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Progress Report

May 2004 Report No. 04-34

Medicaid Disease Management Initiative Has Not Yet Met Cost-Savings and Health Outcomes Expectations

at a glance

The 1997 Legislature directed the Agency for Health Care Administration to establish a Medicaid disease management initiative to help control expenditures and improve health outcomes for chronically ill Medicaid recipients. However, after nearly seven years, the initiative continues to fall short of legislative expectations and intended goals.

The initiative does not provide disease management services for all of the chronic diseases specified by the Legislature. Although the initiative has included disease management services for seven disease states, as of March 2004, services were available for only five of nine chronic diseases. In addition, the initiative continues to serve only a small percentage of eligible recipients.

Due in part to this slow implementation, the Initiative has achieved only a small portion of the projected savings. To date, the initiative has reportedly saved $13.4 million; however, the agency has not finalized cost savings for several programs. In addition, cost savings are likely overstated because of weak approaches used to estimate baseline costs. Further, the agency has not sufficiently assessed whether health outcomes of chronically ill Medicaid recipients have improved. Finally, agency oversight does not ensure that recipients receive appropriate levels of services or that physicians support the initiative and use best practice guidelines.

Scope

In accordance with state law, this progress report informs the Legislature of actions taken by Florida's Agency for Health Care Administration (AHCA) in response to a 2001 OPPAGA review.[1, 2] This report assesses the extent to which the agency has taken action to address the findings and recommendations in our prior review and reports on the effectiveness of these actions and the status of initiative implementation.

Background

To help control expenditures for chronically ill Medicaid recipients, the 1997 Florida Legislature directed the Agency for Health Care Administration to implement a disease management initiative for MediPass recipients diagnosed with asthma, diabetes, HIV/AIDS, and hemophilia.[3] In 1998 and 2000, the Legislature further directed the agency to continue and expand the initiative and develop programs for hypertension, cancer, congestive heart failure, end-stage renal disease, and sickle cell anemia.

Disease management offers an integrated approach to treating chronic disease by providing support to patients and physicians. It helps chronically ill patients follow appropriate treatments, use less expensive interventions, and learn how to self-monitor their conditions.

[1] Section 11.51(6), *F.S.*

[2] *Justification Review: Medicaid Disease Management Initiative Sluggish, Cost Savings Not Determined, Design Changes Needed*, Report No. 01-27, May 2001.

[3] MediPass is Florida's Medicaid primary care case management system.

In addition, disease management encourages physicians to use best practice guidelines for optimal treatment. (See Appendix A.)

The Legislature anticipated that the disease management program would produce cost savings of $112.7 million between Fiscal Years 1997-98 and 2000-01. (See Exhibit 1.)

Exhibit 1
The Medicaid Disease Management Initiative Was Projected to Save $112.7 Million Over Four Years

Fiscal Year	Anticipated Savings (millions)	Disease Management Initiative
1997-98	$ 4.2	Implement disease management for asthma, diabetes, HIV/AIDS, and hemophilia.
1998-99	39.4	Continue disease management for the initial four diseases ($24.7 M). Expand disease management to include cancer, end-stage renal disease, congestive heart failure, hypertension, and sickle cell anemia ($14.7 M).
2000-01	69.1	Improve disease management efficiency for the nine diseases ($23.0 M). Expand disease management to include population-based disease management and diseases not already covered by the initiative ($46.1 M).
Total	**$112.7**	

Source: General Appropriations Acts of 1997-98, 1998-99, and 2000-01.

The Legislature has continued to expect disease management to reduce the costs of treating Medicaid recipients with chronic diseases in addition to improving their health outcomes, but it has not projected savings since Fiscal Year 2000-01. This was partly due to our reporting in 2001 that the agency had not provided disease management services for the full range of chronic conditions expected by the Legislature, had little cost-savings information which the Legislature could use to inform budgeting decisions, and had achieved only a small portion of the expected savings. [4]

[4] *Justification Review: Medicaid Disease Management Initiative Sluggish, Cost Savings Not Determined, Design Changes Needed,* Report No. 01-27, May 2001.
Justification Review: Expected Medicaid Savings Unrealized; Performance, Cost Information Not Timely for Legislative Purposes, Report No. 01-61, November 2001.

Our 2001 report noted that although the Legislature expected the disease management initiative to include programs for nine diseases, implementation had been slow and only five programs were operating. The agency also had not determined whether the initiative had improved health outcomes or reduced costs.

In addition, agency oversight was minimal, failing to identify and address significant problems. Further, the initiative did not adequately address the multiple health issues of the chronically ill who often have more than one chronic condition. We recommended that the Legislature

- direct the agency to redesign the initiative from a disease-specific to a patient-focused or holistic approach;
- require the agency to establish a defensible methodology to determine cost savings and recover overpayments; and
- require the agency to report on progress in meeting performance expectations, including health outcomes and cost savings, and to improve oversight of the initiative.

Current Status

Since our 2001 review, the agency has reduced the number of vendors for disease management services and now contracts with four rather than six companies. However, after nearly seven years, the initiative still falls short of legislative expectations and intended goals. Specifically,

- disease management services are not available for all disease states prescribed by statute;
- the initiative has not produced the level of cost savings anticipated by the Legislature, and the total amount of net savings is undetermined because of delayed confirmations of savings and weak methodologies;
- the initiative's effects on recipient outcomes is largely unknown because the agency has not conducted analyses that demonstrate sustainability of improvements over time and what services influence changes in outcomes; and
- the agency's monitoring has not ensured that recipients receive needed services or

physicians participate and use best practice guidelines.

The agency has reduced the number of disease management vendors

The agency has reduced the number of vendors that deliver disease management services. At the time of our 2001 review, the agency contracted with six disease management organizations. Each company delivered disease management services for a specific chronic condition. The agency now contracts with four companies: two traditional disease management organizations and two pharmaceutical companies.[5] One pharmaceutical company delivers services to MediPass recipients with any of four chronic diseases: asthma, congestive heart failure, diabetes, and hypertension. As a result, recipients with one or more of these chronic conditions can be served by one company. Previously, recipients with multiple conditions were assigned to a program that focused on only one chronic condition.[6] This is a positive change as it can improve services to persons with multiple chronic conditions.

The agency has not provided disease management to all recipients specified by the Legislature

Although the disease management initiative was established in 1997, after nearly seven years the program currently does not provide services for all nine disease states specified by the Legislature. In addition, it continues to provide services to only a small portion of eligible recipients.

The disease management initiative currently includes services for five chronic conditions. As shown in Exhibit 2, these conditions are asthma, congestive heart failure, diabetes, HIV/AIDS, and hypertension. With one exception, services for these conditions have been available statewide since September 2002. The Bristol Myers Squibb Health Choice Network did not provide diabetes services to MediPass recipients from July 2003 until February 2004 due to extended contract renewal negotiations between the agency and vendor.[7]

Exhibit 2
The Disease Management Initiative Currently Offers Services for Five of the Nine Disease States Mandated by the Legislature

MediPass Disease Management Initiative

Offers Services	Does Not Offer Services
Asthma	Cancer
Congestive Heart Failure	End-Stage Renal Disease
Diabetes	Hemophilia
HIV/AIDS	Sickle Cell Anemia
Hypertension	

Source: Agency for Health Care Administration.

The program does not currently provide disease management services for MediPass recipients with end-stage renal disease, hemophilia, sickle cell anemia, or cancer. At one time, the program provided services to MediPass recipients with end-stage renal disease, but these services ended in December 2002.[8] Similarly, program services for hemophilia ended in June 2001 for recipients in the southern part of the state and in January 2003 for recipients in the northern part of the state.[9] The agency has selected a vendor to distribute blood factor to MediPass recipients with hemophilia and provide disease management, however, services have not started because the award is being challenged. In addition, the agency is discussing adding sickle cell anemia to the Bristol Myers Squibb program.

The initiative continues to serve only a small percentage of eligible recipients. As shown in Exhibit 3, with the exception of the HIV/AIDS program, disease management serves only a small percentage of eligible recipients. Overall, disease management vendors contact and assess only one-

[5] Contracts with pharmaceutical companies came about pursuant to the 2001 Legislature authorizing the agency to establish a Medicaid preferred drug list and to negotiate supplemental rebates in addition to those required by federal law. Supplemental rebates can be cash rebates or can include other program benefits such as drug product donation, disease management, and prescriber counseling and education.

[6] Recipients with more than one chronic disease were assigned to the disease management organization for the condition that the agency determined as most life threatening.

[7] While Pfizer's Florida: A Health State provides disease management services to the majority of recipients with diabetes, the Bristol-Myers Squibb program serves recipients through federally qualified health centers in seven counties.

[8] The agency notified beneficiaries receiving end-stage renal disease services that the program ended and that they had access to a 24/7 nurse call center; however, recipients with end-stage renal disease are not currently receiving active care management.

