$83.4	$17.0	$66.4
Outward Expansion of Some Existing SDAs	$5.0	$1.9	$3.1
New SDAs	$26.0	$9.5	$16.5
Remaining Counties	$15.5	$12.0	$3.5
Subtotal, SSI Blind/Disabled	$129.9	$40.4	$89.5
Aged and Other Medicare			
Existing SDAs*	$5.1	na *	$5.1
Outward Expansion of Some Existing SDAs	$0.4	na *	$0.4
New SDAs	$3.4	na *	$3.4
Remaining Counties	$0.0	na *	$0.0
Subtotal, Aged and Other Medicare	$8.9	na *	$8.9
TANF and TANF-Related			
Existing SDAs*	$0.0	$0.0	$0.0
Outward Expansion of Some Existing SDAs	$1.5	$5.0	$2.0
New SDAs	$5.5		
Remaining Counties	$0.0		
Subtotal, TANF and TANF-Related	$7.0	$5.0	$2.0
Total, All Populations	$145.8	$45.4	$100.4

* Unlimited pharmacy benefit is assumed not to be extended to aged beneficiaries and other Medicaid beneficiaries who also receive Medicare coverage.

D. Other Issues

Other issues that are relevant to the managed care savings levels are briefly outlined below.

- **Cash Flow.** The cash flow impacts of expansion efforts that move a fee-for-service population into the capitated setting are adverse in the first year, due to the "speeding up" of HHSC payments under capitation. If payments are made in the same month as the coverage applies, the initial year's cash outlays will be 11% greater under capitation than under FFS (even though savings would occur on an incurred cost basis). Most of this adverse cash flow disappears if the capitation payments to the health plans are delayed by one month. Additional cash flow advantages can occur by also delaying existing HMO capitation payments (for TANF enrollees in the existing SDAs and for SSI enrollees in Harris County) by one month, by imposing a withhold on capitation payments, and/or by transitioning some existing TANF HMO enrollees into the PCCM model.

- **A Moving FFS Target.** The savings in this study were derived through a simulation against fiscal year 2002 cost levels and reflect the fee-for-service setting's costs at that point in time. In response to the current budget challenges Texas is facing, HHSC is in the process of implementing several initiatives that are expected to lower FFS cost levels, including across-the-board Medicaid fee cuts, implementation of a PDL, and implementation of an array of disease management programs. The fee cuts are not projected to meaningfully influence the annual savings levels of managed care, as the managed care savings factors developed herein are driven predominantly by savings through care coordination (as opposed to price discounts).

  Moving beneficiaries into managed care settings is anticipated to create some "spillover" savings in pharmacy costs even though pharmacy is carved out of the capitated model. The projected pharmacy savings created by the extension of the STAR+PLUS model to all SDAs is $19.6 million (of the $146 million in Table XII-1). Much of these savings could coincide with the savings that will occur under a PDL for the aged/blind/disabled population in the SDAs.

  Similarly, some of the savings that occur through managed care expansion could overlap with the roll-out of disease management. As with managed care expansion, the vast majority of the projected disease management programs' savings will come from the blind/disabled population. Of the estimated savings for disease management in the fee-for-service population ($8.2 to $25 million), approximately $5 to $8 million in annual savings could overlap with the savings achieved through expansion of managed care for the blind and disabled. While Lewin did not attempt to provide a detailed attribution of savings between these initiatives, it is important to acknowledge that some overlap exists and that the total Medicaid savings cannot be derived by simply adding each of the component initiatives together.

- **Redesigning existing Medicaid managed care models.** Lewin identified some possible mechanisms to strengthen the savings potential of both the capitated and the PCCM models. While such opportunities are of secondary value in terms of maximizing savings (versus implementing managed care in untapped market segments), HHSC may want to explore these opportunities at some future point in time.

Appendix A
Cost Factors

Appendix A-1
Managed Care Cost Factors, TANF and TANF-Related Population

STAR HMO Model

SDA	HMO STAR Inp. Hospital Medical Factor	HMO STAR Out. Hospital Medical Factor	HMO STAR Professional Medical Factor	HMO STAR Other Medical Factor	HMO STAR Pharmacy Medical Factor
Bexar	0.875	0.850	1.100	0.800	0.800
Dallas	0.800	0.900	1.100	0.850	0.800
El Paso	0.850	0.900	1.100	0.900	0.800
Harris	0.800	0.850	1.100	0.825	0.800
Harris Contiguous	0.800	0.850	1.100	0.750	0.800
Lubbock	0.875	0.875	1.100	0.800	0.800
SE Region	0.850	0.875	1.100	0.825	0.800
Tarrant	0.800	0.875	1.100	0.825	0.800
Travis	0.850	0.850	1.100	0.775	0.800
Non-SDA	0.950	0.900	1.100	0.950	0.900

PCCM Model

SDA	PCCM Inp. Hospital Medical Factor	PCCM Out. Hospital Medical Factor	PCCM Professional Medical Factor	PCCM Other Medical Factor	PCCM Pharmacy Medical Factor
Bexar	0.938	0.925	1.050	0.900	1.000
Dallas	0.900	0.950	1.050	0.925	1.000
El Paso	0.925	0.950	1.050	0.950	1.000
Harris	0.900	0.925	1.050	0.913	1.000
Harris Contiguous	0.900	0.925	1.050	0.875	1.000
Lubbock	0.938	0.938	1.050	0.900	1.000
SE Region	0.925	0.938	1.050	0.913	1.000
Tarrant	0.900	0.938	1.050	0.913	1.000
Travis	0.925	0.925	1.050	0.888	1.000
Non-SDA	0.950	0.900	1.100	0.950	1.000

EPO Model

SDA	EPO Inp. Hospital Medical Factor	EPO Out. Hospital Medical Factor	EPO Professional Medical Factor	EPO Other Medical Factor	EPO Pharmacy Medical Factor
Bexar	0.958	0.945	1.030	0.880	1.000
Dallas	0.920	0.970	1.030	0.905	1.000
El Paso	0.945	0.970	1.030	0.930	1.000
Harris	0.920	0.945	1.030	0.893	1.000
Harris Contiguous	0.920	0.945	1.030	0.855	1.000
Lubbock	0.958	0.958	1.030	0.880	1.000
SE Region	0.945	0.958	1.030	0.893	1.000
Tarrant	0.920	0.958	1.030	0.893	1.000
Travis	0.945	0.945	1.030	0.868	1.000
Non-SDA	0.970	0.920	1.080	0.930	1.000

Appendix A-2

Managed Care Cost Factors, SSI Blind and Disabled (Non-Medicare) Population

STAR+PLUS HMO Model

SDA	STAR+PLUS Inp. Hospital Medical Factor	STAR+PLUS Out. Hospital Medical Factor	STAR+PLUS Professional Medical Factor	STAR+PLUS Other Medical Factor	STAR+PLUS Pharmacy Medical Factor	STAR+PLUS Nursing Home Medical Factor	STAR+PLUS Other LTC Medical Factor
Bexar	0.700	0.865	1.100	0.790	0.850	0.950	0.900
Dallas	0.700	0.915	1.100	0.840	0.850	0.950	0.900
El Paso	0.700	0.815	1.100	0.840	0.850	0.950	0.900
Harris	0.700	0.915	1.100	0.840	0.850	0.950	0.900
Harris Contiguous	0.700	0.840	1.100	0.790	0.850	0.950	0.900
Lubbock	0.700	0.815	1.100	0.865	0.850	0.950	0.900
SE Region	0.700	0.815	1.100	0.840	0.850	0.950	0.900
Tarrant	0.700	0.840	1.100	0.840	0.850	0.950	0.900
Travis	0.700	0.840	1.100	0.840	0.850	0.950	0.900
Non-SDA	0.900	0.890	1.100	0.890	0.925	0.975	0.900

STAR HMO Model

SDA	HMO STAR Inp. Hospital Medical Factor	HMO STAR Out. Hospital Medical Factor	HMO STAR Professional Medical Factor	HMO STAR Other Medical Factor	HMO STAR Pharmacy Medical Factor	HMO STAR Nursing Home Medical Factor	HMO STAR Other LTC Medical Factor
Bexar	0.725	0.875	1.100	0.800	0.850	1.000	1.000
Dallas	0.725	0.925	1.100	0.850	0.850	1.000	1.000
El Paso	0.725	0.825	1.100	0.850	0.850	1.000	1.000
Harris	0.725	0.925	1.100	0.850	0.850	1.000	1.000
Harris Contiguous	0.725	0.850	1.100	0.800	0.850	1.000	1.000
Lubbock	0.725	0.825	1.100	0.875	0.850	1.000	1.000
SE Region	0.725	0.825	1.100	0.850	0.850	1.000	1.000
Tarrant	0.725	0.850	1.100	0.850	0.850	1.000	1.000
Travis	0.725	0.850	1.100	0.850	0.850	1.000	1.000
Non-SDA	0.925	0.900	1.100	0.900	0.925	1.000	1.000

PCCM Model

SDA	PCCM Inp. Hospital Medical Factor	PCCM Out. Hospital Medical Factor	PCCM Professional Medical Factor	PCCM Other Medical Factor	PCCM Pharmacy Medical Factor	PCCM Nursing Home Medical Factor	PCCM Other LTC Medical Factor
Bexar	0.908	0.958	1.033	0.933	1.000	1.000	1.000
Dallas	0.908	0.975	1.033	0.950	1.000	1.000	1.000
El Paso	0.908	0.942	1.033	0.950	1.000	1.000	1.000
Harris	0.908	0.975	1.033	0.950	1.000	1.000	1.000
Harris Contiguous	0.908	0.950	1.033	0.933	1.000	1.000	1.000
Lubbock	0.908	0.942	1.033	0.958	1.000	1.000	1.000
SE Region	0.908	0.942	1.033	0.950	1.000	1.000	1.000
Tarrant	0.908	0.950	1.033	0.950	1.000	1.000	1.000
Travis	0.908	0.950	1.033	0.950	1.000	1.000	1.000
Non-SDA	0.925	0.900	1.100	0.900	1.000	1.000	1.000

EPO Model

SDA	EPO Inp. Hospital Medical Factor	EPO Out. Hospital Medical Factor	EPO Professional Medical Factor	EPO Other Medical Factor	EPO Pharmacy Medical Factor	EPO Nursing Home Medical Factor	EPO Other LTC Medical Factor
Bexar	0.928	0.978	1.013	0.913	1.000	1.000	1.000
Dallas	0.928	0.995	1.013	0.930	1.000	1.000	1.000
El Paso	0.928	0.962	1.013	0.930	1.000	1.000	1.000
Harris	0.928	0.995	1.013	0.930	1.000	1.000	1.000
Harris Contiguous	0.928	0.970	1.013	0.913	1.000	1.000	1.000
Lubbock	0.928	0.962	1.013	0.938	1.000	1.000	1.000
SE Region	0.928	0.962	1.013	0.930	1.000	1.000	1.000
Tarrant	0.928	0.970	1.013	0.930	1.000	1.000	1.000
Travis	0.928	0.970	1.013	0.930	1.000	1.000	1.000
Non-SDA	0.945	0.920	1.080	0.880	1.000	1.000	1.000

