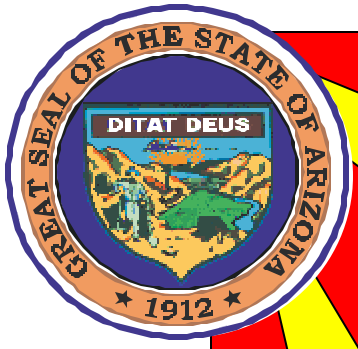

State of Arizona Office of the Auditor General

PERFORMANCE AUDIT

PERINATAL SUBSTANCE ABUSE PILOT PROGRAM

Report to the Arizona Legislature
By Debra K. Davenport
Auditor General

November 2001
Report No. 01-31

The Auditor General is appointed by the Joint Legislative Audit Committee, a bipartisan committee composed of five senators and five representatives. Her mission is to provide independent and impartial information and specific recommendations to improve the operations of state and local government entities. To this end, she provides financial audits and accounting services to the state and political subdivisions and performance audits of state agencies and the programs they administer.

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DEBRA K. DAVENPORT, CPA
AUDITOR GENERAL

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

WILLIAM THOMSON
DEPUTY AUDITOR GENERAL

November 1, 2001

Members of the Arizona Legislature

The Honorable Jane Dee Hull, Governor

Ms. Catherine R. Eden, Director
Department of Health Services

Transmitted herewith is a report of the Auditor General, An Evaluation of the Perinatal Substance Abuse Pilot Program administered by the Arizona Department of Health Services. This evaluation was conducted pursuant to Laws 1998, Ch. 176, §3. I am also transmitting with this report a copy of the Report Highlights for this evaluation to provide a quick summary for your convenience.

As outlined in its response, the Department of Health Services plans to implement all of the recommendations.

My staff and I will be pleased to discuss or clarify items in the report.

This report will be released to the public on November 2, 2001.

Sincerely,

Debra K. Davenport
Auditor General

Enclosure

2910 NORTH 44th STREET • SUITE 410 • PHOENIX, ARIZONA 85018 • (602) 553-0333 • FAX (602) 553-0051

SUMMARY

The Office of the Auditor General has completed an evaluation of the Perinatal Substance Abuse Pilot Program, pursuant to Laws 1998, Ch. 176, §3. This pilot program uses an integrated model for administering services to women who use or are at risk of using substances, and who are either pregnant or have recently given birth. Under this approach, steps are taken to involve providers of medical, behavioral, and social services in a collaborative network. The program's purpose is to improve service providers', or collaborators', ability to address the health and well-being of mothers and their children by sharing information and developing a more coordinated set of services. The Legislature has appropriated $83,000 annually to fund the integrated program for fiscal years 2000 through 2002. An additional $200,000 was appropriated to the program in 2000 from Temporary Assistance for Needy Families (TANF) funds. The pilot program, called EMSA (Expectant Mothers with Substance Abuse) Esperanza, has been operating since July 1999 and is located in Tucson, Arizona. It enrolled 67 women between November 1999 and May 2001. The program terminates in June 2002.

Program Needs to Improve Integration of Services (See pages 13 through 19)

While the pilot program has implemented some elements of an integrated services program, it needs to make additional improvements. In an integrated program, clients should have access to comprehensive medical, behavioral health, and social services. These services should be coordinated among the service providers, or collaborators, through sharing client information in a central location. To help it achieve integration, the pilot program has taken some steps, such as conducting regular meetings with collaborators. As a result of these meetings, collaborators indicated that they have increased their knowledge of available community resources.

However, the pilot program has not sufficiently implemented other important elements of integration. Specifically, collaborators were expected to use a shared information system to track client needs, services received, and demographic information. Sharing such information would allow the collaborators to jointly manage and coordinate services for clients, thereby enhancing the possibility of a positive outcome for substance-abusing mothers and their children. However, collaborators did not effectively share information through this system. Further, the information sharing about clients that did occur at monthly collaborator meetings could also be improved. Discussions about clients generally did not lead to the co-management or development of plans for the clients' care. Finally, the pilot program lacks a formal leadership mechanism to develop program direction and address barriers to service integration, such as concerns with sharing confidential client information. The pilot program intends for its Advisory Board to make recommendations for program improvement, but has proposed minimal ways to gather information so that the Board can develop appropriate policies and strategies.

If the Legislature decides to fund the pilot program beyond June 2002, or if it continues without state funding, program staff need to make improvements. Specifically, the staff need to develop methods to obtain client information and effectively share it with all collaborators. If the pilot program continues to use monthly meetings to discuss client care, the meetings should be used as a forum for co-managing client care and integrating services. Finally, the pilot program should continue with its plan to expand its Advisory Board and charge the Board with the responsibility for helping to develop program direction and address barriers to service integration.

Program's Impact Cannot Be Assessed (See pages 21 through 27)

Although the law creating the program requires a report on the outcomes of the program, including whether clients achieved a

drug-free status, evaluators were not able to accomplish this because they lacked data and had other limitations. Evaluating a program's impact requires knowing which services clients received and what happened as a result. In this pilot program, both types of information are insufficient. For example, while the program has information about the number of times that clients were referred for services, it does not have adequate information about whether these services were actually provided. Information on outcomes is also missing. The program did not properly monitor client drug use and relapse rates. It also did not consistently monitor the women's general health.