[9] Hemophilia disease management was offered in the northern and southern parts of the state by two separate vendors.

quarter of eligible recipients. The agency and vendors report that contacting and engaging eligible MediPass recipients has been a continuing problem. Some recipients do not have telephones; others frequently change telephone numbers and residences. Further, recipients may become ineligible for Medicaid services or choose not to actively participate in disease management.

Exhibit 3
A Low Percentage of Eligible Recipients Currently Receive Services

Disease State	Recipients Receiving Services[1]	Estimated Number of Recipients Eligible for Services	Percentage Receiving Services
Asthma	4,720	24,745	19%
Diabetes	3,332	11,512	29%
CHF	1,528	8,939	17%
Hypertension	5,550	25,185	22%
HIV/AIDS	4,266	6,182	69%
Total	**19,396**	**76,563**	**25%**

[1] At a minimum, recipients are considered to have received services once an initial assessment is completed.
Source: Agency for Health Care Administration, enrollment figures as of December 2003.

This situation also existed at the time of our 2001 review. We continue to believe that disease management vendors should be able to serve a higher percentage of eligible recipients. While it is likely not feasible for the initiative to serve all Medicaid recipients with chronic conditions, vendors could reach more recipients by working with doctors to refer their patients for services. To assist in this effort, the agency could use Medicaid field offices to help vendors contact doctors and to inform them of disease management through provider training.

The agency has not finalized savings for several contracts; reported savings are limited and likely overstated

The Legislature intended that the disease management initiative would reduce Medicaid costs for recipients with chronic diseases. Until recently, agency contracts required all vendors to guarantee savings.[10] As of March 2004, the initiative has reportedly netted $13.4 million in cost savings. While the agency has conducted initial calculations, it has not yet finalized cost savings for several programs. In addition, because of weak methodologies, reconciled savings are limited and likely overstated.

While disease management has reportedly saved $13.4 million, the agency has not finalized cost-savings information for several programs. Based on reconciliations completed by March 2004, the disease management initiative has netted a savings of $13.4 million. This represents an overall return of $1.46 for every $1 invested for the five disease management programs shown in Exhibit 4.

Exhibit 4
Disease Management Initiative Reportedly Has Saved $13.4 Million

Vendor and Disease(s)	Gross Savings[1]	Program Costs	Net Savings[2]
Accordant-hemophilia	$ 0.11 M	$ 0.08 M	$ 0.04 M
Caremark-hemophilia	0.83 M	0.05 M	0.78 M
AIDS Healthcare Foundation-HIV/AIDS	21.08 M	13.65 M	7.43 M
LifeMasters-congestive heart failure	12.66 M	7.63 M	5.03 M
Pfizer-asthma, congestive heart failure, diabetes, and hypertension	7.59 M	7.50 M	0.09 M
Total	**$ 42.27 M**	**$ 28.91 M[3]**	**$13.36 M**

[1] Gross savings are determined by subtracting actual expenditures from projected baseline expenditures.
[2] Net savings are determined by subtracting program costs from gross savings.
[3] Includes both investment and shared savings.
Source: Agency for Health Care Administration.

Until recently, vendor contracts have been risk-based in that vendors were expected to achieve a certain level of savings. If vendors demonstrated savings, the agency and vendor shared the savings; if vendors did not demonstrate savings, they were to repay administrative costs to the agency or the portion of savings unrealized. Savings are determined by comparing expected expenditures to actual expenditures.

However, expected expenditures can be estimated using different approaches, which can yield

[10] Required savings have varied since the initiative was first implemented. Initial contracts with disease management organizations specified that vendors save more than administrative costs; later contracts specified that vendors save 6.5% of the expected expenditures for recipients with the specific chronic condition. Pharmaceutical contracts specify that vendors will save enough to meet the overall guarantees specified in their contracts related to the preferred drug list.

significantly different estimates of cost savings. For example, four different approaches to estimate costs savings for one contract yielded estimates that ranged from a negative savings of $1.3 million to a positive savings of $11.9 million. Since no perfect methodology exists for projecting expected expenditures, vendors with at-risk contracts can be expected to challenge cost savings estimates that are not favorable to them. One company has been in dispute with the agency since we issued our prior report in 2001. [11]

Due to these disagreements, the agency has not determined cost-savings information for several programs accounting for $54.3 million in investment costs. Some of these reconciliations have been in dispute for several years and the vendors are no longer under contract with the state. In these instances, disagreements between the agency and vendors have generally related to how the agency projected the baseline costs needed to determine gross savings. In the other instances, either the agency or independent evaluator has not yet determined the cost savings. [12] Timely information is critical to assist the Legislature in determining whether disease management for MediPass recipients is worth the investment.

[11] This same company has been in litigation with the agency since 2003.

[12] The two pharmaceutical contracts require independent evaluators to determine cost savings.

This is particularly significant because the state's investment for programs with delayed reconciliations exceeds the costs of the disease management programs for which the agency has completed reconciliations. As shown in Exhibit 5, the state has invested $54.3 million to implement programs for which it has not yet determined savings. Some of the programs ended almost two years ago. At the very least, the agency should have determined cost savings for vendors that no longer provide disease management services.

Because of these difficulties and the uncertainty of attaining short-term cost savings as well as sustained savings for the long-term, the agency has modified some more recent contracts with vendors. For example, one current contract does not require cost savings; instead the vendor will continue to provide services for a reduced administrative fee. Since the agency is not likely to develop a methodology for projecting cost savings that vendors will not challenge, it should stop issuing contracts that base vendor payments on attaining specified costs savings. Instead it should establish other clear performance expectations for disease management contracts, including vendor expectations related to service provision, health outcomes, and return on investment. This will require the agency to identify a sound methodology to estimate baseline costs for determining return on investment, which it should annually report to the Legislature.

Exhibit 5
Cost-Savings Information Delayed for Contracts Accounting for $53.4 Million Investment

Vendor and Disease(s)	Investment	Contract Status	Reconciliations Delayed for
Coordinated Care Solutions - Diabetes	$17.96 M	Ended June 2002	Three Contract Years from 05/99 to 06/02
Accordant Health Care - Hemophilia	0.05 M	Ended June 2001	Contract Year 09/00 to 08/01
Renal Management Services - End Stage Renal Disease	13.01 M	Ended December 2002	Two Contract Years from 09/00 to 08/02
CareMark - Hemophilia	0.07 M	Ended January 2003	Two Contract Years from 09/00 to 01/03
Bristol-Myers Squibb - Diabetes	4.45 M	Ongoing	Contract Year 07/02 to 06/03
Pfizer - Asthma, Congestive Heart Failure, Diabetes, and Hypertension	8.93 M	Ongoing	Contract Year 07/02 to 06/03
AIDS Healthcare Foundation - HIV/AIDS	3.72 M	Ongoing	Contract Year 12/02 to 11/03
AIDS Healthcare Foundation - HIV/AIDS (South Florida)	2.45 M	Ongoing	Contract Year 08/02 to 07/03
LifeMasters - Congestive Heart Failure	3.72 M	Ongoing	Contract Year 09/02 to 08/03

Source: Agency for Health Care Administration, February 2004.

Because of weaknesses in the methods used to determine gross savings, reported net savings are likely overstated. The net savings that the agency has reported are also of questionable validity. Most of the savings reported to date were determined by the agency using a method to project baseline costs that is similar to the method it uses to set HMO rates. However, the agency's method is weak, because it does not control for factors that could affect reductions in costs and service utilization, such as new drug therapies, other medical practice changes, or changes that may be associated with each disease over time. This method also does not control for changes in health care costs that would occur regardless of the intervention. [13]

In addition, the $7.6 million gross savings attributable to Pfizer's Florida: A Healthy State program is overstated because of the approach used by the external evaluator to project baseline costs for eight intervention groups. [14] The external evaluator considered four methods to project baseline costs for high-risk recipients in the intervention groups, producing four trend factors for each group. The evaluator then averaged the highest and lowest trend factors for each intervention group and used the averaged trend factor to project baseline costs. This approach estimated gross savings of $5.1 million for high-risk recipients. The evaluator then applied the percentage of savings for high-risk recipients to the low-risk recipients, adding another $2.5 million to the gross savings estimate.

However, this approach overstated gross savings for two reasons. First, averaging the highest and lowest trend factors was not appropriate because the four methods, when applied individually, produced widely varying estimates (from $11.9 million gross savings to a loss of $1.3 million). [15] Second, the evaluator's decision to apply the percentage of savings for high-risk recipients to low-risk recipients was not appropriate because the low-risk recipients received only a minimal level of services. (For additional description and details, see Appendix B.)