Appendix A-3

Managed Care Cost Factors, Aged and Dual Eligible Population

STAR+PLUS HMO Model

SDA	STAR+PLUS Inp. Hospital Medical Factor	STAR+PLUS Out. Hospital Medical Factor	STAR+PLUS Professional Medical Factor	STAR+PLUS Other Medical Factor	STAR+PLUS Pharmacy Medical Factor	STAR+PLUS Nursing Home Medical Factor	STAR+PLUS Other LTC Medical Factor
Bexar	0.850	0.933	1.050	0.895	1.000	0.950	0.900
Dallas	0.850	0.958	1.050	0.920	1.000	0.950	0.900
El Paso	0.850	0.908	1.050	0.920	1.000	0.950	0.900
Harris	0.850	0.958	1.050	0.920	1.000	0.950	0.900
Harris Contiguous	0.850	0.920	1.050	0.895	1.000	0.950	0.900
Lubbock	0.850	0.908	1.050	0.933	1.000	0.950	0.900
SE Region	0.850	0.908	1.050	0.920	1.000	0.950	0.900
Tarrant	0.850	0.920	1.050	0.920	1.000	0.950	0.900
Travis	0.850	0.920	1.050	0.920	1.000	0.950	0.900
Non-SDA	0.950	0.945	1.050	0.945	1.000	0.975	0.900

STAR HMO Model

SDA	HMO STAR Inp. Hospital Medical Factor	HMO STAR Out. Hospital Medical Factor	HMO STAR Professional Medical Factor	HMO STAR Other Medical Factor	HMO STAR Pharmacy Medical Factor	HMO STAR Nursing Home Medical Factor	HMO STAR Other LTC Medical Factor
Bexar	0.863	0.938	1.050	0.900	1.000	1.000	1.000
Dallas	0.863	0.963	1.050	0.925	1.000	1.000	1.000
El Paso	0.863	0.913	1.050	0.925	1.000	1.000	1.000
Harris	0.863	0.963	1.050	0.925	1.000	1.000	1.000
Harris Contiguous	0.863	0.925	1.050	0.900	1.000	1.000	1.000
Lubbock	0.863	0.913	1.050	0.938	1.000	1.000	1.000
SE Region	0.863	0.913	1.050	0.925	1.000	1.000	1.000
Tarrant	0.863	0.925	1.050	0.925	1.000	1.000	1.000
Travis	0.863	0.925	1.050	0.925	1.000	1.000	1.000
Non-SDA	0.963	0.950	1.050	0.950	1.000	1.000	1.000

PCCM Model

SDA	PCCM Inp. Hospital Medical Factor	PCCM Out. Hospital Medical Factor	PCCM Professional Medical Factor	PCCM Other Medical Factor	PCCM Pharmacy Medical Factor	PCCM Nursing Home Medical Factor	PCCM Other LTC Medical Factor
Bexar	0.954	0.979	1.017	0.967	1.000	1.000	1.000
Dallas	0.954	0.988	1.017	0.975	1.000	1.000	1.000
El Paso	0.954	0.971	1.017	0.975	1.000	1.000	1.000
Harris	0.954	0.988	1.017	0.975	1.000	1.000	1.000
Harris Contiguous	0.954	0.975	1.017	0.967	1.000	1.000	1.000
Lubbock	0.954	0.971	1.017	0.979	1.000	1.000	1.000
SE Region	0.954	0.971	1.017	0.975	1.000	1.000	1.000
Tarrant	0.954	0.975	1.017	0.975	1.000	1.000	1.000
Travis	0.954	0.975	1.017	0.975	1.000	1.000	1.000
Non-SDA	0.963	0.950	1.050	0.950	1.000	1.000	1.000

EPO Model

SDA	EPO Inp. Hospital Medical Factor	EPO Out. Hospital Medical Factor	EPO Professional Medical Factor	EPO Other Medical Factor	EPO Pharmacy Medical Factor	EPO Nursing Home Medical Factor	EPO Other LTC Medical Factor
Bexar	0.964	0.989	1.007	0.957	1.000	1.000	1.000
Dallas	0.964	0.998	1.007	0.965	1.000	1.000	1.000
El Paso	0.964	0.981	1.007	0.965	1.000	1.000	1.000
Harris	0.964	0.998	1.007	0.965	1.000	1.000	1.000
Harris Contiguous	0.964	0.985	1.007	0.957	1.000	1.000	1.000
Lubbock	0.964	0.981	1.007	0.969	1.000	1.000	1.000
SE Region	0.964	0.981	1.007	0.965	1.000	1.000	1.000
Tarrant	0.964	0.985	1.007	0.965	1.000	1.000	1.000
Travis	0.964	0.985	1.007	0.965	1.000	1.000	1.000
Non-SDA	0.973	0.960	1.040	0.940	1.000	1.000	1.000

Appendix B

Development of Administrative Cost PMPMs

ADMINISTRATIVE COST MODELING APPENDIX

Estimating the administrative costs to the State for operating a Medicaid program is an unavoidably inexact process. It is often difficult to discern which costs are associated with which programs and populations, as well as which costs would exist regardless of program design and which are as a direct result of changes to the program (e.g., implementing managed care). In addition, Texas has recently made significant changes in its contracting that will be implemented throughout the coming years. This makes determining the administrative cost efficiencies associated with managed care difficult to tease out from efficiencies gained by new contracting mechanisms.

The State has many large contracts with several vendors for services such as claims processing, care management (i.e., the PCCM contractor) and studies of the managed care program. The State also directly employs several case managers, whose positions are anticipated to be eliminated as a result of managed care expansion. The State provided Lewin with information on the costs of these contracts and state positions and projected future costs associated with them. Lewin used these data to develop PMPM estimates of the administrative costs associated with each program by each applicable risk group through a two part process. First, Lewin developed FY02 administrative costs based on the contracts in place at that time. We then used these data to adjust future administrative cost amounts to reflect the new contracting structure, had it been in place during the FY02 base period. The following section describes Lewin's development of the PMPM costs to the State.

FY02 Estimates

Claims and Encounter Data Processing and Administering the PCCM Program

Lewin began to evaluate the costs to the State for claims and encounter data processing, as well as the administration of the PCCM program, by reviewing data from the same base period as the medical costs, FY02. During that time, NHIC was the claims and encounter data processor, while Birch & Davis was the administrator of the PCCM program. While those contracts have since been consolidated into a single contract with ACS, Lewin established this baseline to develop a relationship between the relative costs of processing claims and encounters and administering the PCCM program going forward.

NHIC

In FY02, NHIC was responsible for processing claims for the FFS and PCCM programs and processing encounters for the STAR HMO and STAR+PLUS programs. NHIC was paid a fixed amount of $75,600,662 for processing claims and encounters for Medicaid (Title XIX) programs. In addition to the fixed fee, NHIC was paid $0.54 per claims processed and $0.17 per encounter processed. According to data from HHSC, NHIC processed 30,386,772 claims for the FFS and PCCM programs and 2,459,504 encounters for the STAR HMO and STAR+PLUS program.

To allocate the fixed costs, Lewin calculated the member month (MM) distribution across risk groups and programs and apportioned the total fixed costs to each risk group/program combination. Tables A and B below show the MM distribution as well as the proportion of the fixed costs associated with each program.

Table A
FY02 Member Month Distribution

Population	FFS MMs	STAR+PLUS MMs	STAR HMO MMs	PCCM MMs	Total
Blind & Disabled	1,943,713	354,821	171,548	120,849	2,590,931
Aged	3,416,647	328,208			3,744,855
TANF & TANF-Related	10,418,491		5,281,321	2,811,633	18,511,445
Total	15,778,851	683,029	5,452,869	2,932,482	24,847,231

Table B
Redistribution of FY02 NHIC Fixed Costs based on FY02 MMs

Population	FFS	STAR+PLUS	STAR HMO	PCCM	Total
Blind &Disabled	$ 5,913,978	$ 1,079,585	$ 521,955	$ 367,697	$ 7,883,216
Aged	$10,395,556	$ 998,612	N/A	N/A	$11,394,168
TANF & TANF-Related	$31,699,501	N/A	$16,069,049	$ 8,554,729	$56,323,278
Total	$48,009,035	$ 2,078,197	$16,591,004	$ 8,922,426	$75,600,662

The next step in analyzing the NHIC costs was to attribute the costs of processing claims and encounters. HHSC staff provided Lewin with the total number of claims and encounters; however, they were not attributable to any specific risk group or program. To allocate the claims and encounters, HHSC provided the distribution of FFS claims across risk groups. The following table outlines the percentage of the population and the percentage of claims associated with each group.

Table C
FY02 FFS Member Months and Claims

	Percentage of MMs	Percentage of Claims
Blind & Disabled	12.3%	27.7%
Aged	21.7%	29.6%
TANF & Related	66.0%	42.8%
Total	100.0%	100.0%

Using this distribution, Lewin allocated the 30,386,772 FFS and PCCM claims. (Please note, it was assumed that the relationship between the number of claims and risk groups held across the FFS and PCCM programs.) Table D shows the distribution of claims among the risk groups.

Table D
Number of FFS and PCCM Claims by Risk Group

Population	FFS Claims	PCCM Claims	Total
Blind &Disabled	7,427,365	461,791	7,889,156
Aged	7,930,311	0	7,930,311
TANF & TANF-Related	11,471,497	3,095,807	14,567,305
Total	26,829,173	3,557,599	30,386,772

To calculate the total dollars associated with these claims by risk group, Lewin multiplied the number of claims in each cell by the $0.54 per claim cost. The results are shown in Table E.

Table E
Cost of Processing FFS and PCCM Claims by Risk Group

Population	FFS Claims	PCCM Claims	Total
Blind & Disabled	$ 4,010,777	$ 249,367	$ 4,260,144
Aged	$ 4,282,368	$ -	$ 4,282,368
TANF & TANF-Related	$ 6,194,609	$ 1,671,736	$ 7,866,345
Total	$14,487,754	$ 1,921,103	$16,408,857

In addition to processing claims, NHIC also processed encounters generated by the HMOs in the STAR HMO and STAR+PLUS programs. Using the same approach to redistributing the claims across risk groups and programs, Lewin allocated the number of encounters (Table F). Lewin then multiplied the number of encounters by the $0.17 per encounter charge to generate the total costs associated with processing encounters (Table G).