Information is available on the health status of 23 babies whose mothers gave birth to them while participating in the program, but the health status cannot be attributed to the mother's participation in the program. This is because too few women entered the program at each stage of pregnancy and birth information was not available for all women who gave birth while in the program. Although research suggests that a baby benefits no matter when the mother stops using drugs, positive birth outcomes are more likely to occur if a woman enters care in her first trimester.[1] However, only 9 of the 67 women entered the program during their first trimester.[2] Further, birth information is available for only 23 women. To draw reliable conclusions about the program's impact, sufficient birth information must be available for a sufficient number of mothers entering the program at each stage of pregnancy.

If the program continues, action is needed to improve recordkeeping, develop ways to ensure that the outcomes identified in the program's enabling law are measured, and bring women into the program earlier in their pregnancies.

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1 Monjaraz, Connie. *A Study of the Relationship of Early Prenatal Care to Birth Weight. Does First Trimester Care Make a Difference?* University of Nebraska—Omaha, 2001.

2 Information on date of enrollment into the program and estimated date of delivery is available for 61 clients. Information is not available for the remaining 6 clients.

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TABLE OF CONTENTS

TABLE OF CONTENTS (Concl'd)

Figures

Tables

INTRODUCTION AND BACKGROUND

The Office of the Auditor General has completed an evaluation of the Perinatal Substance Abuse Pilot Program. The evaluation was conducted pursuant to Laws 1998, Ch. 176, §3. This report provides information on program administration, implementation, and outcomes, and offers recommendations for improvement.

Pilot Program Is Designed To Improve Health and Welfare Through an Integrated Set of Services

Through Laws 1998, Ch. 176, §5, the Legislature created the Perinatal Substance Abuse Pilot Program (pilot program), which is based on an integrated model for delivering services to pregnant or postpartum women who are substance abusers or are at risk for substance abuse. The program received an original appropriation of $83,000 per year for fiscal years 2000 through 2002. The integrated model was developed by a legislatively authorized committee charged with developing a statewide strategy for addressing substance abuse by women during or after pregnancy.[1] This committee's recommendation for an integrated model was made in a September 1997 report, *Community-Based Integrated Model for Pregnant and Parenting Substance Abusing Women*.

The program serves pregnant or postpartum women with substance abuse problems.

The primary goal of an integrated approach is to improve the health and welfare of pregnant or parenting substance-abusing women and their children through better access to a combination of medical, behavioral health, and social services. In a nonintegrated approach, service providers operate independently of

[1] Laws 1995, Ch. 215, §1 created the Advisory Council on Perinatal Substance Abuse, known more recently as the Implementation Oversight Committee on Perinatal Substance Abuse.

each other. For example, if a pregnant woman seeks obstetrical care, a medical provider typically focuses on the mother's medical needs. In an integrated service model, providers from each system coordinate and share information about medical and behavioral health care and social services for the woman and her family.

The integrated program's specific goals are to:

- Expand the target population's knowledge of and access to services;
- Improve birth outcomes and client and family well-being;
- Ensure that substance-abusing women have access to comprehensive health care;
- Reduce unnecessary duplication of case management and improve efficiency in the service delivery system;
- Maximize existing resources for clients through collaborative partnerships; and
- Increase providers' service awareness.