The agency has not adequately determined if health outcomes have improved for MediPass recipients

In addition to reducing costs, the Legislature expected disease management to improve health outcomes of MediPass recipients with chronic diseases. To evaluate success toward this goal, the agency requires vendors to report annually on health outcomes. These reports are to demonstrate whether outcomes improved during the year. [16] However, vendor annual reports are typically insufficient to demonstrate improved health outcomes or meaningful reductions in hospital and emergency admissions. [17] In addition, the agency does not verify reported information and has not compiled results across programs or conducted independent analyses to evaluate the overall effect of disease management on recipient health and service utilization. Without this information, the Legislature and other policymakers cannot judge the effectiveness of services for specific chronic diseases or of the initiative as a whole.

The agency needs to better inform stakeholders and policymakers of the merits of disease management. The agency should provide analyses that demonstrate not only short-term changes in behavior and outcomes but sustainability of these changes over the long term. [18] The agency should also supplement self-reported data with objective, clinical data from patient records. In addition, the agency should provide analyses that demonstrate which services or mix of services influence changes in outcomes and systematically compare recipients who receive disease management services to those who are eligible for services but do not participate.

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[13] The statistical phenomenon is known as regression to the mean. An example of this would be the tendency of extremely ill patients to recover from their crises and then have lower expenses in the following months regardless of disease management interventions.

[14] These groups included two Medicaid eligibility groups (TANF and SSI) for each of four disease states (asthma, congestive heart failure, diabetes, and hypertension).

[15] The weakest method which produced the highest gross savings estimate ($11.9 million) was three times higher than the next closest estimate ($3.7 million).

[16] Annual reports should contain recipient information related to hospital and emergency room admissions, improvements in self-reported and objectively measured clinical outcomes, recipient knowledge of their chronic disease(s), and satisfaction with services.

[17] With the exception of AIDS Healthcare Foundation, vendors do not provide outcome data based on objective clinical measures.

[18] A well-documented phenomenon of research and evaluation studies, known as the "Hawthorne Effect," demonstrates that subjects who receive extra attention will improve behaviors in the short term.

The agency's oversight of the initiative remains weak

In our 2001 review, we noted that due to weak oversight, the agency failed to adequately address program barriers. The agency monitors the initiative mainly by reviewing vendor monthly and quarterly reports and teleconferencing with vendors on a regular basis to discuss problems. However, agency staff do not conduct site visits to observe how vendors deliver services or to interview providers and recipients. As a result, the agency

- does not know whether vendors are providing the level of services agreed upon; and
- has not ensured that MediPass providers actively participate in the initiative.

The agency does not adequately monitor vendors to ensure that recipients receive needed services. The agency primarily relies on vendor reports to oversee program delivery. However, in general, these reports provide limited information related to the scope and intensity of vendor services. In addition, the reports are not comparable because the agency does not require a standardized report format or common definitions of terms such as 'enrolled' and 'care managed'. [19] The agency also does not routinely review each program to ensure that recipients are receiving appropriate services. For example, the agency does not conduct site visits to monitor service delivery. The agency also does not interview recipients or conduct claims analyses to verify information in vendor reports.

To ensure that vendors are delivering services that meet the health care needs of recipients and to improve operations, the agency should standardize vendor reports and hold vendors accountable for providing all required information. Vendor reports should include detailed information on the scope and intensity of disease management services provided recipients. The agency also should develop and conduct routine oversight tasks, such as site visits, interviews with recipients, and claims analyses to verify vendor reports.

The agency has not ensured that physicians support the initiative and use best practice guidelines. In addition to educating recipients about their chronic conditions, disease management programs should work with physicians to increase their understanding of patient compliance issues and promote using best practice guidelines. Although the agency requires disease management vendors to provide physicians with best practice guidelines and periodic reports on patient progress, it does not monitor the extent to which this occurs. Some vendors work closely with physicians while other vendors have limited interactions with physicians. [20]

For disease management to succeed, the agency needs to ensure that MediPass physicians support the initiative by using best practice guidelines and working collaboratively with disease management vendors. The agency should develop specific strategies to increase physician awareness such as including a disease management component in MediPass provider training. The agency also should assess the level of vendor contact with physicians and whether physicians use best practice guidelines to improve recipient health.

However, if vendors continue to have varying success working with MediPass physicians, the agency could consider an alternative approach to vendor-based disease management. The agency could facilitate MediPass physicians and other entities, such as the Department of Health, professional associations, and university medical schools, to develop or adopt best practice guidelines using evidence-based medicine for some of the more common chronic diseases. [21] The agency also could design training and tools, such as workshops, treatment action plans, specific chart forms, and clinical software to assist physicians in using these guidelines. States using this approach indicate that early involvement of physicians has fostered greater acceptance and participation in

[19] For example, definitions of 'enrolled,' 'care managed,' and 'risk level' as well as what services these include differ for each program. In addition, while reports include the total number of attempted and completed telephone and face-face contacts, vendors do not report how often they contact assessed recipients, the unduplicated number of recipients contacted, or the average length of each contact.

[20] Vendors have difficulty engaging physicians primarily because most MediPass primary care providers have only a few Medicaid recipients enrolled in their disease management programs.

[21] Primary care physicians regularly treat patients with diabetes, congestive heart failure, asthma and hypertension. Patients with other less common chronic diseases such as HIV/AIDS are more likely to rely on specialists for disease specific medical care; disease management for these patients could continue to be delivered through disease management vendors.

disease management.[22] This approach also facilitates collection of clinical, objective data from patient files.

Conclusions and Recommendations

The 1997 Legislature directed the Agency for Health Care Administration to implement a disease management initiative for chronically ill Medicaid recipients to reduce taxpayer costs and improve health outcomes. However, after nearly seven years the initiative has not met legislative expectations. The agency does not provide the full range of disease management services mandated by the Legislature. While the initiative has reportedly saved $13.4 million, this estimate is questionable and may be overstated because of weak methodologies. In addition, the agency has not reconciled savings for several programs, delaying critical information needed for decision making. Further, the agency has not demonstrated that disease management has improved the health of Medicaid chronically ill recipients, and its oversight of the initiative has been weak.

If the Legislature decides to continue the disease management initiative, we recommend that it direct the Agency for Health Care Administration to take the actions described below.

- Remove risk-based expectations from vendor contracts and establish clear performance expectations. The agency has experienced substantial disputes with its vendors due to disagreements as to whether required savings have been achieved, and no longer requires specific levels of savings in some of its recent contracts. If the agency is unable to establish defensible disease management contracts that base vendor payments on attaining specified costs savings, it should discontinue such contracts and instead establish other clear performance expectations in its contracts, including vendor expectations related to service provision, health outcomes, and return on investment. This will require the agency to identify a sound methodology to estimate baseline costs for determining return on investment, which it should annually report to the Legislature.
- Assess and report on the long-term effects on health outcomes. To strengthen outcomes information and link changes in utilization and health status to program intervention, the agency should supplement data reported by vendors with objective, clinical data from patient records. The agency also should assess whether improvements in outcomes are sustained over time and systematically compare participants who actively receive services to those who are eligible but do not participate.
- Improve monitoring. To ensure that oversight provides the information needed to improve vendor operations, the agency should standardize vendor reports and collect more detailed information on the scope and intensity of recipient and physician services. The agency also should conduct routine oversight tasks such as periodic site visits, interviews with recipients, and claims analyses to verify vendor reports.
- Develop strategies that emphasize provider participation. The agency needs to actively recruit and encourage MediPass physician support and participation. The agency could increase physician awareness of the initiative by including disease management as a component in MediPass provider training. The agency also should assess the extent to which physicians have changed practices in response to best practice guidelines using evidence-based medicine.

  Alternatively, the agency could consider moving away from vendor-based disease management. The agency could initiate an effort to make disease management part of MediPass physician responsibilities. The agency could involve MediPass physicians along with other health care stakeholders to develop or adopt best practice guidelines for the more common chronic diseases. MediPass primary care case managers would then provide disease management as part of their MediPass responsibilities for which they receive a $3 monthly case management fee for each recipient. To encourage MediPass physicians to use the best practice guidelines for chronic diseases, the agency could provide additional support or incentives. In return, the agency could require participating physicians to comply with training, data collection, and other essential requirements.

[22] States that use this approach include Indiana, Maryland, New York, North Carolina, Virginia, and West Virginia.

Appendix A

Disease Management Is Expected to Improve Health Outcomes and Reduce Use of High Cost Services

Persons who have chronic diseases often receive fragmented care between primary care physicians and specialty physicians and have difficulty following appropriate treatment plans, including prescription drug regimens. Although optimal guidelines exist for some chronic diseases, treatment plans for these diseases frequently vary from patient to patient and from provider to provider. These factors ultimately lead to expensive specialty treatment, inappropriate health care utilization, and negative health outcomes. Disease management is expected to reduce the high rate of complications experienced by patients with chronic illness, improve overall health, and reduce patient use of high-cost health services, thereby reducing costs.