Table F
Number of HMO Encounters by Risk Group

Population	STAR+PLUS	STAR HMO	Total
Blind & Disabled	388,287	187,728	576,016
Aged	218,163	0	218,163
TANF & TANF-Related	0	1,665,326	1,665,326
Total	606,450	1,853,054	2,459,504

Table G
Cost of Processing HMO Encounters by Risk Group

Population	STAR+PLUS	STAR HMO	Total
Blind & Disabled	$ 66,009	$ 31,914	$ 97,923
Aged	$ 37,088	N/A	$ 37,088
TANF & TANF-Related	N/A	$ 283,105	$ 283,105
Total	$ 103,097	$ 315,019	$ 418,116

Birch & Davis

HHSC provided Lewin with the total amount paid to Birch & Davis for the administration of the PCCM program. In FY02, Birch and Davis received $22,317,372 for its services. These costs are 100 percent attributable to the PCCM program; however, the PCCM program serves two risk groups: Blind and Disabled and TANF and TANF-Related. Therefore, Lewin redistributed the Birch & Davis fees across the two risk groups, based on the number of MMs in each group. Table H shows the amount associated with each risk group for the PCCM program.

Table H
Distribution of Birch & Davis Costs for the PCCM Program

Population	PCCM MMs	PCCM Costs
Blind & Disabled	120,849	$ 919,710
TANF & Related	2,811,633	$21,397,662
Total	2,932,482	$22,317,372

Enrollment Broker Services

MAXIMUS is Texas Medicaid's enrollment broker and assists eligible Medicaid consumers in enrolling in a health plan or the PCCM program. Because this cost is associated only with the managed care programs, Lewin distributed the $16,747,449 paid to MAXIMUS in FY02 based on the number of members months in each risk group and each managed care program. Table I displays the percentage of managed care MMs in each risk group, while Table J displays the allocation of MAXIMUS' fees based on the MM distribution.

Table I
Percentage of Managed Care MMs by Risk Group and Managed Care Program

Population	STAR+PLUS	STAR HMO	PCCM	Total
B&D	3.9%	1.9%	1.3%	7.1%
Aged	3.6%	0.0%	0.0%	3.6%
TANF & TANF-Related	0.0%	58.2%	31.0%	89.2%
Total	7.5%	60.1%	32.3%	100.0%

Table J
Distribution of MAXIMUS Fees by Risk Group and Managed Care Program

Population	STAR+PLUS	STAR HMO	PCCM	Total
Blind & Disabled	$ 655,282	$ 316,814	$ 223,183	$ 1,195,280
Aged	$ 606,133	N/A	N/A	$ 606,133
TANF & TANF-Related	N/A	$ 9,753,523	$ 5,192,513	$14,946,036
Total	$ 1,261,415	$10,070,337	$ 5,415,696	$16,747,449

External Quality Review Organization (EQRO) Services

HHSC has contracted with the Institute of Child Health Policy (ICHP) to perform quality and access assessments of the managed care programs, STAR+PLUS, STAR (HMO and PCCM). According to HHSC staff, the cost of these services is approximately $1.5 million per year. Twenty percent of that $1.5 million (or $0.3 million) is allocated to the STAR+PLUS program while the remaining $1.2 million is associated with the STAR program. (The total cost of this contract is expected to decrease to approximately $1.4 million in FY05; however, for the purposes of this analysis Lewin used the $1.5 million amount.)

Lewin reallocated the cost of EQRO services based on the membership in each risk group by program. The $0.3 million associated with STAR+PLUS was allocated across the Blind and Disabled and Aged risk groups, as displayed in Table K below.

Table K
Distribution of ICHP Fees by Risk Group for STAR+PLUS

Population	STAR+PLUS MMs	STAR+PLUS Costs
Blind & Disabled	354,821	$ 155,844
Aged	328,208	$ 144,156
Total	683,029	$ 300,000

The $1.2 million associated with the STAR HMO and PCCM program was allocated in the same manner, as seen in Table L, below.

Table L
Distribution of ICHP Fees by Risk Group for STAR

Population	STAR MMs	STAR Costs
Blind & Disabled	354,821	$ 155,844
Aged	328,208	$ 144,156
Total	683,029	$ 300,000

Other State Administrative Costs

In addition to the fees paid to contractors to administer the Medicaid program, the State has internal staff to monitor the contractors' work. In conversations with HHSC staff, Lewin learned that approximately 8 FTEs monitor the contracts of the vendors described above. HHSC staff estimated that each FTE generated approximately $50,000 in administrative costs, for a total of $400,000. To allocate these costs across programs and across risk groups, Lewin divided the $400,000 equally among the risk groups and programs they serve.

Table M
Distribution of State Funds for Contract Management

Contract Management	FFS	STAR+PLUS	STAR HMO	PCCM	Total
NHIC	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 100,000
Birch and Davis				$ 100,000	$ 100,000
MAXIMUS		$ 33,333	$ 33,333	$ 33,333	$ 100,000
ICHIP		$ 33,333	$ 33,333	$ 33,333	$ 100,000
Total	$ 25,000	$ 91,667	$ 91,667	$ 191,667	$ 400,000

Finally, the State incurs costs for internal case management staff that coordinates care for the Aged, Blind and Disabled populations. As mentioned earlier, HHSC anticipates that 380 of these positions would be eliminated with the expansion of the STAR+PLUS program. HHSC estimates the cost of these positions to be approximately $14.8 million. To allocate these costs, we apportioned them by population and expenditures. Table N, below, illustrates these costs by risk group and delivery model.

Table N
Distribution of State Funded Case Management Positions

Risk Group	FFS	STAR+PLUS	STAR HMO	PCCM	Total
Blind and Disabled	$ 5,400,513		$ 769,159	$ 541,843	$ 6,711,516
Aged	$ 8,041,778				$ 8,041,778
Total	$ 13,442,290		$ 769,159	$ 541,843	$ 14,753,293

Summary of Administrative Costs for FY02

To develop overall administrative costs to the State by risk group and by program, Lewin added all of the redistributed costs. Lewin then divided by total MMs to arrive at a PMPM administrative cost for each program and risk group. Table O shows the results of our FY02 analysis.

Table O
Summary of FY02 PMPM Administrative Costs

Population	FFS	STAR+PLUS	STAR HMO	PCCM
Blind & Disabled	$ 9.59	$ 5.65	$ 9.72	$19.25
Aged	$ 8.24	$ 5.58	N/A	N/A
TANF & Related	$ 3.64	N/A	$ 5.10	$13.30

Future Administrative Cost Estimates

As mentioned earlier, HHSC has negotiated a new contract with ACS to provide the services previously provided by both NHIC and Birch & Davis. Therefore, the FY02 administrative cost estimates above may not accurately reflect the future administrative costs to the FFS and managed care programs. Using the analysis above and information on the new ACS contract, Lewin developed administrative cost estimates for future years of the Medicaid program.

Claims and Encounter Data Processing and Administering the PCCM Program

ACS's contract with HHSC is similar to the former NHIC contract in that there is a fixed and variable component to the fees. The fixed portion covers both the fixed costs of processing claims and encounters, as well as the costs of administering the PCCM program. The structure of the variable cost contract has changed between the NHIC contract and the ACS contract. Rather than paying ACS on a per claim basis, ACS is reimbursed on a PMPM basis -- regardless of how many claims an individual generates in a month. The structure of the encounter reimbursement is the same as under the NHIC contract; however the amount of the per encounter cost has changed from $0.17 per encounter to less than $0.02 per encounter.

Fixed Fees

Because the fixed fee paid to ACS must cover both the fixed costs of processing claims and the administration of the PCCM program, Lewin needed to redistribute these costs to correctly reflect the amount of the fixed costs associated with each program. Lewin developed a ratio of NHIC fixed costs and Birch & Davis costs from FY02 and used this ratio to apportion the expected fixed costs for ACS in FY05 (the first year that ACS would be the exclusive contractor for these services) accordingly. The following table displays the amount of the ACS fixed costs associated with claims and encounter processing versus PCCM administration.

Table P
Distribution of ACS Fixed Costs Under New Contract

ACS Responsibility	Percentage of Fixed Costs	Amount of Fixed Costs
Claims/Encounter Processing	77.2%	$ 54,238,141
PCCM Administration	22.8%	$ 16,011,140
Total	100.0%	$ 70,249,281

As with the NHIC and Birch & Davis costs, Lewin distributed these costs by program and risk group. The costs associated with the claims and encounter processing were distributed evenly based on the MM distribution in FY02. The PCCM costs were attributed solely to those participating in the PCCM, using MMs to apportion the costs between the Blind and Disabled and TANF and TANF-Related.

Variable Fees

Rather than pay on a per claims basis, the ACS contract requires PMPM reimbursement for claims processing. However, in determining the costs associated with each program and risk group, a PMPM amount does not reflect the true *costs*, as different beneficiaries will generate different administrative efforts on the part of the contactor (e.g., an average Blind & Disabled beneficiary is more likely to generate a greater number of claims than an average TANF beneficiary). However, the PMPM charge multiplied by the total number of MMs does equate to the total amount *spent* by the State. Therefore, Lewin generated an estimate of the cost of processing claims that was specific to the population served. Lewin first calculated a total amount that would have been spent in FY02 (if this contract had been in place during that time) by multiplying the total FY02 FFS and PCCM claims by the PMPM amount of $0.4318 to arrive at a total claims processing cost of $8,079,554. Lewin then redistributed this amount based on the distribution of FFS claims among risk groups and programs, as described in the earlier section. The results of our calculation are displayed in Table Q.

Table Q
Redistribution of Variable Fees Associated with Claims Processing

Population	FFS Claims	PCCM Claims	Total
Blind & Disabled	$ 1,974,866	$ 122,786	$ 2,097,652
Aged	$ 2,108,594	N/A	$ 2,108,594
TANF & Related	$ 3,050,162	$ 823,146	$ 3,873,308
Total	$ 7,133,622	$ 945,932	$ 8,079,554

The structure of the reimbursement for encounters has not changed from the NHIC to the ACS contract; the amount of the per encounter reimbursement, however, has decreased from $0.17 to less than $0.02 per encounter. Because the structure of reimbursement has not changed, Lewin used the same methodology described in the FY02 section to distribute the total costs associated with processing encounters. The following table outlines the costs associated with processing these encounters on a FY02 basis.

Table R
Distribution of Variable Costs Associated with Processing Encounters

Population	STAR+PLUS	STAR	Total
Blind & Disabled	$7,649	$3,698	$ 11,348
Aged	$4,298	N/A	N/A
TANF & Related	N/A	$ 32,807	$ 32,807
Total	$ 11,947	$ 36,505	$ 48,452

Other Administrative Costs

Because the other vendor contracts were not anticipated to change significantly going forward, Lewin used the same cost assumptions for MAXIMUS and ICHP as described in the previous section. Additionally, Lewin assumed that the State's contract management costs would not change as a result of the ACS contract. Therefore, Lewin continued to estimate $400,000 in State contract management costs; however, four of the FTEs were assumed to monitor the ACS contract, while two FTEs continued to monitor each of the MAXIMUS and ICHP contracts. Finally, Lewin also assumed no change in the costs of case management staff positions.