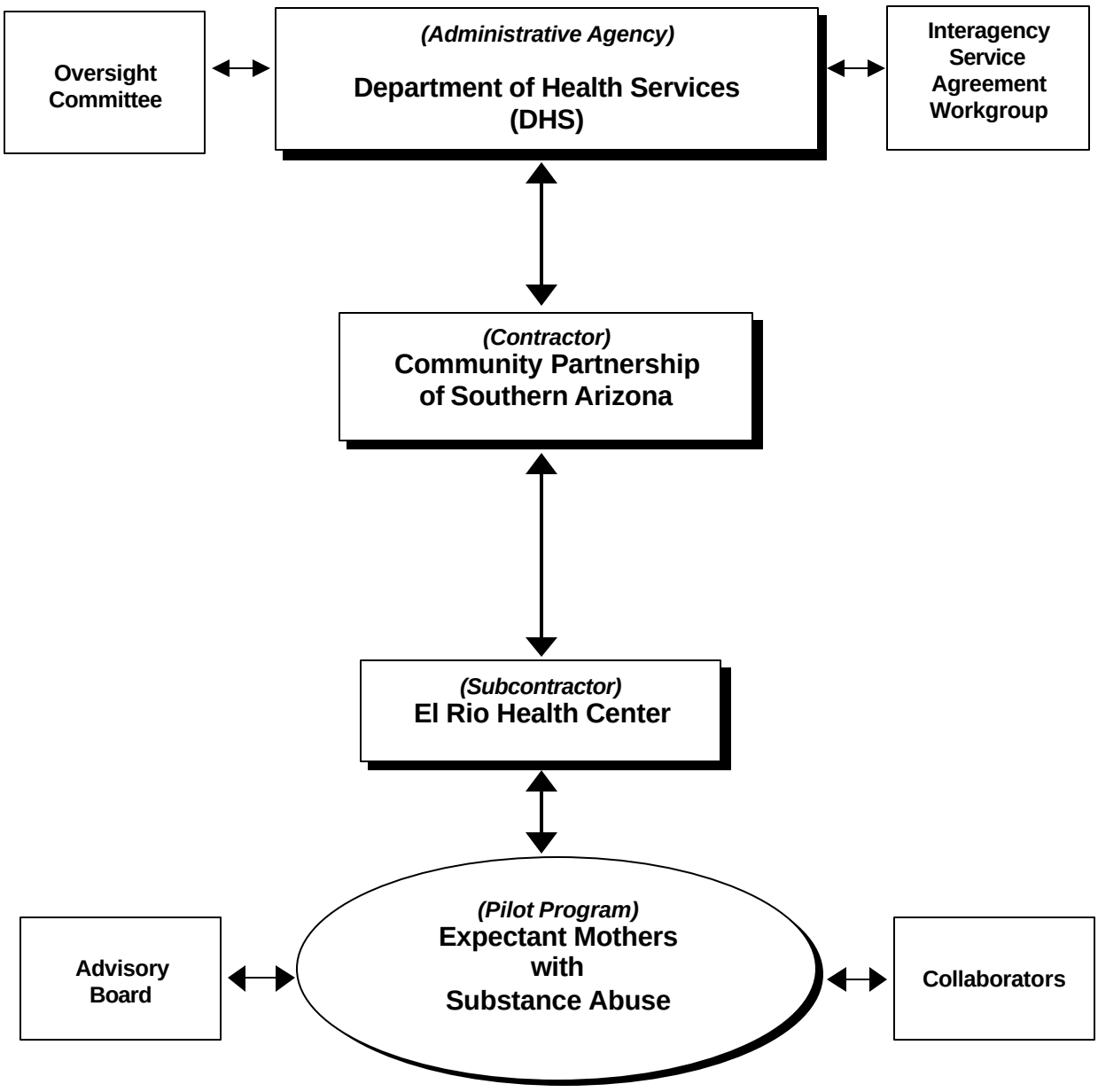
Pilot Program Organization, Staffing, and Funding Sources

The Department of Health Services administers the program— The Department of Health Services (Department) developed the request for proposals and administers the pilot program through a contract with Community Partnership of Southern Arizona, the Department's Regional Behavioral Health Authority (RBHA) in Pima County.[1] Community Partnership of Southern Arizona

[1] A Regional Behavioral Health Authority (RBHA) is a community organization that administers behavioral health services in the State of Arizona. They contract with providers to deliver a full range of services, including prevention, substance abuse, and general mental health programs.

Figure 1

Perinatal Substance Abuse Pilot Program
Pilot Program Oversight and Administration
July 1999 through May 2001



Source: Auditor General staff summary of program oversight and administration contained in the program contract and legislation.

subcontracted this program to El Rio Health Center in Tucson, Arizona. The pilot program, which is called EMSA (Expectant Mothers with Substance Abuse) Esperanza, was started in July 1999 and enrolled its first client in November 1999.

To put this program into effect, Laws 1998, Ch. 176, §2 established the Interagency Service Agreement Workgroup (workgroup). The workgroup is composed of a representative from the Department of Health Services, the Department of Economic Security, the Arizona Health Care Cost Containment System, and the Governor's Community Policy Office. The workgroup meets, generally on a monthly basis, to address issues such as identifying services that can assist pregnant substance-abusing women and encouraging collaboration among service providers.

Pilot program staffing—

When the program began, it had 1.75 positions as follows:

- **Director (.5 FTE)**—Provides program oversight.
- **Coordinator (.5 FTE)**—Maintains relationships with community agencies and helps decrease barriers to a woman's access to services. El Rio Health Center funds began providing salaries for an additional .5 coordinator FTE as of May 2000.
- **Computer Specialist (.5 FTE)**—Maintains the Health Pro database, connects collaborators to the database, and provides training on the system.
- **Clerk (.25 FTE)**—Assists with customer service and keeps records.

In fiscal year 2001, the program added an additional position:

- **Assistant (1.0 FTE)**—Conducts initial assessments, makes referrals, ensures a woman receives services, and maintains data collection.

The pilot program also has an Advisory Board, which is typically composed of representatives from up to three agencies. The Board's purposes include defining program principles, identifying available community services, and addressing service barriers. The Board has been meeting quarterly since April 2000.

Pilot program has been appropriated about $450,000 over 3 fiscal years—Program appropriations have come from two separate sources:

The program's original appropriation was $83,000 per year for 3 years.

- **Tobacco Tax funds ($249,000)**—In 1998, the Legislature (Laws 1998, Ch. 176, §5) appropriated to the Department of Health Services $83,000 per year for 3 years (2000-2002) for this program. The money was allocated from Tobacco Tax funds for program implementation, including staff salary, computer equipment, and other office supplies and expenses. These funds could be used for integration activities, but not for new or expanded direct services or case management.