The 1997 Florida Legislature directed the agency to implement disease management to improve health outcomes and reduce health care costs of MediPass recipients. The Legislature expected the agency to establish disease management using

- best practice and treatment guidelines;
- prevention and education interventions;
- coordination of patient care;
- clinical interventions and protocols; and
- outcomes research and information technology.

Florida's Medicaid disease management initiative contracts with disease management organizations and pharmaceutical companies to deliver a variety of patient, provider, and community outreach services, as shown in Table A-1.

Table A-1
Disease Management Should Offer a Variety of Services to MediPass Recipients and Providers

Patient Services	Provider Services	Community Outreach
▪ Educational materials specific to the disease process ▪ Patient risk assessments to determine risk level ▪ Care management provided by a RN or LPN care manager ▪ Individual care plans ▪ 24/7 toll-free telephone services ▪ Patient satisfaction and knowledge surveys	▪ Best practice guidelines ▪ Recipient care plans ▪ Feedback on patient compliance with treatment protocols ▪ Patient profiling of utilization and cost patterns ▪ Specialist referral options ▪ Professional educational conferences ▪ 24/7 toll-free telephone line	▪ Health fairs ▪ Community health classes

Source: OPPAGA review of disease management contracts and interviews with agency staff.

Appendix B

Estimating Cost Savings Lacks Precision

Cost-savings calculations should control for several factors

Projecting baseline costs is critical to estimating cost savings. Disease management cost-savings calculations compare actual expenditures to projected baseline costs. Projected baseline costs reflect what expenditures would have been if disease management had not been provided. If actual expenditures are lower than the projected baseline costs, gross savings are realized. If actual expenditures are higher than or equal to projected baselines costs, gross savings are not realized and may represent a loss.

To estimate cost savings, it is critical that projected baseline costs control for changes in expenditures that are unrelated to disease management. These changes include factors such as disease severity level, cost-containment efforts, new treatments, and disease progression over time. For example, the severity level of enrolled individuals can change over time, so changes in expenditures may reflect differences in health status of enrollees, rather than improvements from an intervention. Cost-containment efforts, like preferred drug lists, can also reduce expenditures irrespective of disease management, while other changes, such as new treatments or pharmaceuticals, may increase expenditures. Baseline projections also should control for regression to the mean, the tendency of ill individuals that are chosen for program interventions such as disease management to improve, regardless of disease management interventions. Models that accurately control for these factors will generate more accurate savings estimates.

Independent evaluator used four methods to project baseline costs for Pfizer's Florida: A Healthy State program

For Pfizer's Florida: A Healthy State disease management program, the independent evaluator, Medical Scientists, Inc., considered four methods to project baseline costs for high-risk recipients in eight intervention groups.[23] Each of these methods controlled for various factors that influence expenditures. Table B-1 summarizes these methods.

Table B-1
Medical Scientists, Inc., Considered Four Methods to Calculate Baseline Costs

Methods
Agency for Health Care Administration, Budget Method
This method projected per-member per-month (PMPM) costs using prior claims data for each disease state by eligibility group and then trended each forward by applying service category inflation rates used to set HMO capitation rates. This method does not control for factors that could affect reductions in costs and service utilization, such as the use of new drug therapies, other medical practice changes, or changes that may be associated with each disease over time. Of these four methods, this method is the least precise and generates results that depart significantly from the other three methods.
Ernst & Young, Actuarial
This actuarial model projected baseline PMPM costs by applying a regression technique to a six-month moving average of expenditures over a 45-month time period. While this method controls for changes in specific disease costs within each intervention group, it does not control for population characteristics such as age, gender, or region. However, this method does control for the effect of the following three Medicaid program changes on costs: drug utilization review, prior authorization on mental health, and prior authorization on inpatient hospital admissions.

[23] These groups included two Medicaid eligibility groups (TANF and SSI) for each of four disease states (asthma, congestive heart failure, diabetes, and hypertension).

Methods
Medical Scientists, Inc., Actuarial
This actuarial model projected baseline PMPM costs using three techniques, regression and annual and monthly geometric averages, and then weighted each technique equally. Using three techniques strengthened the accuracy of the projected baseline. This method controlled for changes in specific disease costs within eligibility group as well as age and gender. This method also controlled for the three Medicaid program changes referred to in the previous method.
Medical Scientists, Inc., Markov Model
This statistical model projected PMPM costs using a multivariate regression model that controlled for numerous factors including changes in specific disease costs within eligibility group, age, gender, region, and ethnicity. This is the only method that models utilization over time for population-specific disease states and controls for regression to the mean. As such, this model is the strongest of the four.

Source: OPPAGA assessment of information provided by Medical Scientists, Inc. and interviews with the Agency for Health Care Administration and Medical Scientists, Inc.

Each of the above methods produced trend factors for projecting baseline per-member per-month (PMPM) costs for high-risk recipients. For each intervention group, the evaluator averaged the highest and the lowest trend factor from the four methods for each group. The averaged trend factor for each group was then squared and multiplied by Fiscal Year 1999-2000 PMPM baseline costs to project what Fiscal Year 2001-02 costs would have been in the absence of disease management.[24] The projected PMPM was then compared to the actual PMPM for each intervention group. The cost-savings calculation resulted in $5.1 million gross savings for high-risk recipients. The evaluator then applied the percentage of savings for high-risk recipients to low-risk recipients to calculate an additional $2.5 million savings for a total gross savings of $7.6 million for the entire program.

Final $7.6 million cost-savings estimate for Pfizer's Florida: A Healthy State program is overstated

As described above, the $5.1 million cost-savings estimate for high-risk recipients was calculated by averaging the highest and lowest trend factors for each of the eight intervention groups produced by the four methods described in Table B-1. The agency's budget method produced either the highest or the lowest trend factor for each intervention group. As a result, the cost-savings method with the most limitations (see Table B-1), the agency's budget method, had the most influence on the final estimate of gross savings. However, as shown in Table B-2, if applied separately, the agency's budget method would produce estimated savings ($11.9 million) three times higher than the next closest estimate ($3.7 million). Because this averaging technique includes trend factors from the weakest method for every intervention group, it overstates the $5.1 million savings.

[24] The trend rate is squared because the baseline cost represents costs in FY 1999-2000 and the Year 1 projection is two years in the future (FY 2001-2002).

Table B-2
Different Cost-Saving Methods Yield Results That Range From $11.9 Million Savings to a $1.3 Million Loss

Intervention Group	Budget Method	Ernst & Young Actuarial	MSI Actuarial	MSI Markov Model
Congestive Heart Failure – TANF	$ (17,331)	$ 100,489	$ 2,004	$ 56,388
Congestive Heart Failure – SSI	1,536,219	37,307	(133,037)	(336,364)
Diabetes – TANF	(434,124)	296,857	(309,544)	(35,666)
Diabetes – SSI	1,044,637	(2,225,333)	(2,367,493)	(4,121,703)
Hypertension – TANF	(432,693)	(257,793)	(32,393)	361,306
Hypertension- SSI	6,681,793	2,433,633	2,433,633	238,952
Asthma – TANF	674,969	3,330,726	3,372,281	1,421,960
Asthma – SSI	2,892,077	(10,147)	(1,151,063)	1,071,869
Total	**$11,945,547**	**$3,705,738**	**$1,814,387**	**$(1,343,260)**

Source: OPPAGA analysis of data from Pfizer's Florida: A Healthy State reconciliation.

The remaining $2.5 million savings is also overstated. The evaluator applied the same percentage of savings for high-risk recipients to low-risk recipients, even though low-risk recipients differed in health care costs, disease progression, and intensity of disease management services received. Because savings for high-risk recipients are already overstated, applying the percentage of savings for high-risk recipients to low-risk recipients further overstates the gross savings.

The Agency for Health Care Administration provided a written response to our report. This response is not reprinted herein but is available in its **entirety on our website.**

OPPAGA supports the Florida Legislature by providing evaluative research and objective analyses to promote government accountability and the efficient and effective use of public resources. This project was conducted in accordance with applicable evaluation standards. Copies of this report in print or alternate accessible format may be obtained by telephone (850/488-0021 or 800/531-2477), by FAX (850/487-3804), in person, or by mail (OPPAGA Report Production, Claude Pepper Building, Room 312, 111 W. Madison St., Tallahassee, FL 32399-1475).

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FLORIDA AGENCY FOR HEALTH CARE ADMINISTRATION

JEB BUSH, GOVERNOR

MARY PAT MOORE, INTERIM SECRETARY

May 7, 2004

Mr. Gary R. VanLandingham, Interim Director
Office of Program Policy Analysis
and Government Accountability
111 West Madison Street, Room 312
Claude Pepper Building
Tallahassee, FL 32399-1475

Dear Mr. VanLandingham:

Thank you for the opportunity to respond to your office's preliminary and tentative report entitled *Medicaid Disease Management Initiative Has Not Yet Met Cost-Savings and Health Outcomes Expectations.*

In your report you recommend that if the Legislature decides to continue the disease management initiative, AHCA should be directed to remove risk-based expectations from vendor contracts and establish clear performance expectations, assess and report on the long-term effects on health outcomes, improve monitoring of vendor operations, and develop strategies that emphasize provider participation. You also recommend that AHCA could consider moving away from vendor-based disease management, making it a part of MediPass physician responsibility.