Summary of Future Administrative Costs on a FY02 Basis

To develop overall administrative costs to the State by risk group and by program, Lewin added all of the redistributed costs. Lewin then divided by total MMs to arrive at a PMPM administrative cost for each program and risk group. Table S shows the results of this analysis.

Table S
Summary of PMPM Administrative Costs[20]

Population	FFS	STAR+PLUS	STAR HMO	PCCM
Blind & Disabled	$ 7.68	$ 4.62	$ 8.69	$ 15.20
Aged	$ 6.74	$ 4.62	N/A	N/A
TANF & Related	$ 2.48	N/A	$ 4.20	$ 9.99

[20] Please note that the additional administrative costs for the State's case management staff were not included for Harris County and the areas outside of the expanded SDAs.

Appendix C
PMPM Modeling Results

Appendix C-1

Cost Modeling PMPM Costs, Year 5
TANF and TANF-Related Population

Base Medical PMPM Costs

SDA	Member Months	FFS Baseline	STAR HMO Model	PCCM Model	EPO Model
Bexar	1,656,138	$165.83	$142.24	$156.18	$156.92
Dallas	1,932,925	$188.95	$159.32	$176.00	$177.55
El Paso	1,138,045	$144.95	$126.13	$137.68	$138.91
Harris	2,668,622	$202.93	$167.87	$187.47	$189.18
Harris Contiguous	620,882	$223.21	$184.96	$206.35	$207.33
Lubbock	401,848	$169.67	$148.31	$161.09	$161.59
SE Region	450,995	$180.00	$155.26	$170.43	$171.33
Tarrant	1,172,693	$208.69	$175.73	$194.08	$195.55
Travis	698,766	$177.75	$150.70	$165.86	$166.60
Non-SDA	7,770,531	$172.80	$163.81	$166.53	$167.12
Grand Total	18,511,445	$180.75	$160.11	$170.87	$171.85

Administrative PMPM Costs

SDA	Member Months	FFS Baseline	STAR HMO Model	PCCM Model	EPO Model
Bexar	1,656,138	$2.48	$21.14	$9.99	$9.99
Dallas	1,932,925	$2.48	$24.17	$9.99	$9.99
El Paso	1,138,045	$2.48	$18.69	$9.99	$9.99
Harris	2,668,622	$2.48	$25.57	$9.99	$9.99
Harris Contiguous	620,882	$2.48	$27.73	$9.99	$9.99
Lubbock	401,848	$2.48	$21.64	$9.99	$9.99
SE Region	450,995	$2.48	$22.02	$9.99	$9.99
Tarrant	1,172,693	$2.48	$26.49	$9.99	$9.99
Travis	698,766	$2.48	$23.14	$9.99	$9.99
Non-SDA	7,770,531	$2.48	$21.28	$9.99	$9.99
Grand Total	18,511,445	$2.48	$22.67	$9.99	$9.99

Profit Allocation PMPM Costs

SDA	Member Months	FFS Baseline	STAR HMO Model	PCCM Model	EPO Model
Bexar	1,656,138	$0.00	$2.95	$0.00	$0.00
Dallas	1,932,925	$0.00	$3.47	$0.00	$0.00
El Paso	1,138,045	$0.00	$2.52	$0.00	$0.00
Harris	2,668,622	$0.00	$3.72	$0.00	$0.00
Harris Contiguous	620,882	$0.00	$4.09	$0.00	$0.00
Lubbock	401,848	$0.00	$3.03	$0.00	$0.00
SE Region	450,995	$0.00	$3.10	$0.00	$0.00
Tarrant	1,172,693	$0.00	$3.88	$0.00	$0.00
Travis	698,766	$0.00	$3.29	$0.00	$0.00
Non-SDA	7,770,531	$0.00	$2.97	$0.00	$0.00
Grand Total	18,511,445	$0.00	$3.21	$0.00	$0.00

Total Cost PMPM

SDA	Member Months	FFS Baseline	STAR HMO Model	PCCM Model	EPO Model
Bexar	1,656,138	$168.31	$166.32	$166.17	$166.91
Dallas	1,932,925	$191.42	$186.96	$185.99	$187.54
El Paso	1,138,045	$147.43	$147.34	$147.67	$148.90
Harris	2,668,622	$205.40	$197.16	$197.46	$199.17
Harris Contiguous	620,882	$225.69	$216.78	$216.34	$217.32
Lubbock	401,848	$172.15	$172.99	$171.08	$171.58
SE Region	450,995	$182.48	$180.38	$180.43	$181.32
Tarrant	1,172,693	$211.17	$206.10	$204.07	$205.54
Travis	698,766	$180.23	$177.13	$175.85	$176.59
Non-SDA	7,770,531	$175.28	$188.07	$176.52	$177.11
Grand Total	18,511,445	$183.23	$185.99	$180.86	$181.85
SDA Subtotal	10,740,914	$188.98	$184.49	$184.00	$185.27

Appendix C-2

Cost Modeling PMPM Costs, Year 5
SSI Blind and Disabled (Non-Medicare) Population

Base Medical PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Bexar	263,236	$829.63	$693.00	$712.81	$797.16	$798.20
Dallas	296,085	$756.79	$644.40	$661.08	$731.04	$732.47
El Paso	98,880	$775.22	$645.05	$660.32	$744.48	$746.67
Harris	427,045	$797.98	$660.52	$679.67	$764.02	$767.49
Harris Contiguous	100,037	$910.37	$752.52	$771.58	$870.15	$872.69
Lubbock	46,829	$886.37	$759.04	$779.32	$858.63	$861.03
SE Region	84,864	$865.47	$732.09	$753.83	$834.54	$837.27
Tarrant	166,416	$909.81	$777.90	$799.13	$880.77	$882.90
Travis	97,761	$844.20	$723.55	$742.96	$818.78	$820.05
Non-SDA	1,009,778	$990.73	$922.89	$944.22	$957.16	$958.66
Grand Total	2,590,931	$887.82	$781.24	$801.12	$855.83	$857.75

Administrative PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Bexar	263,236	$7.68	$54.84	$63.13	$15.20	$15.20
Dallas	296,085	$7.68	$49.17	$59.10	$15.20	$15.20
El Paso	98,880	$7.68	$53.69	$63.28	$15.20	$15.20
Harris	427,045	$7.68	$52.27	$63.23	$15.20	$15.20
Harris Contiguous	100,037	$7.68	$62.63	$75.59	$15.20	$15.20
Lubbock	46,829	$7.68	$53.14	$62.76	$15.20	$15.20
SE Region	84,864	$7.68	$54.79	$63.37	$15.20	$15.20
Tarrant	166,416	$7.68	$52.37	$62.92	$15.20	$15.20
Travis	97,761	$7.68	$49.25	$57.84	$15.20	$15.20
Non-SDA	1,009,778	$7.68	$58.73	$64.96	$15.20	$15.20
Grand Total	2,590,931	$7.68	$55.14	$63.67	$15.20	$15.20

Profit Allocation PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Bexar	263,236	$0.00	$11.79	$10.58	$0.00	$0.00
Dallas	296,085	$0.00	$10.45	$9.80	$0.00	$0.00
El Paso	98,880	$0.00	$11.52	$10.61	$0.00	$0.00
Harris	427,045	$0.00	$11.18	$10.60	$0.00	$0.00
Harris Contiguous	100,037	$0.00	$13.61	$13.01	$0.00	$0.00
Lubbock	46,829	$0.00	$11.39	$10.51	$0.00	$0.00
SE Region	84,864	$0.00	$11.77	$10.63	$0.00	$0.00
Tarrant	166,416	$0.00	$11.21	$10.54	$0.00	$0.00
Travis	97,761	$0.00	$10.47	$9.55	$0.00	$0.00
Non-SDA	1,009,778	$0.00	$12.70	$10.94	$0.00	$0.00
Grand Total	2,590,931	$0.00	$11.86	$10.69	$0.00	$0.00

Total Cost PMPM

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Bexar	263,236	$837.32	$759.63	$786.53	$812.35	$813.40
Dallas	296,085	$764.47	$704.02	$729.97	$746.24	$747.67
El Paso	98,880	$782.91	$710.26	$734.20	$759.68	$761.87
Harris	427,045	$805.67	$723.97	$753.50	$779.22	$782.69
Harris Contiguous	100,037	$918.05	$828.76	$860.18	$885.34	$887.89
Lubbock	46,829	$894.05	$823.56	$852.59	$873.83	$876.22
SE Region	84,864	$873.16	$798.66	$827.83	$849.74	$852.47
Tarrant	166,416	$917.50	$841.47	$872.59	$895.96	$898.09
Travis	97,761	$851.88	$783.27	$810.36	$833.98	$835.25
Non-SDA	1,009,778	$998.42	$994.31	$1,020.12	$972.36	$973.86
Grand Total	2,590,931	$895.50	$848.23	$875.48	$871.03	$872.95
SDA Subtotal	1,581,153	$829.78	$742.54	$770.84	$797.72	$799.95

Appendix C-3

Cost Modeling PMPM Costs, Year 5
Aged and Dual Eligible Population

Base Medical PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Bexar	329,354	$642.03	$611.76	$636.34	$640.13	$639.77
Dallas	346,732	$691.10	$661.22	$686.30	$689.50	$689.14
El Paso	206,874	$420.76	$400.39	$415.19	$418.90	$418.53
Harris	414,980	$722.58	$691.75	$707.65	$717.60	$716.25
Harris Contiguous	116,473	$672.65	$643.04	$665.92	$670.41	$669.94
Lubbock	70,953	$698.24	$668.58	$694.07	$696.85	$696.40
SE Region	90,248	$829.84	$791.16	$823.47	$827.72	$827.26
Tarrant	214,460	$791.40	$758.50	$786.52	$789.77	$789.45
Travis	139,466	$796.28	$761.18	$791.66	$794.74	$794.34
Non-SDA	1,815,315	$780.11	$750.67	$777.72	$777.72	$777.31
Grand Total	3,744,855	$731.05	$701.20	$726.09	$728.63	$728.13

Administrative PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Bexar	329,354	$6.74	$30.88	$22.84	$15.20	$15.20
Dallas	346,732	$6.74	$27.09	$23.50	$15.20	$15.20
El Paso	206,874	$6.74	$29.69	$25.23	$15.20	$15.20
Harris	414,980	$6.74	$40.73	$52.00	$15.20	$15.20
Harris Contiguous	116,473	$6.74	$26.15	$25.40	$15.20	$15.20
Lubbock	70,953	$6.74	$28.98	$24.66	$15.20	$15.20
SE Region	90,248	$6.74	$34.91	$26.21	$15.20	$15.20
Tarrant	214,460	$6.74	$24.94	$22.79	$15.20	$15.20
Travis	139,466	$6.74	$29.97	$23.14	$15.20	$15.20
Non-SDA	1,815,315	$6.74	$41.32	$25.42	$15.20	$15.20
Grand Total	3,744,855	$6.74	$36.16	$27.72	$15.20	$15.20