- **Temporary Assistance for Needy Families funds (TANF) ($200,000)**—In 2000, the Legislature (Laws 2000, Ch. 393, §17) made an additional one-time appropriation of $200,000 to this program from the TANF program. In deciding how to apply this additional money, the workgroup approved the pilot program's plans to spend it on salaries for additional staff, transportation, and various services, including legal assistance, home-based support, and day care vouchers. The additional monies cannot be used to fund medical treatment (A.R.S. §46-300.04) (see Table 1, page 6) but can be used for case management. See Statutory Evaluation Components, pages 29 through 34, for further information about this appropriation.

Table 1

Perinatal Substance Abuse Pilot Program
Schedule of Revenues and Expenditures
Years Ended or Ending June 30, 2000, 2001, and 2002
(Unaudited)

	2000 (Actual)	2001 (Actual)	2002[4] (Estimated)
Revenues:			
Tobacco Tax and Health Care Fund appropriation [1]	$83,000	$ 83,000	$ 83,000
Temporary Assistance for Needy Families (TANF) block grant		28,571 [2]	171,429
Total revenues	$83,000	$111,571	$254,429
Expenditures [3]	$83,000	$111,571	$254,429

1 Consists of monies transferred from the Fund's Medically Needy Account administered by the Arizona Health Care Cost Containment System in accordance with Laws 1998, Chapter 176, §5.

2 Consists of monies reimbursed from the Department of Economic Security in accordance with A.R.S. §46-300.04.

3 Amounts shown are payments made or estimated to be paid to Community Partnership of Southern Arizona. The 2001 amount includes $28,571 owed to the Partnership, but not paid at June 30, 2001.

4 The Department of Health Services believes the Partnership will spend at least $83,000. However, TANF monies are paid retroactively based on subcontractor performance. Consequently, the Department is unable to estimate 2002 TANF revenues and expenditures. Amounts shown are equal to remaining authorized TANF monies and appropriated Tobacco Tax and Health Care Fund monies.

Source: Auditor General analysis of the Arizona Financial Information System's *Revenues and Expenditures by Fund, Program, Organization, and Object* report for the years ended June 30, 2000 and 2001; and the *State of Arizona Companion Transaction Entry/Transfer* form dated July 30, 2001.

Pilot Program Has Several Key Components

Three important components of the program, given its collaborative model, are interagency participation, an assessment for ser-

vices, and an online information-sharing system that can provide information to all participating agencies.

- **The program operates through agency collaboration**—Eight organizations have signed memos of agreement with El Rio Health Center to participate in the pilot program. As stipulated in the agreement, these formal collaborators agree to refer appropriate women to the pilot program, provide services for clients, and participate in networking meetings and outreach efforts. The eight formal collaborators are as follows:

  - **Medical Facilities (3)**—Two facilities, El Rio Obstetrics and Gynecology and El Rio Midwifery, offer medical services for women throughout their participation in the pilot program. A third, the Rural Health Office's mobile health clinic, provides medical care for individuals who may not otherwise have access to health care. Community health advisors from this agency contact pregnant women in their homes or on the street to inform them about the clinic's services and to provide prenatal education.

  - **Substance Abuse Treatment Facilities (3)**—Two collaborators, CODAC Las Amigas and The Haven, are residential substance abuse treatment centers. Women typically live at the centers for 6 to 12 months.[1] They receive substance abuse counseling, life-skills training, and case management, and in some instances, have their children living with them on-site. A third facility, La Frontera, operates a methadone maintenance clinic, where clients receive daily doses of methadone. The length of treatment depends on the individual client, with an average length of 3 years.

  - **Domestic Violence Agency (1)**—Brewster Center is a domestic violence facility that offers shelter, outreach, legal assistance, and food boxes.

There are eight formal collaborating agencies from the medical, behavioral health, and social services fields.

[1] Women can stay at The Haven for up to 6 months and at CODAC Las Amigas for up to 12 months.

- **Homeless Drop-in Shelter (1)**—At Casa Paloma, a homeless drop-in shelter, women receive basic necessities such as food, showers, and laundry facilities. The shelter also maintains some bed space for women who are not currently using substances. These women can stay in the residence for up to 2 years.

In addition to the 8 formal collaborators, 24 agencies participate in the program as informal collaborators. They, too, offer services to pilot program clients, but have not signed memos of agreement to share information about a client's care. These agencies include representatives from the medical, behavioral health, and social service fields, as well as Native American tribes, a school district, and legal counsel.

- **Eligible women complete an intake assessment—**To become enrolled, a woman must meet the following criteria:

  - Pregnant or up to 1 year postpartum,
  - Enrolled in AHCCCS [1] or eligible to enroll, and
  - Using drugs or at risk of using drugs, or
  - At risk of losing child custody due to drug use.

In addition to determining if a woman meets these eligibility criteria, she receives an intake assessment, conducted by the program coordinator or assistant, to determine the services she needs. This assessment addresses client and family demographics, drug use history, and the woman's need for different types of services; for example, medical, drug treatment, transportation, legal, or housing. The woman is then referred to various providers offering services. Pilot program staff or providers may make additional referrals. The program has a policy that requires the assessment to be updated every 3 months to determine if additional services are needed.