We appreciate the analyses performed by your staff and have included our response to these recommendations. AHCA continuously looks for opportunities to improve operations and is committed to providing cost effective and efficient health care services to the State.

If you have any questions regarding this response please contact Michael Bennett at 414-5419.

Sincerely,

Mary Pat Moore

Mary Pat Moore
Interim Secretary

MPM/mb
Enclosure

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Agency Response to OPPAGA's Progress Report

Medicaid Disease Management Initiative Has Not Yet Met Cost-Savings and Health Outcomes Expectations

May 7, 2004

OPPAGA Comments to Agency's Response

Rather than responding to each agency comment, we encourage readers to keep the following points in mind as they consider the information presented in the agency's response.

- The 1997 Florida Legislature authorized the agency to implement a disease management initiative to improve the health outcomes of Medicaid recipients with chronic diseases and to reduce Medicaid costs. Since that time the agency has provided disease management services for varying lengths of time and varying geographic areas for several disease states. However, after nearly seven years, the initiative continues to fall short of meeting legislative expectations.
- The agency has not finalized cost-savings for a number of vendors, even some that no longer provide disease management services. As the result of putting vendors at risk for savings and using imprecise methodologies to determine whether these savings were realized, contested results and lengthy negotiations have delayed critical cost-savings information. While an independent evaluator used a 'blended model' to determine the first year's cost savings for the Florida: A Healthy State program, this methodology was flawed. In this instance, the evaluator considered four models which varied in statistical rigor and yielded vastly disparate results. [1] The evaluator 'blended' these results by averaging the high and the low for each of eight recipient groups. [2] The results derived from the budget method, the weakest of the methods, were included in each averaging. [3] A more accurate and defensible 'blended model' would have averaged the results of the three more robust models. This approach would have yielded gross savings for high-risk recipients of $1.3 million rather than $5.1 million.
- While the agency requires vendors to annually report on outcomes and provides some of this information in its response, information is reported over short time frames and may not represent meaningful change because some outcomes are based on only a small proportion of the population. In addition, the information is often based on recipient self-report of behaviors, such as exercise, smoking, and diet which are value-laden, difficult to change, and susceptible to response bias. The agency has not rigorously evaluated the initiative by studying the long-term effects of disease management on health outcomes, determining which services or mix of services influence changes in outcomes, and comparing recipients who receive services to those who qualify for services but do not participate.
- We conducted multiple interviews with agency staff asking about monitoring changes implemented since our last report. Based on these interviews we concluded that the agency's oversight of the initiative had not improved. Agency staff did not give us any examples of what changes they have made to improve the initiative based on monitoring reports or teleconferences with vendors. The agency in its response indicates that it has conducted 24 site visits since initiative inception; however, nearly all of these site visits focused on ensuring compliance with contracts, were based on limited sampling of records, and occurred before we published our prior report in 2001. In addition, because monitoring efforts do not adequately assess the quality and intensity of services provided to recipients and providers, the agency cannot ensure that services are delivered as intended and are effective.
- Although critical for a successful disease management program, the agency has not demonstrated that MediPass providers accept and support the initiative. Further, the agency has provided little evidence that providers have changed their practices by using the best practice guidelines provided them by disease management vendors. As such, we believe the agency should consider an alternative approach to vendor-based disease management, making disease management part of MediPass. The agency could involve MediPass physicians in developing best practice guidelines for the more common chronic diseases and provide additional support and incentives to encourage their participation.

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[1] These included the agency's budget method, two actuarial methods, and a predictive model.

[2] These groups included two Medicaid eligibility groups (TANF and SSI) for each of four disease states (asthma, congestive heart failure, diabetes, and hypertension).

[3] The budget method estimated gross savings ($11.9 million) three times higher than the next closest method ($3.7 million).

Agency Response to OPPAGA's Progress Report
Medicaid Disease Management Initiative Has Not Yet Met Cost-Savings and Health Outcomes Expectations

Recommend that the Legislature direct AHCA to:

Remove risk-based expectations from vendor contracts and establish clear performance expectations. *The agency has experienced substantial disputes with its vendors due to disagreements as to whether required savings have been achieved, and no longer requires specific levels of savings in some of its recent contracts. If the agency is unable to establish defensible disease management contracts that base vendor payments on attaining specific cost savings, it should discontinue such contracts and instead establish other clear performance expectations in its contracts, including vendor expectations related to service provision, health outcomes, and return on investment. This will require the agency to identify a sound methodology to estimate baseline costs for determining return on investment, which it should annually report to the Legislature.*

Agency Response:

Recognizing that Florida Medicaid implemented disease management programs when the field was young, the Agency believes that the methodologies used in reconciling performance issues have been both sound and defensible. The Agency entered into the first generation of contracts using the methodology that had been used to project expected spending for Medicaid fee-for-service beneficiaries. This same methodology, - - the budget method - - is used to project the Upper Payment Limit (UPL), which is the basis for the HMO capitation rates.

The Agency worked diligently to establish defensible methodologies for determination of cost savings. As example, for the "Florida: A Healthy State" contract, the largest disease management initiative to date, a third party was engaged to determine and recommend specific methodologies to be used in calculating the disease management savings. The methodologies included the budget method, actuarial projections, and predictive modeling. Each of these projections had strengths and weaknesses, and a blended model was developed. Adjustments were made to the budget method to quantify historical inaccuracies in projections. An actuarial baseline was projected to accommodate fluctuations in utilization and to weight recent utilization experience more heavily. Adjustments were made to the overall trend to account for the Agency's utilization measures. The reconciliation for year one of this program, yielded a conservative savings of 3% overall. (See Table 1)

In future contracts, the Agency will build on these methodologies. The Agency is exploring the use of no-risk contracting where savings have been documented in the past. It is interested in linking changes in utilization and outcomes to changes in cost. An outside evaluator with experience in disease management is evaluating the methodologies, will report on best practices and the experiences of other states, and make recommendations for future contract models.

Table 1 - Disease Management Program Savings/Savings Reconciliations

Diabetes					
Contractor	***Year***	***Contract Period***	***Administrative Costs***	***Gross Savings***	***Net Savings***
Coordinated Care Solutions	One	May 1999 – April 2000	($7,579,842)	*In Litigation*	
	Two	May 2000 – April 2001	($7,208,641)		
	Three	May 2001 – June 2002	($3,167,676)		

HIV/AIDS					
Contractor	***Year***	***Contract Period***	***Administrative Costs***	***Gross Savings***	***Net Savings***
AIDS Healthcare Foundation	One	July 1999 – June 2000	($2,479,492)	$5,773,730	$3,294,238
	Two	July 2000 – June 2001	($4,755,315)	$7,613,451	$2,858,136
	Three	July 2001 – November 2002	($4,025,340)	$7,687,998	$2,827,728
	Four	December 2002 – June 2003	($2,528,820)	$6,726,661	*Projected* $4,197,841
	Five	July 2003 – June 2004	($4,335,120)	$11,531,419	*Projected* $7,196,299

HIV/AIDS					
Contractor	***Year***	***Contract Period***	***Administrative Costs***	***Gross Savings***	***Net Savings***
SFCCN	One	September 2002 – June 2003	($2,040,318)	$5,427,246	*Projected* $3,383,928
	Two	July 2003 – June 2004	($2,705,220)	$7,195,885	*Projected* $4,490,665

Hemophilia					
Contractor	***Year***	***Contract Period***	***Administrative Costs***	***Gross Savings***	***Net Savings***
Accordant	One	September 1999 – August 2000	($75,600)	$112,912	$37,312
	Two	September 2000 – August 2001	($54,900)	*Admin Fees Not at Risk; No Shared Savings*	
Caremark	One	August 1999 – August 2000	($47,872)	$825,745	$777,873
	Two	September 2000 – August 2001	($35,775)	*Admin Fees Not at Risk; No Shared Savings*	
	Three	September 2001 – July 2002	($36,225)		

ESRD/Chronic Kidney Disease					
Contractor	***Year***	***Contract Period***	***Administrative Costs***	***Gross Savings***	***Net Savings***
RMS Disease Management	One	September 2000 – August 2001	($7,404,616)	$11,093,143	$3,688,527
	Two	September 2001 – August 2002	($5,603,250)	*In Negotiation*	