Profit Allocation PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Bexar	329,354	$0.00	$5.18	$2.06	$0.00	$0.00
Dallas	346,732	$0.00	$4.44	$2.15	$0.00	$0.00
El Paso	206,874	$0.00	$4.95	$2.40	$0.00	$0.00
Harris	414,980	$0.00	$7.13	$6.29	$0.00	$0.00
Harris Contiguous	116,473	$0.00	$4.25	$2.43	$0.00	$0.00
Lubbock	70,953	$0.00	$4.81	$2.32	$0.00	$0.00
SE Region	90,248	$0.00	$5.98	$2.55	$0.00	$0.00
Tarrant	214,460	$0.00	$4.01	$2.05	$0.00	$0.00
Travis	139,466	$0.00	$5.00	$2.10	$0.00	$0.00
Non-SDA	1,815,315	$0.00	$7.24	$2.43	$0.00	$0.00
Grand Total	3,744,855	$0.00	$6.22	$2.76	$0.00	$0.00

Total Cost PMPM

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Bexar	329,354	$648.77	$647.82	$661.24	$655.33	$654.97
Dallas	346,732	$697.85	$692.75	$711.94	$704.70	$704.34
El Paso	206,874	$427.50	$435.03	$442.83	$434.10	$433.73
Harris	414,980	$729.32	$739.61	$765.95	$732.80	$731.45
Harris Contiguous	116,473	$679.39	$673.44	$693.75	$685.60	$685.14
Lubbock	70,953	$704.98	$702.37	$721.05	$712.05	$711.60
SE Region	90,248	$836.59	$832.06	$852.23	$842.92	$842.45
Tarrant	214,460	$798.14	$787.45	$811.36	$804.97	$804.65
Travis	139,466	$803.02	$796.16	$816.90	$809.94	$809.54
Non-SDA	1,815,315	$786.85	$799.23	$805.56	$792.92	$792.51
Grand Total	3,744,855	$737.79	$743.58	$756.57	$743.82	$743.32
SDA Subtotal	1,929,540	$691.64	$691.23	$710.48	$697.64	$697.05

Appendix D
Cash Flow Implications

Cash Flow Implications of Shifting From Fee-For-Service To Capitation

Under a capitated managed care arrangement, a health plan is paid in advance to cover the cost of the claims that recipients are expected to incur in the upcoming month (plus the plan's administrative expenses). By contrast, under a fee-for-service (FFS) arrangement, claim payments are not all made in the month in which the claim is incurred (i.e., when the health care service is rendered to the recipient). Instead, the claims incurred in a given month are paid over a period of several months. The portion of the claims incurred in month x that are paid in month x+y is known as the lag factor for month y, and the sum of the lag factors for month one (i.e., the incurral month) through month y is known as the completion factor for month y.

Table A shows the effect on cash flow that can occur as a result of switching from a FFS arrangement to a capitated arrangement. This effect is attributable to the payment lags described above – or more precisely, to the absence of payment lags in a capitated arrangement. In this illustration, the initial monthly claim cost is assumed to be $100 million, and the administrative cost under the FFS arrangement is assumed to be five percent of the claim cost. Claims are assumed to increase at a rate of five percent per year, or about 0.4 percent per month. Finally, claims are assumed to be paid according to the lag factors that were provided to us by HHSC staff. These factors are as follows:

Table A
Fee-For-Service Claims Lag Distribution

Month	Portion of claims incurred in month x that are paid in this month
x + 0	22.28%
x + 1	39.89%
x + 2	15.64%
x + 3	7.88%
x + 4	4.50%
x + 5	2.97%
x + 6	2.07%
x + 7	1.49%
x + 8	0.91%
x + 9	0.62%
x + 10	0.41%
x + 11	1.35%

The first three columns of the cash flow table (Table B) show the incurred claims, incurred administrative costs, and total incurred cost for the program for each month during the five-year period running from September 2004 through August 2009 (i.e., FY05 through FY09). The next three columns (collectively labeled "Cash Flow A") show the *paid* claims, administrative costs, and total monthly cash flow assuming that claim payments follow the lag pattern shown above.

The next two columns show two alternative cash flow patterns under a capitated managed care arrangement. The premiums for the managed care plan are assumed to be five percent lower than the average incurred cost for the FFS plan over the course of each year. However, the managed care premiums generally would be paid in full at the beginning of each month, as shown under "Cash Flow B." As an alternative, Lewin shows what the cash flow would be if premium payments were delayed by one month (so that, in effect, the premium for each month is paid at the *end* of that month).

Under the columns labeled "Net Managed Care Cost/Savings," Lewin shows the difference between the managed care cash flows (B and C) and the FFS cash flow (A). Finally, Lewin shows the cumulative cost or savings assuming that the balance from each month is carried forward at an annual interest rate of 2.5 percent. Under the prepaid arrangement (B), the net cost (in terms of cash flow) of switching from FFS to managed care remains positive throughout the five-year projection period. But under the delayed-payment arrangement (C), the cumulative cost (disregarding the first month) becomes negative during the second year – that is, the program realizes cumulative cash flow savings as a result of both the 5 percent savings under the managed care plan and the one-month delay in the paying of premiums to the plan.

There is roughly an 11 percent adverse cash flow impact in the initial year of transitioning a fee-for-service population into a capitated setting. If payments are delayed one month, the adverse cash flow impact of the initial year is reduced to two percent. After the first year, the cash flow impact of capitated managed care is favorable, regardless as to whether the payments are delayed one month.

Lewin also modeled the cash flow impacts of moving the managed care program in the opposite direction – from a capitated payment setting back to a fee-for-service setting. These impacts are presented in Table B, under a scenario in which there is no assumed incurred cost differential between the capitated and fee-for-service setting. In this situation, there is roughly a 15 percent cash flow advantage to transitioning payments back to the FFS in the initial year.

Table B

Cash Flow Comparison

Between Fee-for-Service Payments With Normal Lag and Capitation Payments (Managed Care Premiums)

Initial FFS Claim Cost: $100.00 per month

FFS Admin. Cost as % of Claim Cost: 5.00%

Claim Cost Trend: 0.41% per month, 5.00% per year

Managed Care Savings: 5.00% (on combined claims and admin. cost)

Interest Rate to Accumulate Cash Flow Cost/(Savings): 2.50%

	Fee-for-Service						Managed Care				Net Managed Care Cost/(Savings)		Cumulative Managec Care Cost/(Savings)	
	Incurred Cost			Cash Flow A			Cash	% of A	Cash	% of A				
Month	Claims	Admin.	Total	Claims	Admin.	Total	Flow B	(annual)	Flow C	(annual)	B	C	B	C
Sep-04	100.00	5.00	105.00	22.28	5.00	27.28	102.02		-		**74.74**	**(27.28)**	74.74	(27.28)
Oct-04	100.41	5.02	105.43	62.26	5.02	67.28	102.02		102.02		34.74	34.74	111.34	6.78
Nov-04	100.82	5.04	105.86	78.15	5.04	83.19	102.02		102.02		18.82	18.82	132.95	25.77
Dec-04	101.23	5.06	106.29	86.35	5.06	91.41	102.02		102.02		10.61	10.61	146.88	37.02
Jan-05	101.64	5.08	106.72	91.20	5.08	96.28	102.02		102.02		5.73	5.73	156.29	43.68
Feb-05	102.05	5.10	107.16	94.54	5.10	99.64	102.02		102.02		2.37	2.37	162.57	47.14
Mar-05	102.47	5.12	107.59	97.00	5.12	102.12	102.02		102.02		(0.10)	(0.10)	166.52	48.22
Apr-05	102.89	5.14	108.03	98.88	5.14	104.02	102.02		102.02		(2.01)	(2.01)	168.68	47.42
May-05	103.31	5.17	108.47	100.19	5.17	105.36	102.02		102.02		(3.34)	(3.34)	169.56	45.26
Jun-05	103.73	5.19	108.91	101.22	5.19	106.40	102.02		102.02		(4.39)	(4.39)	169.41	42.00
Jul-05	104.15	5.21	109.36	102.04	5.21	107.25	102.02		102.02		(5.24)	(5.24)	168.41	37.82
Aug-05	104.57	5.23	109.80	103.81	5.23	109.03	102.02	111.4%	102.02	102.1%	(7.02)	(7.02)	165.60	31.74
Sep-05	105.00	5.25	110.25	104.23	5.25	109.48	107.12		102.02		**(2.36)**	**(7.46)**	167.38	25.07
Oct-05	105.43	5.27	110.70	104.65	5.27	109.92	107.12		107.12		(2.81)	(2.81)	168.75	22.89
Nov-05	105.86	5.29	111.15	105.08	5.29	110.37	107.12		107.12		(3.26)	(3.26)	169.71	20.21
Dec-05	106.29	5.31	111.60	105.51	5.31	110.82	107.12		107.12		(3.71)	(3.71)	170.25	17.01
Jan-06	106.72	5.34	112.06	105.94	5.34	111.27	107.12		107.12		(4.16)	(4.16)	170.35	13.28
Feb-06	107.16	5.36	112.51	106.37	5.36	111.73	107.12		107.12		(4.61)	(4.61)	170.00	9.00
Mar-06	107.59	5.38	112.97	106.80	5.38	112.18	107.12		107.12		(5.07)	(5.07)	169.18	4.16
Apr-06	108.03	5.40	113.43	107.24	5.40	112.64	107.12		107.12		(5.52)	(5.52)	167.89	(1.26)
May-06	108.47	5.42	113.90	107.67	5.42	113.10	107.12		107.12		(5.98)	(5.98)	166.11	(7.27)
Jun-06	108.91	5.45	114.36	108.11	5.45	113.56	107.12		107.12		(6.44)	(6.44)	163.82	(13.90)
Jul-06	109.36	5.47	114.82	108.55	5.47	114.02	107.12		107.12		(6.90)	(6.90)	161.01	(21.15)
Aug-06	109.80	5.49	115.29	109.00	5.49	114.49	107.12	95.7%	107.12	95.3%	(7.37)	(7.37)	157.66	(29.05)
Sep-06	110.25	5.51	115.76	109.44	5.51	114.95	112.47		107.12		**(2.48)**	**(7.84)**	159.12	(37.61)
Oct-06	110.70	5.53	116.23	109.89	5.53	115.42	112.47		112.47		(2.95)	(2.95)	160.15	(41.50)
Nov-06	111.15	5.56	116.71	110.33	5.56	115.89	112.47		112.47		(3.42)	(3.42)	160.74	(45.95)
Dec-06	111.60	5.58	117.18	110.78	5.58	116.36	112.47		112.47		(3.89)	(3.89)	160.87	(50.99)
Jan-07	112.06	5.60	117.66	111.23	5.60	116.84	112.47		112.47		(4.36)	(4.36)	160.52	(56.63)
Feb-07	112.51	5.63	118.14	111.69	5.63	117.31	112.47		112.47		(4.84)	(4.84)	159.70	(62.89)
Mar-07	112.97	5.65	118.62	112.14	5.65	117.79	112.47		112.47		(5.32)	(5.32)	158.37	(69.78)
Apr-07	113.43	5.67	119.10	112.60	5.67	118.27	112.47		112.47		(5.80)	(5.80)	156.53	(77.32)
May-07	113.90	5.69	119.59	113.06	5.69	118.75	112.47		112.47		(6.28)	(6.28)	154.16	(85.54)
Jun-07	114.36	5.72	120.08	113.52	5.72	119.24	112.47		112.47		(6.76)	(6.76)	151.25	(94.44)
Jul-07	114.82	5.74	120.57	113.98	5.74	119.72	112.47		112.47		(7.25)	(7.25)	147.78	(104.05)
Aug-07	115.29	5.76	121.06	114.45	5.76	120.21	112.47	95.7%	112.47	95.3%	(7.74)	(7.74)	143.74	(114.39)
Sep-07	115.76	5.79	121.55	114.91	5.79	120.70	118.10		112.47		**(2.60)**	**(8.23)**	144.73	(125.48)
Oct-07	116.23	5.81	122.05	115.38	5.81	121.19	118.10		118.10		(3.10)	(3.10)	145.25	(131.71)
Nov-07	116.71	5.84	122.54	115.85	5.84	121.69	118.10		118.10		(3.59)	(3.59)	145.29	(138.59)
Dec-07	117.18	5.86	123.04	116.32	5.86	122.18	118.10		118.10		(4.09)	(4.09)	144.84	(146.14)
Jan-08	117.66	5.88	123.54	116.80	5.88	122.68	118.10		118.10		(4.58)	(4.58)	143.88	(154.38)
Feb-08	118.14	5.91	124.05	117.27	5.91	123.18	118.10		118.10		(5.08)	(5.08)	142.39	(163.32)
Mar-08	118.62	5.93	124.55	117.75	5.93	123.68	118.10		118.10		(5.58)	(5.58)	140.37	(172.99)
Apr-08	119.10	5.96	125.06	118.23	5.96	124.18	118.10		118.10		(6.09)	(6.09)	137.79	(183.41)
May-08	119.59	5.98	125.57	118.71	5.98	124.69	118.10		118.10		(6.59)	(6.59)	134.64	(194.59)
Jun-08	120.08	6.00	126.08	119.19	6.00	125.20	118.10		118.10		(7.10)	(7.10)	130.90	(206.55)
Jul-08	120.57	6.03	126.59	119.68	6.03	125.71	118.10		118.10		(7.61)	(7.61)	126.56	(219.33)
Aug-08	121.06	6.05	127.11	120.17	6.05	126.22	118.10	95.7%	118.10	95.3%	(8.12)	(8.12)	121.60	(232.94)
Sep-08	121.55	6.08	127.63	120.66	6.08	126.74	124.00		118.10		**(2.73)**	**(8.64)**	121.91	(247.40)
Oct-08	122.05	6.10	128.15	121.15	6.10	127.25	124.00		124.00		(3.25)	(3.25)	121.70	(256.84)
Nov-08	122.54	6.13	128.67	121.64	6.13	127.77	124.00		124.00		(3.77)	(3.77)	120.98	(267.03)
Dec-08	123.04	6.15	129.19	122.14	6.15	128.29	124.00		124.00		(4.29)	(4.29)	119.71	(277.99)
Jan-09	123.54	6.18	129.72	122.64	6.18	128.81	124.00		124.00		(4.81)	(4.81)	117.89	(289.75)
Feb-09	124.05	6.20	130.25	123.14	6.20	129.34	124.00		124.00		(5.34)	(5.34)	115.50	(302.33)
Mar-09	124.55	6.23	130.78	123.64	6.23	129.86	124.00		124.00		(5.86)	(5.86)	112.53	(315.76)
Apr-09	125.06	6.25	131.31	124.14	6.25	130.39	124.00		124.00		(6.39)	(6.39)	108.95	(330.04)
May-09	125.57	6.28	131.85	124.65	6.28	130.93	124.00		124.00		(6.92)	(6.92)	104.75	(345.22)