[1] The Arizona Health Care Cost Containment System (AHCCCS) is the State's Medicaid program.

- **Program has an information system for facilitating communication among collaborating agencies—**Formal collaborators are to use an online information-sharing system, Health Pro, to share information and to facilitate communication about the woman's care within the integrated services system. Only formal collaborators who have signed memos of agreement are eligible to use the system. This database allows collaborators to track client referrals and services and follow various aspects of a woman's care.

Characteristics of Women in the Pilot Program

The program enrolled 67 women by May 1, 2001.

Between November 1999 and May 2001, 120 women were referred to the program by 25 different medical, behavioral health, or social service agencies. Forty-five percent of the women were referred by medical providers, 27 percent by behavioral health providers, and 26 percent by social service agencies. The remaining clients (2 percent) were referred to the program from other sources. Many of the 120 women did not meet eligibility requirements or complete the intake assessment, or were not enrolled in the program for other reasons. Thus, a total of 67 women were enrolled in the pilot program from November 1999 through May 2001.

The typical client has given birth to two children, is Hispanic, 29 years of age, not married, unemployed and currently not seeking employment, and has less than a high school education. Further, upon entry into the pilot program, the typical client reported having used multiple types of drugs and was in her third trimester of pregnancy. See Statutory Evaluation Components, pages 29 through 34, for further details about the program and its clients.

Evaluation Scope and Limitations

Laws 1998, Ch. 176, §3 calls for this evaluation to assess specific outcomes. However, due to a lack of data and other limitations, evaluators were unable to assess the pilot program in accordance

with the criteria set forth in statute. Evaluators were to assess the following specific outcomes:

- **Drug Usage and Well-Being**—

Due to insufficient program data, outcomes could not be assessed as required by the Legislature.

a. Successful strategies for reducing or eliminating substance-abusing behaviors,
b. Number of months a woman is drug-free,
c. Relapse rates, and
d. Status of woman's and family's well-being.

Evaluators did not have the necessary information to assess these outcomes. Evaluators worked with the program staff to establish appropriate methods of collecting such information. These methods include establishing a baseline of conditions when a woman enters the program and measuring a woman's drug use history and general well-being at 3-month intervals, and at program completion. However, as discussed in Finding II (see pages 21 through 27), program staff and collaborators did not adequately collect this information.

- **Infant Drug Status at Birth**—Information is available on the health status of 23 babies whose mothers gave birth to them while participating in the program, but the health status cannot be attributed to the mother's participation in the program. This is because too few women entered the program at each stage of pregnancy and birth information was not available for all women who gave birth while in the program. Although research suggests that a baby benefits no matter when the mother stops using drugs, positive birth outcomes are more likely to occur if a woman enters care in her first trimester.[1] However, only 9 women entered the program during their first trimester, 10 entered during their second trimester, and 19 women entered during their third trimester. Further, birth information is available for only 3 women who entered during in their first trimester, 4 who entered in their second trimester, and 16 who entered in their third trimester. To draw reliable conclusions about the program's impact, sufficient birth information must be available for a sufficient

[1] Monjaraz, Connie. *A Study of the Relationship of Early Prenatal Care to Birth Weight. Does First Trimester Care Make a Difference?* University of Nebraska—Omaha, 2001.

number of mothers entering the program at each stage of pregnancy.

Methods

This report presents findings and recommendations in two areas:

- The program needs to improve its integration of services.
- Although many service referrals have been made, the pilot program did not collect sufficient data needed to assess outcomes.

A variety of methods was used to assess the pilot program's ability to integrate services. The evaluators made 21 site visits to the pilot program from November 2000 through April 2001. During these site visits, evaluators attended collaborator and Advisory Board meetings, observed client meetings, and conducted interviews with program administrators, formal collaborators, and informal collaborators. Further, evaluators completed a file review of 16 of the 67 client files to verify the accuracy and completeness of the Health Pro database. Intake assessment information collected in the Health Pro database from November 1999 to May 2001 was also analyzed to determine client and child traits, drug use and treatment history, and referrals made for the 67 enrolled clients.

Additionally, evaluators observed 12 Oversight Committee meetings and 12 workgroup meetings from July 1999 to May 2001. Finally, evaluators documented the process by which the contractor and subcontractor were selected.

Acknowledgements

The Auditor General and staff express appreciation to the Department of Health Services, the Community Partnership of Southern Arizona, the El Rio Health Center, and the pilot program agencies and clients for their cooperation and assistance throughout the evaluation.

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FINDING I

PROGRAM NEEDS TO IMPROVE INTEGRATION OF SERVICES

While the pilot program has implemented some elements of an integrated services program, it needs to make additional improvements. Components of integration include a client receiving comprehensive services and service providers, or collaborators, sharing client information in a central location. To help it achieve integration, the pilot program has taken some steps, such as conducting regular meetings with the collaborators. However, the pilot program has not sufficiently implemented other elements of integration that it proposed, such as effective methods of sharing client information. The pilot program should make additional improvements to further integrate services and increase information sharing.