Congestive Heart Failure					
Contractor	***Year***	***Contract Period***	***Administrative Costs***	***Gross Savings***	***Net Savings***
LifeMasters Supported Selfcare	One	September 2000 – August 2001	($3,906,875)	$7,236,704.21	$3,329,829.21
	Two	September 2001 – August 2002	($4,373,000)	$5,425,112.20	$1,052,112.20
	Three	September 2002 – August 2003	*Projected* ($3,600,000)	*Projected* $6,000,000.00	*Projected* $2,400,000 *Admin Fees Not at Risk; No Shared Savings*
	Four	September 2003 – August 2004	*Projected* ($3,600,000)	*Projected* $6,000,000.00	*Projected* $2,400,000 *Admin Fees Not at Risk; No Shared Savings*
	Five	September 2004 – August 2005	*Projected* ($3,600,000)	*Projected* $6,000,000.00	*Projected* $2,400,000 *Admin Fees Not at Risk; No Shared Savings*
	Six	September 2005 – August 2006	*Projected* ($3,600,000)	*Projected* $6,000,000.00	*Projected* $2,400,000 *Admin Fees Not at Risk; No Shared Savings*

Chronic Obstructive Pulmonary Disease (COPD)					
Contractor	***Year***	***Contract Period***	***Administrative Costs***	***Gross Savings***	***Net Savings***
CyberCare	One	August 2000 – December 2001	($82,875)	$57,521	($25,354)

Recommendation that the Legislature direct AHCA to:

Assess and report on the long-term effects on health outcomes. *To strengthen outcomes agency should supplement data reported by vendors with objective, clinical data from patient records. The agency also should assess whether improvements in outcomes are sustained over time and systematically compare participants who actively receive services to those who are eligible but do not participate.*

Agency Response:

The Agency has relied extensively on objective clinical and utilization data from patient claims records to formulate conclusions with respect to DM efficacy. Throughout the DM monitoring and reconciliation process, Agency staff have utilized this data as a check and balance to the data provided from outside vendors. Differences were discussed in meetings between vendor and Agency staff to arrive at a mutually acceptable resolution. Clinical data from patient medical records captured by the DM vendor also are monitored by the Agency through random audits of the DM vendor records.

The Agency has partnered with DM vendors in an effort to increase the amount of clinical data available. These efforts have included the utilization of Area Office staff, the program participants, nursing and physician staff.

Clinical data efforts for the DM program included amplified provider contact, contracts with home health nurses to obtain lab specimens during home visits, and self-test kits for program participants. These pilots all yielded increased volume of results, which were utilized in the Agency's outcome evaluations.

DM programs have completed initial analyses of improved outcomes, and the results are promising. For participants in these programs, the data show a marked improvement in health outcomes for the time periods assessed. Early indicators further suggest that the longer a beneficiary is actively engaged in a DM program, the greater the achieved improvement in health status.

Florida's largest disease management initiative, "Florida: A Healthy State" (FAHS), involving 10 hospitals across the state, has demonstrated success in improved clinical results, lower utilization of high-cost inpatient services and emergency department visits, which lead to overall cost savings. The table below illustrates the program impact on utilization at the end of the first year.

	Overall	Hypertension	Asthma	Diabetes	Heart Failure
Inpatient Days	↓12.6%	↓15.0%	↓0.7%	↓13.7%	↓6.0%
Emergency Room Visits	↓1.0%	↓0.7%	↓4.0%	↑1.8%	↓1.3%
Sample Size	N=3,947	2,014	733	1,003	197

This analysis compared the number of emergency department visits and inpatient days in two groups:

a) Care managed, and
b) Non-care managed.

Claims data from July 2001 through December 2002 were analyzed. Criteria for inclusion required both groups to have enrollees that were Medicaid eligible continuously from July 2001 to December 2002, and were matched for eligibility category (SSI vs. TANF), disease state, prior utilization and length of time in the program.

Other Florida disease management programs have reported similar results, with hospital admission decreasing by 36% in the first two years of the program.

Population level improvements demonstrate that the program has successfully educated patients about their disease and health care, increased their abilities to self-manage, and changed health-related behaviors.

The measurement of these health behaviors is indicative of beneficiary self-management skills, lifestyle indicators, and perceived quality of life. These data are self-reported by the beneficiary to the nurse care manager, using nationally recognized and validated instruments for data collection. A more detailed description of the instruments is attached. (Table 2, "Self-Management Outcome Measures")

Table 2 - Self-Management Outcomes Measures
Florida- A Healthy State Program

Outcome Measure	What is it and why is it important?	How is it measured in FHS program?	Who uses this measure?	Reference values for Medicaid?
Quality of Life	Health status is a term that encompasses the overall state of a persons physical mental and social well-being. QOL instruments measure physical pain, ability to perform daily tasks, feelings of depression, happiness or anxiety and ability to perform mental tasks or engage in social activities.	A 12-item validated QOL instrument called the SF-12[1]. The SF-12 is a shorter version of the SF-36, one of the first validated instruments to quantify health status. A newer version of this instrument, the SF-8 is also used to measure health status. General and disease-specific population norms are available for comparison. Scoring protocols describe how to derive subscale scores (PCS and MCS).	SF-36 is used as part of the Health of Seniors (HOS) survey which is a part of HEDIS performance data set. HOS is required by Medicare for Medicare + choice plan reporting. PSF-36 is one of the FACCT quality measures	A cross-sectional study assessed participation rates, comprehensibility, and overall scores for three generic measures of health status--the Short Form-12, EuroQol EQ-5D, and Health Utilities Index Mark 2/3. Participants at an inner-city community health center completed demographic questions, the measures, and questions regarding the comprehensibility and relevance of the measures. Mean scores were lower than published population norms. Participants were able to complete the self-administered measures and appeared to comprehend the measures. Responses from the measures yielded apparently valid results, and scores are

[1] Ware JJ, Sherbourne CD. The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. **Medical Care** 1992; 30:473-83

Outcome Measure	What is it and why is it important?	How is it measured in FHS program?	Who uses this measure?	Reference values for Medicaid?
				likely to be lower than higher socioeconomic status populations. Mean scores were comparable to scores of persons with chronic diseases. The results suggest that these measures may be successfully used in characterizing the health of minority and low-income populations.[2]
Physical Health (PCS) subscale	Scales shown in the components analysis to primarily measure physical health (physical functioning and role limitations-physical) best distinguished groups differing in severity of chronic medical condition and had the most pure physical health interpretation.	The SF-12 users manual describes how to generate subscale scores. Subscale combines responses from several questions into a single summary score.		
Mental Health (MCS) subscale	Scales shown to primarily measure mental health (mental health and role limitations-emotional) best distinguished groups differing in the presence and severity of psychiatric disorders and had the most pure mental health interpretation.	See above.		
NYHA Class (Heart Failure)	The most commonly used system to assess the severity of heart failure is the New York Heart Association (NYHA) functional classification.[3]	Qualitatively assessed by asking about level of activity that brings on symptoms	*Clinicians use this classification to determine how well controlled heart failure*	

[2] Lubetkin EI, Gold MR. Comprehensibility of measures of health-related quality of life in minority and low-income patients. J Natl Med Assoc 2002 May;94(5):327-35

[3] Criteria Committee NYHA Inc. Diseases of the Heart and Blood Vessels: Nomenclature and Criteria for Diagnosis. Boston, Mass: Little Brown & Co Inc; 1964:114.

Outcome Measure	What is it and why is it important?	How is it measured in FHS program?	Who uses this measure?	Reference values for Medicaid?
	Patients are grouped according to the degree of effort needed to elicit heart failure symptoms. Class I patients exhibit symptoms only at exertion levels similar to those achieved readily by healthy individuals, whereas class II patients have symptoms on ordinary exertion. Class III patients have symptoms on minimal exertion, and class IV patients have symptoms at rest. NYHA class has been found to correlate closely with SF-36 score.[4] The physical (role and functioning) health burden was significantly greater than that suffered in other serious common chronic disorders, whether cardiac or other systems. Optimising treatment to improve NYHA class appears to improve perceptions of quality of life for patients with heart failure. Given the dramatic decline in quality of life with heart failure, this end-point should be a much more important target for healthcare interventions, especially treatments such as ACE inhibitors and beta-blockers that are shown to improve quality of life.		*patients symptoms are.* NYHA is often used to classify patients enrolled in clinical trials.	

[4] Hobbs, FD et al. Impact of heart failure and left ventricular systolic dysfunction on quality of life. A cross-sectional study comparing common chronic cardiac and medical disorders and a representative adult population. Eur Heart Journal. 2002. Dec, 23(23); 1867-76.