Table C

Cash Flow Comparison
When Moving from Capitated Payments to Fee-for-Service Payments (if no incurred cost savings for MC)

Initial Claim Cost: $100.00 per month

FFS Admin. Cost as % of Claim Cost: 5.00%

Claim Cost Trend: 0.41% per month
5.00% per year

Managed Care Savings: 0.00%
(on incurred claims and admin. cost)

Interest Rate to Accumulate Cash Flow Cost/(Savings): 2.50%

	Managed Care Cash	Fee-for-Service								
		Incurred Cost			Cash Flow				Net Savings	
Month	Flow	Claims	Admin.	Total	Claims	Admin.	Total	% of MC	Monthly	Cumulative
Sep-04	107.39	100.00	5.00	105.00	22.28	5.00	27.28		80.11	80.11
Oct-04	107.39	100.41	5.02	105.43	62.26	5.02	67.28		40.11	122.22
Nov-04	107.39	100.82	5.04	105.86	78.15	5.04	83.19		24.19	149.46
Dec-04	107.39	101.23	5.06	106.29	86.35	5.06	91.41		15.98	169.18
Jan-05	107.39	101.64	5.08	106.72	91.20	5.08	96.28		11.10	184.51
Feb-05	107.39	102.05	5.10	107.16	94.54	5.10	99.64		7.74	196.86
Mar-05	107.39	102.47	5.12	107.59	97.00	5.12	102.12		5.26	207.05
Apr-05	107.39	102.89	5.14	108.03	98.88	5.14	104.02		3.36	215.59
May-05	107.39	103.31	5.17	108.47	100.19	5.17	105.36		2.03	223.00
Jun-05	107.39	103.73	5.19	108.91	101.22	5.19	106.40		0.98	229.56
Jul-05	107.39	104.15	5.21	109.36	102.04	5.21	107.25		0.13	235.43
Aug-05	107.39	104.57	5.23	109.80	103.81	5.23	109.03	85.3%	(1.65)	239.67
Sep-05	112.75	105.00	5.25	110.25	104.23	5.25	109.48		3.28	248.94
Oct-05	112.75	105.43	5.27	110.70	104.65	5.27	109.92		2.83	257.99
Nov-05	112.75	105.86	5.29	111.15	105.08	5.29	110.37		2.38	266.82
Dec-05	112.75	106.29	5.31	111.60	105.51	5.31	110.82		1.93	275.42
Jan-06	112.75	106.72	5.34	112.06	105.94	5.34	111.27		1.48	283.79
Feb-06	112.75	107.16	5.36	112.51	106.37	5.36	111.73		1.03	291.91
Mar-06	112.75	107.59	5.38	112.97	106.80	5.38	112.18		0.57	299.78
Apr-06	112.75	108.03	5.40	113.43	107.24	5.40	112.64		0.12	307.39
May-06	112.75	108.47	5.42	113.90	107.67	5.42	113.10		(0.34)	314.73
Jun-06	112.75	108.91	5.45	114.36	108.11	5.45	113.56		(0.80)	321.80
Jul-06	112.75	109.36	5.47	114.82	108.55	5.47	114.02		(1.27)	328.57
Aug-06	112.75	109.80	5.49	115.29	109.00	5.49	114.49	99.3%	(1.73)	335.06
Sep-06	118.39	110.25	5.51	115.76	109.44	5.51	114.95		3.44	346.87
Oct-06	118.39	110.70	5.53	116.23	109.89	5.53	115.42		2.97	358.52
Nov-06	118.39	111.15	5.56	116.71	110.33	5.56	115.89		2.50	369.98
Dec-06	118.39	111.60	5.58	117.18	110.78	5.58	116.36		2.03	381.26
Jan-07	118.39	112.06	5.60	117.66	111.23	5.60	116.84		1.55	392.34
Feb-07	118.39	112.51	5.63	118.14	111.69	5.63	117.31		1.08	403.23
Mar-07	118.39	112.97	5.65	118.62	112.14	5.65	117.79		0.60	413.91
Apr-07	118.39	113.43	5.67	119.10	112.60	5.67	118.27		0.12	424.38
May-07	118.39	113.90	5.69	119.59	113.06	5.69	118.75		(0.36)	434.63
Jun-07	118.39	114.36	5.72	120.08	113.52	5.72	119.24		(0.84)	444.65
Jul-07	118.39	114.82	5.74	120.57	113.98	5.74	119.72		(1.33)	454.44
Aug-07	118.39	115.29	5.76	121.06	114.45	5.76	120.21	99.3%	(1.82)	463.98
Sep-07	124.31	115.76	5.79	121.55	114.91	5.79	120.70		3.61	479.19
Oct-07	124.31	116.23	5.81	122.05	115.38	5.81	121.19		3.12	494.29
Nov-07	124.31	116.71	5.84	122.54	115.85	5.84	121.69		2.63	509.27
Dec-07	124.31	117.18	5.86	123.04	116.32	5.86	122.18		2.13	524.14
Jan-08	124.31	117.66	5.88	123.54	116.80	5.88	122.68		1.63	538.87
Feb-08	124.31	118.14	5.91	124.05	117.27	5.91	123.18		1.13	553.48
Mar-08	124.31	118.62	5.93	124.55	117.75	5.93	123.68		0.63	567.94
Apr-08	124.31	119.10	5.96	125.06	118.23	5.96	124.18		0.13	582.27
May-08	124.31	119.59	5.98	125.57	118.71	5.98	124.69		(0.38)	596.45
Jun-08	124.31	120.08	6.00	126.08	119.19	6.00	125.20		(0.89)	610.47
Jul-08	124.31	120.57	6.03	126.59	119.68	6.03	125.71		(1.40)	624.34
Aug-08	124.31	121.06	6.05	127.11	120.17	6.05	126.22	99.3%	(1.91)	638.03
Sep-08	130.53	121.55	6.08	127.63	120.66	6.08	126.74		3.79	657.78
Oct-08	130.53	122.05	6.10	128.15	121.15	6.10	127.25		3.28	677.50
Nov-08	130.53	122.54	6.13	128.67	121.64	6.13	127.77		2.76	697.19
Dec-08	130.53	123.04	6.15	129.19	122.14	6.15	128.29		2.24	716.86
Jan-09	130.53	123.54	6.18	129.72	122.64	6.18	128.81		1.71	736.49
Feb-09	130.53	124.05	6.20	130.25	123.14	6.20	129.34		1.19	756.10
Mar-09	130.53	124.55	6.23	130.78	123.64	6.23	129.86		0.66	775.66
Apr-09	130.53	125.06	6.25	131.31	124.14	6.25	130.39		0.13	795.19

Appendix E
New SDA Analysis

Analysis of Expansion Criteria

(See Tables below for Definition of Criteria)