Participation in an Integrated Services Program

In an integrated services program, a pregnant or parenting substance-abusing woman should be able to simultaneously access a variety of medical, behavioral health, or social services that she needs. The pilot program, in its proposal, stated that it would establish links among collaborators by providing them with a common database information system. This system would allow collaborators to easily co-manage a woman's various needs. The resulting communication regarding client care among collaborators would enable them to track client services, and enhance the possibility of a positive outcome for substance-abusing mothers and their children.

The pilot program proposed the following process for a client's participation:

- A woman appears forservices at the pilot program;

- The program coordinator or assistant determines if the woman is eligible for the program;

- If eligible, the woman enrolls in the pilot program and receives an assessment to identify her service needs;

- The program staff refer the woman to collaborators for needed medical, behavioral health, or social services;

- Collaborators use the pilot program's shared information system to obtain client demographic, assessment, and referral data; and

- As the woman receives care, the collaborator provides information within the database system about the referrals and the outcome of the services and makes additional referrals as necessary.

The pilot program also intended that the collaborators and program staff would meet regularly to discuss the services available to clients. Further, program staff would ensure that collaborators make referrals and provide services, and that the collaborators use the shared information system to effectively coordinate the clients' care.

The pilot program also established an Advisory Board whose members were to meet regularly to resolve program implementation barriers. Potential barriers could include different approaches on how to work with women; organizational problems, such as a lack of support from top management; conflicting data requirements; or legal issues regarding confidentiality of shared information.

Program Has Taken Some Steps To Achieve Integration

After the pilot program's contract was approved in July 1999, the pilot program took some steps to help it achieve integration. Specifically, it:

- Enrolled 67 women from the 120 referrals received.

- Enlisted the participation of 8 formal and 24 informal collaborators. Formal collaborators have signed memorandums of agreement to enter information in the shared information system, provide services for pilot program clients, and participate in monthly meetings with program staff. Informal collaborators have not signed such agreements and therefore do not have access to the shared information system. However, they do provide services to pilot program clients and can attend monthly meetings with program staff.

- Conducted 18 monthly meetings from September 1999 to April 2001. An average of 4 formal collaborators and 3 informal collaborators attended the meetings, ranging from 3 to 11 participants at any meeting.

- Provided community service information, including presentations from five local service providers, during the monthly meetings.

- Prepared a "gaps analysis" of needed community resources.

According to interviews with formal collaborators, their participation in the pilot program has helped increase their knowledge of available community resources.

Increased Information Sharing Needed for Further Integration

While the pilot program has taken several steps to achieve integration, it has yet to sufficiently implement some important elements of an integrated program. First, although the pilot program proposal and contract call for sharing client information through the Health Pro information system, providers are not sharing information and the system is not being used as intended. Second, the client information sharing that does occur at monthly meetings could be more effective. Finally, the pilot program lacks a formal leadership mechanism for developing program direction.

***Information-sharing system is not being used*—**Although the pilot program's proposal stated that collaborators were to establish "integrated care through communication and clinical pathways among each other using a comprehensive management information system called Health Pro," the system is not being used as intended. Health Pro enables collaborators to obtain client information including basic demographics, intake and assessment information, and service referrals, and to manage client care. However, client information has not been consistently shared through Health Pro. First, the majority of the service providers did not become formal collaborators and therefore did not have access to Health Pro. Twenty-four of the 32 collaborators are informal participants and they account for 84 percent of all of the pilot program's referrals for service. Because informal collaborators cannot use the data system, information on these referrals must be obtained by program staff who then enter it into the database. This was not done consistently.

Second, even the formal collaborators did not fully use Health Pro. They did not consistently provide information to the database, nor did they find the information that was available in Health Pro to be useful. Collaborators gave various reasons for not providing or using information in Health Pro, including the burden of additional work, not having an accessible way to provide information, and concerns about confidentiality of information contained within the system. However, by not consistently using the information system, collaborators could not determine a woman's service needs or whether a woman received services from other providers.

The pilot program, realizing that there were problems with Health Pro, proposed that its use be made optional, and identified alternative ways (fax, e-mail, or courier) in which information would be shared. However, the pilot program has not specified how client information will be shared among collaborators using those means. Unless the pilot program develops specific procedures for sharing information about a woman's care, it cannot improve service integration. Further, the pilot program should clarify how these alternative methods will reduce duplicative service efforts, which is one goal of an integrated approach.

Ineffective client information sharing occurred at collaborator meetings—Although pilot program staff and collaborators discussed specific client cases during monthly meetings, these discussions were not effective in coordinating a woman's care. During these meetings, information about a client, such as her pregnancy, living situation, or progress in treatment, was shared among the group. However, evaluators attended meetings between September 1999 and March 2001, and did not identify any instances in which the discussion led to the group co-managing the client's care, developing an action plan, establishing timelines to accomplish specific tasks, or following up on clients at subsequent meetings. When the collaborators do not perform these functions, the responsibility falls upon the program's limited staff resources. For example, a formal collaborator shared that:

> "…one of the clients is homeless, lives in the desert, and is going to deliver her baby soon. The community health worker has taken the woman to her pre-natal appointments, but is concerned that the baby will be removed from the woman's care because of her living situation. [The collaborator] stated that she is not sure where the woman should go, what type of services she can receive, or has received through [the pilot program]."