Outcome Measure	What is it and why is it important?	How is it measured in FHS program?	Who uses this measure?	Reference values for Medicaid?
NHLBI severity level (Asthma)	A symptom-based severity classification system for asthma based on pre-treatment assessment of Sx.[5] Categories include: mild intermittent asthma (level 1); mild persistent asthma (level 2) moderate persistent asthma (level 3); severe persistent asthma (level 4).	Assessed by a series of questions that quantify frequency of daytime Sx; nocturnal Sx; activity limitation due to asthma.	Clinicians use the measure to determine treatment intensity for symptom control.	
Medication Compliance Score	Calculation of a mediation compliance score requires responses to nine questions to determine the level of patient medication taking behavior. It is also possible to look at the specific barriers identified in each question that patients have (e.g., knowledge, forgetfulness, etc).	A quantitative, self-administered 9 item medication compliance scale (Morisky Self-reported Medication Taking Behavior Scale[6])	This instrument has been tested and quantitatively validated in hypertension, tuberculosis, HIV infection and gout. Recently, the tool has been used in other medical conditions such as type 2 diabetes and COPD.	

[5] NHLBI: Guidelines for diagnosis and management of asthma.

[6] Morisky DE, Green LW, Levine DM. Concurrent and predictive validity of a self-reported measure of medication adherence. *Med Care*. 1986 Jan;24(1):67-74.

Data management is one of the most important components of a quality DM program, and leads to more robust outcome measurements. In the disease management programs, information is captured to assess improvement processes across several general domains, including health behaviors, patient self-management skills, clinical indicators, psychosocial outcomes, and health care utilization. The information comes primarily from three sources:

1) Medical record information, including laboratory test values,
2) Claims data for inpatient hospitalizations and ED visits, and
3) Self-reported data from participants.

Every effort is made to ensure that objective and complete information is used in evaluating DM outcome measures. Categories of information utilized by the Agency include:

Health Behaviors.

Information about current health behaviors, including diet, exercise, and smoking status, are captured and stored in the disease management data system at baseline, at all relevant follow-up contacts with care managers, and summarized in regular reports.

Patient Self-Management Skills.

To determine whether the program is positively impacting patients' self-management skills, relevant information regarding self-monitoring is collected as well. This includes, but is not limited to, self-monitoring of weight for patients with heart failure, home self-monitoring of blood glucose and daily foot exams for patients with diabetes, and home blood pressure monitoring for patients with chronic heart disease. Medication adherence is also measured at least annually using a 9-item validated self-report medication compliance scale (Morisky DE, Green LW, Levine DM. Med Care 1986. Jan: 24(1): 67-74.).

Clinical Indicators.

To determine whether the program has had a positive impact on patients' health status, a number of clinical measures are also captured during regular nurse care manager contacts with program participants including results of laboratory tests, vital signs, and symptoms. The data are retrieved using a variety of methods, from patient self-reports, to manual review of the medical record, to a pilot of home self-testing by beneficiaries.

Psychosocial Outcomes.

Psychosocial outcomes as those that represent influences on patient health-related perceptions and beliefs. Several indicators of psychosocial improvement are used

throughout the course of the programs including health status, self-efficacy, and patient satisfaction. The SF-12, a commonly used and validated instrument to assess health status across all conditions is administered annually. Self-efficacy regarding self-management for each disease is also measured via the SF12 to assess patients' confidence in their ability to do what is necessary to manage their condition. This kind of efficacy is a powerful measure of patient empowerment and a strong predictor of actual health behaviors.

Service Utilization.

Claims data are used to collect and analyze information on service utilization. This information is used to assess whether the program is influencing appropriate hospital admissions, number of days in the hospital, and reducing unnecessary or inappropriate medication and emergency room use.

Health Behaviors[1]	Program Impact
Non-Smokers (n=949)[1]	↑3.7%
In Process of Quitting Smoking (n=949)	↑35.4%
Following a Special Diet (n=1,720)	↑14.0%
Regular Physical Activity (n=982)	↑13.9%
Medication Compliance[2] (n=969)	↑39.0%
General Health Status[3]	**Program Impact**
Physical Health (n=1,834)	↑3.4%
Mental Health (n=1,834)	↑4.9%

[1]N = the number of beneficiaries with an initial health risk assessment for which a follow-up assessment has been completed. (12,365 beneficiaries completed an initial assessment)
A response to the question related to the measure at both initial and follow-up, with a minimum thirty-day period between them, was required.

[2]Medication Compliance was measured on a 12-point scale (0 = very compliant, 12 = very non-compliant).

[3]General health status is based on the SF12, a validated measure of general health status. A higher value indicates better health.

Recommend that the Legislature direct AHCA to:

Improve monitoring. *To ensure that oversight provides the information needed to improve vendor operations, the agency should standardize vendor reports and collect more detailed information on the scope and intensity of recipient and physician services. The agency also should conduct routine oversight tasks such as periodic site visits, interviews with recipients, and claims analysis to verify vendor reports.*

Agency Response:

The initial intent of the disease management initiative was to test and assess a variety of interventions. Towards that end, vendors were required to report on a monthly, quarterly and annual basis on contractually specified measures. Although the Agency has not required vendors to reprogram existing IT systems to achieve standardized outcome analysis and reporting, it recognizes that this could enhance the overall evaluation of the DM initiative. Discussions with vendors indicate a willingness to move towards report standardization across disease-specific programs. The Agency also notes that optimal outcome reporting is a long-term process that requires a great deal of rigor and analytic resources to be accurate and valid. Having accrued long-term clinical data that may yield statistically significant outcomes, the Agency is taking steps to standardize monthly, quarterly, and annual outcome reporting for each DM program.

The Agency actively monitors each of the DM programs. Monitoring consists of announced and unannounced site visits, routine telephone conferences with nurse care managers and other program staff, and regular review of participant charts for contact, interventions and clinical information.

Since implementation, the Agency has completed 24 on-site visits to observe vendor compliance with contract terms. For the value-added programs encompassing 10 hospital sites, an off-site call center and a network of Federally Qualified Health Clinics, Agency staff members made semi-annual site visits, in addition to monthly site visits by oversight and implementation program partners.

Agency headquarters staff also work closely with the staff of the Area Offices to monitor local program operations. Complaints or compliments received by the Area Offices from providers or participants are shared with headquarters staff. Agency staff inspected each vendor site at least once during the contract period. These visits were both scheduled and unannounced. Staff members interviewed program participants as well as providers. The Agency continues to solicit and receive feedback on program activity from various consumer and provider groups, including the Department of Health.

Recommendation that the Legislature direct AHCA to:

Develop strategies that emphasize provider participation. *The agency needs to actively recruit and encourage MediPass physician support and participation. The agency could increase physician awareness of the initiative by including disease management as a component in MediPass provider training. The agency also should assess the extent to which physicians have changed practices in response to best practice guidelines using evidence-based medicine.*

Alternatively, the agency could consider moving away from vendor-based disease management. The agency could initiate an effort to make disease management part of MediPass physician responsibilities. The agency could involve MediPass physicians along with other health care stakeholders to develop or adopt best practice guidelines for the more common chronic diseases. MediPass primary care case managers would then provide disease management as part of their MediPass responsibilities for which they receive a $3 monthly case management fee for each recipient. To encourage MediPass physicians to use the best practice guidelines for chronic diseases, the agency could provide additional support or incentives. In return, the agency could require participating physicians to comply with training, data collection, and other essential requirements.

Agency Response:

Provider participation in disease management programs is vital to the success of the programs, and the Agency and its partners have recognized this since the initial programs were implemented.

The initial contracts went to vendors whose DM experience was primarily commercial based. These vendors were charged with establishing a presence in the medical community and building a medical network concurrently with program inception.

The value added programs brought an additional resource, the use of existing provider networks, to DM initiatives. Nurse care managers in the FAHS program are community based, and positioned in the 10 largest safety net hospital systems statewide. Locally based physicians serve as medical directors for each of the 10 hospitals and are active in program planning, evaluation, referrals and best practice guideline implementation. In a second program, Diabetik Smart, the nurse care managers are clinically based in an associated group of Federally Qualified Health Centers in South Florida whose providers are actively engaged in the program. These community-based enhancements have led to increased provider participation in, and recognition of, the DM programs.

DM programs are charged, by contract, with dissemination of best practice guidelines to providers whose patients participate in the DM program. This process is well documented by each vendor and is often accompanied by an outreach visit, and a progress report for the provider on patients who are program participants. Vendors are

sensitive to provider resistance to mandates on clinical practice and focus on education on most recent best practice guidelines.

MediPass training for primary care providers includes information regarding disease management, which also appears in the MediPass provider handbook. In addition, the Medicaid Area Office staff have been invaluable in assisting DM vendors in reaching local providers.

The Agency has pursued vendor-based disease management as directed by the Legislature. Other states have implemented disease management programs by using an enhanced primary care provider network. In this approach, a state's health care agency works with the primary care providers to enhance the care they provide to their enrollees with certain chronic conditions. The agencies provide claims-based feedback to the providers on their patients as well as best practice guidelines for management of chronic illness. An additional case management fee is generally paid to these providers.