SDA	County	Total County Pop.	Rural Desig. Code	Land Area	Pop. to Land Ratio	MDs per 1000	Hosp. per 1000	Commercial HMOs	Criteria Met (5 OF 6)	FY02 Medicaid MMs
Bexar	Atascosa	38,628	6	3,191	12.11	0.52	0.03	12	YES	61,920
	Bexar	1,392,931	0	3,229	431.38	2.86	0.01	14	YES	1,639,980
	Comal	78,021	1	1,454	53.66	1.38	0.01	15	YES	44,305
	Guadalupe	89,023	1	1,842	48.33	0.74	0.01	14	YES	73,016
	Kendall	71,313	1	2,036	35.03	0.56	0.03	14	YES	10,805
	Medina	39,304	6	3,439	11.43	0.38	0.03	12	YES	46,081
	Wilson	32,408	1	2,090	15.51	0.37	0.03	13	YES	32,849
Corpus Christi	Aransas	22,497	6	652	34.50	1.91	0.00	10	NO	26,789
	Bee	32,359	6	2,280	14.19	0.56	0.03	11	YES	40,407
	Calhoun	20,647	6	1,327	15.56	0.58	0.05	7	YES	22,928
	Jim Wells	39,326	4	2,239	17.56	0.74	0.03	10	YES	78,637
	Kleberg	31,549	4	2,256	13.98	0.76	0.03	9	YES	50,034
	Nueces	313,645	2	2,165	144.87	2.41	0.03	9	YES	419,027
	Refugio	7,828	6	1,995	3.92	0.26	0.13	9	NO	10,443
	San Patricio	67,138	2	1,791	37.49	0.46	0.01	9	YES	94,433
	Victoria	84,088	3	2,286	36.78	2.25	0.04	7	YES	91,918
Dallas	Collin	491,675	0	2,195	224.00	1.44	0.01	14	YES	111,067
	Dallas	2,218,899	0	2,278	974.06	2.21	0.01	14	YES	1,632,991
	Ellis	111,360	2	2,624	42.44	0.63	0.02	14	YES	75,126
	Hunt	76,596	1	2,179	35.15	0.80	0.03	13	YES	74,068
	Kaufman	71,313	1	2,036	35.03	0.56	0.03	14	YES	57,077
	Navarro	45,124	4	2,610	17.29	1.11	0.02	11	YES	52,700
	Rockwall	43,080	0	334	128.98	2.00	0.00	14	YES	17,164
Expanded Dallas	Fannin	31,242	6	2,309	13.53	0.67	0.03	8	YES	28,739
	Grayson	110,595	3	2,418	45.74	1.60	0.03	10	YES	92,566
El Paso	Culberson	2,975	7	9,874	0.30	0.34	0.34	5	NO	5,609
	El Paso	679,622	1	2,434	279.22	1.56	0.01	9	YES	1,239,076
	Hudspeth	3,344	8	11,839	0.28	0.00	0.00	7	NO	6,539
Harris	Brazoria	241,767	1	3,591	67.33	1.05	0.02	18	YES	141,932
	Fort Bend	354,452	0	2,265	156.49	1.59	0.01	19	YES	138,406
	Galveston	250,158	0	1,032	242.40	3.55	0.01	19	YES	197,009
	Harris	3,400,578	0	4,478	759.40	2.28	0.01	21	YES	2,816,170
	Montgomery	293,768	1	2,704	108.64	1.23	0.01	17	YES	166,488
	Waller	32,663	1	1,330	24.56	0.21	0.00	16	YES	28,463
Expanded Harris	Austin	23,590	6	1,690	13.96	0.93	0.04	11	YES	15,699
	Colorado	20,390	7	2,494	8.18	0.88	0.15	12	NO	19,605
	Matagorda	37,957	4	2,886	13.15	0.74	0.05	11	YES	41,458
	Washington	30,373	6	1,578	19.25	1.32	0.03	11	YES	25,529
	Wharton	41,188	6	2,823	14.59	1.29	0.05	11	YES	40,925
Lubbock	Crosby	7,072	8	2,330	3.04	0.28	0.14	3	NO	14,385
	Floyd	7,771	7	2,570	3.02	0.77	0.13	3	NO	13,970
	Garza	4,872	6	2,319	2.10	0.21	0.21	3	NO	7,067
	Hale	36,602	4	2,602	14.07	1.15	0.05	3	YES	50,296
	Hockley	22,716	6	2,352	9.66	0.53	0.04	3	NO	28,151
	Lamb	14,709	6	1,844	7.98	0.61	0.07	3	NO	23,369
	Lubbock	242,628	3	2,330	104.13	2.91	0.02	3	YES	270,544
	Lynn	6,550	6	2,310	2.84	0.46	0.15	3	NO	8,169
	Terry	12,761	6	2,305	5.54	0.55	0.08	3	NO	20,732

SDA	County	Total County Pop.	Rural Desig. Code	Land Area	Pop. to Land Ratio	MDs per 1000	Hosp. per 1000	Commercial HMOs	Criteria Met (5 OF 6)	FY02 Medicaid MMs
Northeast	Anderson	55,109	6	2,773	19.87	1.32	0.04	5	YES	47,828
	Bowie	89,306	3	2,300	38.83	2.31	0.04	2	YES	102,381
	Camp	11,549	6	512	22.56	0.17	0.09	3	NO	15,661
	Cass	30,438	6	2,428	12.54	0.39	0.10	2	YES	41,945
	Cherokee	46,659	6	2,725	17.12	1.33	0.04	6	YES	57,911
	Delta	5,327	0	2,301	2.32	0.19	0.00	6	NO	7,654
	Franklin	9,458	9	740	12.78	0.74	0.11	4	NO	7,389
	Gregg	111,379	3	710	156.87	1.90	0.03	5	YES	127,633
	Henderson	73,277	1	2,264	32.37	0.74	0.01	7	YES	69,652
	Hopkins	31,960	6	2,026	15.77	0.97	0.03	6	YES	30,070
	Lamar	48,499	6	2,632	18.43	2.16	0.04	4	YES	65,777
	Morris	13,048	6	659	19.80	0.38	0.00	3	NO	16,981
	Rains	9,139	8	601	15.21	0.22	0.00	7	NO	7,791
	Red River	14,314	6	2,720	5.26	0.35	0.07	2	NO	21,378
	Rusk	47,372	6	2,392	19.80	0.59	0.02	5	YES	43,556
	Smith	174,706	3	2,405	72.64	2.97	0.02	5	YES	161,589
	Titus	28,118	7	1,063	26.45	1.35	0.04	3	NO	30,487
	Upshur	35,291	3	1,522	23.19	0.40	0.00	5	YES	36,411
	Van Zandt	48,140	6	2,198	21.90	0.33	0.02	8	YES	38,684
	Wood	36,752	6	1,684	21.82	0.60	0.05	7	YES	34,863
Southeast	Chambers	26,031	1	1,552	16.77	0.27	0.08	15	NO	17,259
	Hardin	48,073	2	2,316	20.76	0.50	0.02	11	YES	38,864
	Jefferson	252,051	2	2,340	107.71	2.12	0.03	12	YES	309,496
	Liberty	70,154	1	3,004	23.35	0.43	0.03	15	YES	75,439
	Orange	84,966	2	923	92.05	0.60	0.01	12	YES	86,829
Expanded SE	Brazos	152,415	3	1,517	100.47	1.78	0.01	10	YES	99,598
	Grimes	23,552	6	2,055	11.46	0.34	0.04	13	NO	21,675
	Jasper	35,604	6	2,428	14.66	0.84	0.06	5	YES	43,511
	Madison	12,940	6	1,216	10.64	0.77	0.08	8	YES	13,430
	Polk	41,133	6	2,738	15.02	0.61	0.02	4	YES	47,779
	San Jacinto	22,246	8	1,478	15.05	0.13	0.00	10	NO	24,187
	Tyler	20,871	6	2,390	8.73	0.48	0.05	4	NO	21,117
	Walker	61,758	4	2,039	30.29	0.66	0.02	10	YES	38,374
Tarrant	Denton	432,976	6	2,355	183.85	1.01	0.01	15	YES	115,353
	Hood	41,100	1	1,092	37.64	1.00	0.02	13	YES	25,041
	Johnson	126,811	1	1,889	67.13	0.76	0.01	15	YES	89,693
	Parker	88,495	1	2,340	37.82	0.86	0.01	15	YES	45,635
	Tarrant	1,446,219	0	2,236	646.79	1.57	0.01	16	YES	929,068
	Wise	48,793	6	2,343	20.83	0.31	0.02	11	YES	31,218
Expanded Tarrant	Cooke	36,363	6	2,263	16.07	0.55	0.06	9	YES	27,326
	Erath	33,001	6	2,814	11.73	0.91	0.03	6	YES	24,677
	Palo Pinto	27,026	6	2,468	10.95	0.74	0.04	6	YES	25,488
	Somervell	6,809	8	485	14.04	0.59	0.15	10	NO	5,074
Travis	Bastrop	57,733	2	2,301	25.09	0.42	0.02	15	YES	47,602
	Blanco	8,418	8	1,842	4.57	0.48	0.00	9	NO	2,348
	Burnet	34,147	6	2,580	13.24	1.08	0.03	13	YES	25,863
	Caldwell	32,194	2	1,413	22.78	0.59	0.03	13	YES	38,557
	Hays	97,589	2	1,756	55.57	1.06	0.01	15	YES	50,377
	Lee	15,657	6	1,628	9.62	0.26	0.00	11	NO	10,089
	Travis	812,280	2	2,562	317.05	2.26	0.01	15	YES	462,974
	Williamson	249,967	2	2,908	85.96	0.92	0.01	15	YES	96,032
Waco	Bell	237,974	2	2,745	86.69	3.02	0.02	8	YES	187,114
	Bosque	17,204	6	2,562	6.72	0.81	0.06	9	NO	15,902
	Coryell	74,978	2	2,724	27.52	0.45	0.01	7	YES	35,439
	Hill	32,321	6	2,493	12.96	0.65	0.06	10	YES	36,056
	McLennan	213,517	3	2,698	79.14	1.72	0.01	10	YES	221,754

Table 1
Definition of Criteria

Criteria	Value Boundaries
Total County Pop.	Greater than or Equal to 30,000
Rural Design. Code	Less than or Equal to 6
Pop. to Land Ratio	Greater than or Equal to 10.00
MDs per 1000	Greater than or Equal to 0.4
Hosp. per 1000	Greater than or Equal to 0.02
Commercial HMOs	Greater than or Equal to 5

Table 2
Population Within Restructured SDAs

SDA	Population (MMs) within Current Configuration	Population (MMs) within Expansion Area	Total Population within Restructuring
Bexar	1,908,956	--	1,908,956
Corpus Christi	--	834,615	834,615
Dallas	2,020,193	121,305	2,141,498
El Paso	1,251,224	--	1,251,224
Harris & Contiguous	3,488,468	143,215	3,631,683
Lubbock	436,683	--	436,683
Northeast	--	965,641	965,641
Southeast	527,887	309,670	837,557
Tarrant	1,236,008	82,564	1,318,572
Travis	686,240	--	686,240
Waco	--	496,264	496,264
Total	**11,603,261**	**2,953,274**	**14,556,535**