Participants in the meeting suggested places where the woman could receive services, but they did not offer to assist with the woman's care or establish a plan for coordinating her services. Instead, at the end of the discussion, the program coordinator offered to work directly with the collaborator to assist this client.

Pilot program lacks a formal leadership mechanism for developing its direction— Even though written agreements are used to formalize the collaboration, the pilot program lacks a mechanism to further develop implementation plans. Collaborating agencies have agreed to provide services, but the pilot program does not have a formal means for addressing the barriers that may occur in integrating services, such as concerns about confidentiality of client information. Although the pilot program calls for expanding its Advisory Board and charging it with providing recommendations for program improvement, it has proposed minimal

ways to gather information necessary to develop appropriate policies and strategies. Additionally, the Board met only four times in almost 2 years and only had one to three individuals attend each meeting. Thus, it was unable to guide program implementation or identify available community resources.

Actions Can Be Taken To Increase Information Sharing

In the absence of a database information system that can be used to effectively share information, steps can be taken to ensure that client information is still communicated among collaborators. If the Legislature decides to fund the pilot program beyond June 2002, or if the pilot program continues without state funding, program staff need to make specific improvements in the following areas:

- **Develop an approach for sharing client information—** Program staff need to develop methods to obtain client information and make it available to all collaborators as needed. The information-sharing methods should ensure clients are getting needed services and help reduce duplicative service provision. Once the communication methods are established, the pilot program should revise its memorandums of agreement to help ensure that formal collaborators use the methods to consistently share client information.

- **Use monthly meetings more effectively—**Collaborators can make more effective use of the monthly meetings to integrate services and manage client care. Specifically, the meetings could be used as a forum for co-managing client cases and sharing community resource information. If the pilot program continues to use meetings to discuss client cases, program staff should ensure that collaborators develop action plans for client care with timelines and follow up with client case presentations.

- **Develop a formal leadership mechanism—**The pilot program should continue with its plan to expand the Board's membership and charge the Board with responsibility for helping to develop program direction and address barriers to

service integration. The pilot program has already contacted representatives from a variety of medical, behavioral health, and social service agencies and requested their participation on the Board. The Board should meet quarterly and obtain information from both collaborators and pilot program clients to help develop program direction and address barriers. For example, the Board should address concerns with sharing confidential client information in monthly meetings if the pilot program continues to use those meetings to discuss client care.

Recommendations

1. The pilot program should develop methods to share client information with collaborators and revise the memorandums of agreement accordingly.

2. If the pilot program continues to discuss client cases during the monthly meetings, program staff should ensure that collaborators develop action plans for client care with timelines and provide follow-up presentations at future meetings.

3. The pilot program should continue to recruit Advisory Board members. The Board should meet on a regular basis to address barriers to service integration and should use client and provider information to make recommendations for program improvement.

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FINDING II

PROGRAM'S IMPACT CANNOT BE ASSESSED

The law creating the program requires a report on the outcomes of the program, including whether clients have achieved a drug-free status and whether there has been an improvement in the health and well-being of the clients and their infants. However, the data needed to make such a report is not available. The program currently does not have sufficient data on the services that clients actually receive, or on changes in the clients' drug use and health status. Although data is available on birth outcomes for some clients' infants, there are too few women who entered the pilot program at each stage of pregnancy for evaluators to assess the program's impact on these outcomes. While the program has proposed corrective actions to address these problems, its actions so far are incomplete.

Extent to Which Clients Receive Services Is Unknown

Referrals are made but extent to which services are received is unknown.

One important aspect of assessing the program's outcomes is determining which services clients received; however, the pilot program does not have sufficient information. Although the program has information showing the extent to which clients were referred for services, it is not clear how many of these referrals resulted in services. A total of 364 referrals for services had been made for women in the program between November 1999 and March 2001—an average of 6 referrals for each client.[1] See Table 2 (page 22) for the types of referrals and number made.

When a woman is referred to a formal collaborator, the collaborating agency is responsible for indicating in the Health Pro database that the woman did or did not receive a service. If the woman is referred to an informal collaborator, then the program

[1] Referrals are those made between November 1999 and March 2001. Records showed that 57 of the 67 clients had been referred for services; 10 had no referrals as of March 2001.

coordinator is responsible for making these notations. According to a pilot program administrator, these updates should be done within 1 month of referral.

Table 2

Perinatal Substance Abuse Pilot Program
Type, Number, and Percentage of Service Referrals
November 1999 to March 2001

Type of Referral	Number	Percentage of Total Referrals
Substance abuse treatment	52	14.3%
Parenting	50	13.7
Housing	35	9.6
Government assistance	32	8.8
Medical	28	7.7
Mental health	22	6.0
Employment	22	6.0
Education	21	5.8
Legal aid	19	5.2
Clothing / baby items	19	5.2
Transportation	17	4.7
Nutrition	16	4.4
Child care	15	4.1
Counseling / advocacy	9	2.5
Case management	5	1.4
Domestic violence	2	.6
Total referrals	364	100.0%

Source: Auditor General staff analysis of service referrals made for 57 pilot program clients from November 1999 to March 2001.