OPPAGA conclusion: disease management services are not available for all disease states prescribed by statute:

Although the disease management initiative was established in 1997, after nearly seven years the program still does not provide services for all nine disease states specified by the Legislature. In addition, it continues to provide services to only a small portion of eligible clients.

Agency Response:

The Agency has partnered with 10 different vendors since 1999 to implement programs serving the needs of beneficiaries living with one, or more, of nine disease states. (See Table 3)

The DM initiative was initially designed to test various models of care, and the Agency was given the charge to pioneer innovative programs for Medicaid beneficiaries with chronic diseases in an effort to improve health outcomes, improve quality of care and reduce costs.

The first programs were implemented on a single disease state basis. This meant that beneficiaries with multiple disease states were excluded from participating in more than one DM program at a time. Beneficiaries were initially assigned to a program based on a claims data analysis utilizing a hierarchy of disease states.

In 1999 and 2000, the Agency contracted with seven different vendors to provide six disease state DM programs (Diabetes, HIV/AIDS, Hemophilia, Congestive Heart Failure, End Stage Renal Disease, and COPD). These were 'traditional' DM programs with a nurse care manager assigned to work with beneficiaries one-on-one to provide educational support, link to community resources and empower them to improve their health status. The programs provided telephonic and face-to-face intensive nurse care management. Beneficiaries had access to a nurse 24/7 via a toll free telephone number, educational materials mailed on a quarterly basis and disease-specific home health aids at no cost. There was close communication with providers to ensure coordination and continuity of care for the beneficiaries enrolled in the program.

The Chronic Obstructive Pulmonary Disease (COPD) telemedicine program was an innovative pilot program that provided beneficiaries with real-time access to a nurse care manager 24/7 via the Internet. Computers and dedicated ISDN lines were installed in the participants' home and utilized to record daily medical data (blood pressure reading, weight, and other physical assessment indicators). Data were relayed to the beneficiary's' medical provider and to the nurse care manager. The participant's daily entry allowed timely updates on the medical condition resulting in subsequent changes in the treatment plan without an actual emergency room or outpatient visit.

In 2001, the Agency innovatively partnered with pharmaceutical manufacturers in a program that provided multiple-disease state services to beneficiaries with Asthma, Congestive Heart Failure, Diabetes and Hypertension. The program was the first such partnership in the nation and, in the first term, reached over 115,000 beneficiaries, with more than 15,000 individuals receiving intensive care management from 60 nurse care managers through 10 large safety net hospital systems statewide. A second program focuses on Diabetes using an innovative model of care, called Promotora, that pairs lay health care workers with beneficiaries of the same community to provide education and support for Diabetes with the oversight of a nurse. This culturally appropriate, faith-based program has reached over 1,800 beneficiaries, partnered with local churches for outreach, and provides service through a network of Federally Qualified Health Centers (FQHCs).

Directed by the Legislature, the Agency partnered with a major state university in 2002 to establish the Center for Orphan Autoimmune Disorders. This was a provider and medical service based DM program that directs evidence-based best practice for orphan autoimmune disorders such as Rheumatoid Arthritis, Systemic Lupus Erythematosus, Scleroderma, and Sjogrens Syndrome. The Center is the first of its kind in the nation.

A study conducted in 2001 by Dr. Richard Lottenberg at the University of Florida, via the Medicaid Research unit, evaluated and reported on statewide prevalence, geographical location of and medical service availability for Medicaid beneficiaries with Sickle Cell Anemia. This study is an important precursor to the development of a Sickle Cell DM program. The physical and psychological nature of the disease requires unique interventions to improve health status and medication adherence, while being cost effective. Discussion is currently under way regarding the implementation of a Sickle Cell Program.

The Agency partnered with the Department of Health to implement statewide Lung, Breast and Cervical Cancer screening projects in 2001 and 2002. These programs are not traditional DM programs, but are consistent with DM early intervention cancer programs that consist of routine screening and education for commercial populations.

HIV/AIDS DM services have been available continuously since 1999 and served by one vendor. Diabetes DM services have been available continuously since 1999, served by three different vendors with varying approaches to program services. CHF services have been available since 2000, with the north Florida population served by one vendor since inception.

Hemophilia services were available from 1999-2003. Recognizing the need for additional pharmacy benefits management to enhance cost effectiveness, the Agency has sought a unique procurement for factor product distribution and DM service

provision. The associated procurement has been challenged in an administrative action and final resolution is pending.

Asthma services began in 1999 as a pilot program at no cost to the Agency. That program ended and a second program began in 2001.

ESRD DM service provision began in 2000 and ended in 2002 at the request of the vendor. As noted in OPPAGA's report, these beneficiaries have access to a 24/7 nurse call line, and beneficiaries with ESRD combined with other disease conditions have been re-assigned to an appropriate DM program.

The Agency serves the needs of Medicaid beneficiaries with chronic illness as directed by legislative authority by continuously seeking innovative programs, as not all disease states can adequately be served by a single approach. Internal evaluation has led to changes in models of service provision resulting in program improvements.

Table 3 - Medicaid Disease Management Programs

Disease	Disease Management Contractor	Geographic Coverage	Contract Period		Contract Terms	Current Number of Enrolled Beneficiaries
			Start	End		
Diabetes	Coordinated Care Solutions	Statewide	May 1999	August 2003[1]	• Advanced Administrative Fees at Risk	• Contract terminated June 2002 • 16,000 Enrolled at Height
HIV/AIDS	AIDS Healthcare Foundation	Statewide (except Dade and Broward)	July 1999	June 2004[1]	• Advanced Administrative Fees at Risk	4,014
	AHF, Public Health Trust, and the North Broward Hospital District	Dade and Broward	September 2002	June 2004	• Advanced Administrative Fees at Risk • 6.5% Savings Guarantee	2,373
Hemophilia	Accordant	Areas 7 – 11	September 1999	June 2002	• Fixed Administrative Fees	• Services ended June 2001 • Contract terminated June 2002 • 70 Enrolled at Height
	Caremark	Areas 1 – 6	September 1999	January 2003[1]	• Advanced Administrative Fees at Risk	• Contract terminated January 2003 • 60 Enrolled at Height
ESRD	RMS Disease Management	Statewide	September 2000	August 2003	• Advanced Administrative Fees at Risk • 6.5% Savings Guarantee	• Services ended November 2002; • Contract terminated August 2003 • 3800 Enrolled at Height
CHF	LifeMasters Supported Selfcare	Areas 1 – 7	September 2000 October 2003	September 20031 September 2005	• Advanced Administrative Fees at Risk • 6.5% Savings Guarantee • Fixed Administrative Fees	3,663

Source: Medicaid Disease Management Programs: Presentation to the Health and Human Services Appropriations Subcommittee of the Florida Senate March 17, 2004

Disease	*Disease Management Contractor*	*Geographic Coverage*	*Contract Period*		*Contract Terms*	*Current Number of Enrolled Beneficiaries*
			Start	*End*		
COPD	Cybercare, Inc	Areas 5-6	July 2000	December 2001	• Telemedicine Pilot • Administrative Fees Not at Risk • No Savings Guarantee	• Contract Terminated December 2001 • 25 Enrolled at Height
Autoimmune Disorders	University of Florida Center for Orphan Autoimmune Disorders	Statewide	January 2002	June 2004[1]	• Administrative Fees Not at Risk, • No Savings Guarantee	324
Asthma, Congestive Heart Failure, Diabetes, Hypertension	Value Added Agreement with Pfizer Inc. Contracts with 10 Hospital Systems Statewide and One Call Center for Service Provision in Florida: a Healthy State Program	Statewide for Asthma, Diabetes, Hypertension Areas 8-11 CHF	Term 1: June 2001	September 2003[1]	• Savings and Investment Guarantee of $33 Million the First Term.	• 113,015 reached (first term) • 14,950 actively care managed (first term)
			Term 2: September 2003	September 2005	• Savings and Investment Guarantee of $45 Million the Second Term	• Over 115,000 reached (second term to date) • Over 17,000 care managed (second term to date)
Diabetes Promotora Program and Behavioral Health Program	Value Added Agreement with Bristol-Myers Squibb Contract with Health Choice Network for Service Provision in DiabetikSMART Program	Term 1: Dade, Broward, Pasco, Manatee, Lee Hendry, Collier, Glades, Monroe Palm Beach and Charlotte	Term 1: March 2002	June 2003	• Savings and Investment Guarantee of $ 21 Million the First Term	• 1,741 Diabetics eligible (first term) • 494 Diabetics actively participated (first term) • 95 actively participated in the Behavioral Health program
		Term 2: Dade, Broward	Term 2: October 2003	June 2005	• Savings and Investment Guarantee of $9.1 Million the Second Term	• 3,400 reached via Diabetic Sundays (Faith Based Outreach events)

Source: Medicaid Disease Management Programs: Presentation to the Health and Human Services Appropriations Subcommittee of the Florida Senate March 17, 2004