Appendix F

Modeling of Potential New SDAs

Appendix F-1

New SDA Modeling
TANF and TANF-Related Population

Base Medical PMPM Costs

SDA	Member Months	Baseline Inp. Hospital PMPM	Baseline Out. Hospital PMPM	Baseline Professional PMPM	Baseline Other PMPM	Baseline Pharmacy PMPM	Baseline Total PMPM
Corpus Christi	761,970	$80.22	$25.19	$17.14	$46.83	$27.38	$196.75
North East	772411	$69.50	$24.66	$19.81	$42.23	$26.58	$182.78
Waco	437055	$63.44	$19.86	$15.75	$37.43	$18.76	$155.24
Grand Total	1971436	$72.30	$23.80	$17.88	$42.94	$25.15	$182.07

STAR HMO Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Total Medical Factor
Corpus Christi	0.850	0.850	1.100	0.775	0.800	0.847
North East	0.850	0.850	1.100	0.825	0.800	0.864
Waco	0.875	0.875	1.100	0.825	0.800	0.877

PCCM Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Total Medical Factor
Corpus Christi	0.925	0.925	1.050	0.888	1.000	0.937
North East	0.925	0.925	1.050	0.913	1.000	0.947
Waco	0.938	0.938	1.050	0.913	1.000	0.950

EPO Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Total Medical Factor
Corpus Christi	0.945	0.945	1.030	0.868	1.000	0.942
North East	0.945	0.945	1.030	0.893	1.000	0.950
Waco	0.958	0.958	1.030	0.893	1.000	0.954

Medical Costs after Modeling

SDA	Member Months	FFS Baseline	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	761,970	$196.75	$166.64	$184.43	$185.26
North East	772,411	$182.78	$157.93	$173.01	$173.65
Waco	437,055	$155.24	$136.10	$147.55	$148.15
Grand Total	1,971,436	$182.07	$156.46	$171.78	$172.49

Administrative PMPM Costs

SDA	Member Months	FFS Baseline	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	761,970	$2.48	$24.07	$9.99	$9.99
North East	772,411	$2.48	$22.52	$9.99	$9.99
Waco	437,055	$2.48	$20.21	$9.99	$9.99
Grand Total	1,971,436	$2.48	$22.61	$9.99	$9.99

Profit Allocation PMPM Costs

SDA	Member Months	FFS Baseline	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	761,970	$0.00	$3.46	$0.00	$0.00
North East	772,411	$0.00	$3.19	$0.00	$0.00
Waco	437,055	$0.00	$2.79	$0.00	$0.00
Grand Total	1,971,436	$0.00	$3.20	$0.00	$0.00

Total PMPM Costs

SDA	Member Months	FFS Baseline	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	761,970	$199.23	$194.16	$194.42	$195.25
North East	772,411	$185.25	$183.64	$183.00	$183.64
Waco	437,055	$157.72	$159.10	$157.54	$158.14
Grand Total	1,971,436	$184.55	$182.27	$181.77	$182.48

Appendix F-2

New SDA Modeling
SSI Blind and Disabled (Non-Medicare) Population

Base Medical PMPM Costs

SDA	Member Months	Baseline Inp. Hospital PMPM	Baseline Out. Hospital PMPM	Baseline Professional PMPM	Baseline Other PMPM	Baseline Pharmacy PMPM	Baseline Nursing Home PMPM	Baseline Other LTC PMPM	Baseline Total PMPM
Corpus Christi	107,097	$245.68	$93.91	$71.26	$155.00	$148.97	$125.82	$73.48	$914.12
North East	149564	$219.05	$91.21	$75.24	$162.77	$178.95	$296.66	$60.72	$1,084.60
Waco	69800	$164.02	$77.30	$60.67	$161.41	$145.56	$349.85	$63.86	$1,022.67
Grand Total	326461	$216.02	$89.12	$70.82	$159.93	$161.98	$251.99	$65.58	$1,015.43

STAR+PLUS HMO Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Nursing Home Medical Factor	Other LTC Medical Factor	Total Medical Factor
Corpus Christi	0.700	0.840	1.100	0.840	0.850	0.950	0.900	0.844
North East	0.700	0.840	1.100	0.840	0.850	0.950	0.900	0.865
Waco	0.700	0.840	1.100	0.840	0.850	0.950	0.900	0.876

STAR HMO Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Nursing Home Medical Factor	Other LTC Medical Factor	Total Medical Factor
Corpus Christi	0.725	0.850	1.100	0.850	0.850	1.000	1.000	0.869
North East	0.725	0.850	1.100	0.850	0.850	1.000	1.000	0.892
Waco	0.725	0.850	1.100	0.850	0.850	1.000	1.000	0.905

PCCM Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Nursing Home Medical Factor	Other LTC Medical Factor	Total Medical Factor
Corpus Christi	0.908	0.950	1.033	0.950	1.000	1.000	1.000	0.964
North East	0.908	0.950	1.033	0.950	1.000	1.000	1.000	0.972
Waco	0.908	0.950	1.033	0.950	1.000	1.000	1.000	0.976

EPO Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Nursing Home Medical Factor	Other LTC Medical Factor	Total Medical Factor
Corpus Christi	0.928	0.970	1.013	0.930	1.000	1.000	1.000	0.967
North East	0.928	0.970	1.013	0.930	1.000	1.000	1.000	0.973
Waco	0.928	0.970	1.013	0.930	1.000	1.000	1.000	0.976

Medical Costs after Modeling

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	107,097	$914.12	$771.73	$794.00	$881.52	$883.79
North East	149,564	$1,084.60	$938.02	$966.94	$1,054.33	$1,055.77
Waco	69,800	$1,022.67	$895.63	$926.00	$997.73	$998.11
Grand Total	326,461	$1,015.43	$874.40	$901.45	$985.54	$987.02

Administrative PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	107,097	$7.68	$60.22	$68.09	$15.20	$15.20
North East	149,564	$7.68	$57.58	$66.25	$15.20	$15.20
Waco	69,800	$7.68	$50.47	$57.34	$15.20	$15.20
Grand Total	326,461	$7.68	$56.93	$64.95	$15.20	$15.20

Profit Allocation PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	107,097	$0.00	$13.05	$11.55	$0.00	$0.00
North East	149,564	$0.00	$12.43	$11.19	$0.00	$0.00
Waco	69,800	$0.00	$10.76	$9.46	$0.00	$0.00
Grand Total	326,461	$0.00	$12.27	$10.94	$0.00	$0.00

Total PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	107,097	$921.80	$844.99	$873.64	$896.72	$898.99
North East	149,564	$1,092.28	$1,008.03	$1,044.38	$1,069.52	$1,070.97
Waco	69,800	$1,030.36	$956.86	$992.79	$1,012.92	$1,013.31
Grand Total	326,461	$1,023.11	$943.60	$977.34	$1,000.73	$1,002.22

Appendix F-3

New SDA Modeling
Aged and Dual Eligible Population

Base Medical PMPM Costs

SDA	Member Months	Baseline Inp. Hospital PMPM	Baseline Out. Hospital PMPM	Baseline Professional PMPM	Baseline Other PMPM	Baseline Pharmacy PMPM	Baseline Nursing Home PMPM	Baseline Other LTC PMPM	Baseline Total PMPM
Corpus Christi	156,040	$19.34	$9.63	$24.18	$52.22	$198.47	$274.33	$150.75	$728.93
North East	236769	$19.98	$8.31	$20.86	$41.88	$219.43	$457.60	$119.89	$887.95
Waco	98673	$17.66	$7.08	$20.77	$34.51	$199.88	$503.76	$108.13	$891.78
Grand Total	491482	$19.31	$8.48	$21.90	$43.69	$208.85	$408.68	$127.32	$838.23

STAR+PLUS HMO Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Nursing Home Medical Factor	Other LTC Medical Factor	Total Medical Factor
Corpus Christi	0.850	0.920	1.050	0.920	1.000	0.950	0.900	0.951
North East	0.850	0.920	1.050	0.920	1.000	0.950	0.900	0.954
Waco	0.850	0.920	1.050	0.920	1.000	0.950	0.900	0.954

STAR HMO Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Nursing Home Medical Factor	Other LTC Medical Factor	Total Medical Factor
Corpus Christi	0.863	0.938	1.050	0.900	1.000	1.000	1.000	0.990
North East	0.863	0.963	1.050	0.925	1.000	1.000	1.000	0.994
Waco	0.863	0.913	1.050	0.925	1.000	1.000	1.000	0.995

PCCM Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Nursing Home Medical Factor	Other LTC Medical Factor	Total Medical Factor
Corpus Christi	0.954	0.979	1.017	0.967	1.000	1.000	1.000	0.997
North East	0.954	0.988	1.017	0.975	1.000	1.000	1.000	0.998
Waco	0.954	0.971	1.017	0.975	1.000	1.000	1.000	0.998

EPO Cost Factors

SDA	Inp. Hospital Medical Factor	Out. Hospital Medical Factor	Professional Medical Factor	Other Medical Factor	Pharmacy Medical Factor	Nursing Home Medical Factor	Other LTC Medical Factor	Total Medical Factor
Corpus Christi	0.964	0.989	1.007	0.957	1.000	1.000	1.000	0.996
North East	0.964	0.998	1.007	0.965	1.000	1.000	1.000	0.998
Waco	0.964	0.981	1.007	0.965	1.000	1.000	1.000	0.998

Medical Costs after Modeling

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	156,040	$728.93	$693.49	$721.65	$726.50	$726.03
North East	236,769	$887.95	$847.12	$882.80	$886.24	$885.89
Waco	98,673	$891.78	$850.84	$887.18	$890.25	$889.94
Grand Total	491,482	$838.23	$799.09	$832.52	$836.33	$835.95

Administrative PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	156,040	$6.74	$37.90	$27.29	$15.20	$15.20
North East	236,769	$6.74	$32.02	$24.76	$15.20	$15.20
Waco	98,673	$6.74	$29.06	$22.82	$15.20	$15.20
Grand Total	491,482	$6.74	$33.29	$25.17	$15.20	$15.20

Profit Allocation PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	156,040	$0.00	$6.57	$2.70	$0.00	$0.00
North East	236,769	$0.00	$5.41	$2.33	$0.00	$0.00
Waco	98,673	$0.00	$4.82	$2.05	$0.00	$0.00
Grand Total	491,482	$0.00	$5.66	$2.39	$0.00	$0.00

Total PMPM Costs

SDA	Member Months	FFS Baseline	STAR+PLUS HMO Model	STAR HMO Model	PCCM Model	EPO Model
Corpus Christi	156,040	$735.67	$737.96	$751.64	$741.70	$741.22
North East	236,769	$894.70	$884.55	$909.89	$901.43	$901.09
Waco	98,673	$898.52	$884.73	$912.05	$905.45	$905.14
Grand Total	491,482	$844.97	$838.04	$860.08	$851.53	$851.15