However, a key problem is that some of the Health Pro database entries do not contain enough information to determine if the service was received. When a referral is updated in the Health Pro database, the database calls only for making a notation that the referral is "closed." However, a notation that the referral is service was received. When a referral is updated in the Health "closed" does not necessarily mean that a service was received. Rather, a sufficient entry requires entering additional information in the case notes.

Program Did Not Collect Sufficient Data Needed To Assess Outcomes

Although the law creating the program requires a report on several different client-related outcomes, the pilot program did not collect sufficient data required to determine these outcomes. Outcomes specified in the law include whether the woman achieved a drug- and alcohol-free status and, if so, whether the woman subsequently returned to substance-abusing behaviors. Other outcomes include the status of the woman's and the family's general health. However, the program did not collect needed data regarding these outcomes. For example, the program did not monitor clients' drug use and did not consistently follow-up on the clients' general health.

The pilot program did not monitor client drug use or relapse— Drug use and relapse rates cannot be reported because the program did not systematically monitor a client's drug use. To determine substance use and relapse rates for women in the program, drug use should be monitored in an objective manner and on a regular basis. Child Protective Services, the courts, and collaborating substance abuse treatment centers do so through urine analysis testing. Urine analysis testing can determine changes in the pattern, frequency, and amount of an individual's drug use.

Because the original program funding could not be used for urine analysis testing, the pilot program agreed to collect self-reported drug use information at 3-month intervals, although this is less reliable method for monitoring drug use.[1] However, the pilot program did not conduct the proper number of client follow-up assessments. Evaluators' review of client cases as of March 2001 revealed that none of the clients received the proper

[1] Preston et al. Comparison of Self-Reported Drug Use with Quantitative and Qualitative Urinalysis for Assessment of Drug Use in Treatment: *The Validity of Self-Reported Drug Use: Improving the Accuracy of Survey Estimates*. NIDA Research Monograph, 167, 1997, pages 130-144.

number of follow-up reports. Because the pilot program did not monitor client drug use, evaluators cannot determine if the women achieved a drug-free status. Further, pilot program administrators are not able to adequately monitor the program's effectiveness relative to this outcome.

The program did not consistently monitor a client's health or well-being—Although the pilot program collected general health and well-being information when a client entered the program, this information was not regularly updated, meaning that any change in the woman's health and well-being could not be readily determined. A woman's need or receipt of services is determined through the use of the Integrated Services Tool (IST), which is administered by program staff at intake and should be done again every 3 months. Services addressed on the IST are:

Medical	Case Management	Child Care
Perinatal	Transportation	Education Training
Mental Health	Financial Counseling	Employment
Substance Abuse	Income Eligibility	Parenting Skills
Domestic Violence	Housing	CPS
Nutrition	Dependent Care	Other Child Welfare

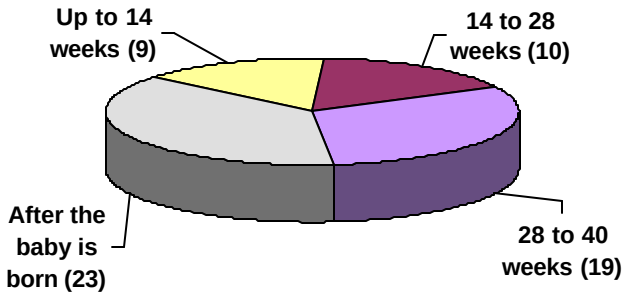
However, the program did not consistently follow up with each active client to determine the current status of her general health and well-being. Only 16 percent of the required follow-up interviews were conducted; thus, consistent updates of client cases in the Health Pro system were not done. Since the program did not adequately monitor the woman's general health or well-being, formal collaborators cannot view updates of what each woman needs; pilot program administrators do not have necessary information about the clients; and evaluators are unable to determine if any improvement has been achieved.

Too Few Clients in Program at Each Stage of Pregnancy

Information is available on the health status of 23 babies whose mothers gave birth to them while participating in the program, but the health status cannot be attributed to the mother's participation in the program. This is because too few women entered the program at each stage of pregnancy and birth information was not available for all women who gave birth while in the program. Although research suggests that there may be benefits for the baby no matter when the mother stops using drugs, positive birth outcomes are more likely to occur if a woman enters care in her first trimester.[1] However, only 9 women entered the program during their first trimester, 10 entered during their second trimester, and 19 women entered during their third trimester. Further, birth information is available for only 3 women who

Figure 2

Perinatal Substance Abuse Pilot Program
Stage of Pregnancy Women Entered the Program
November 1999 to May 2001



Source: Auditor General staff analysis of 61 clients' dates of enrollment into the pilot program and their estimated dates of delivery. Information was not available for six clients.

[1] Monjaraz, Connie. *A Study of the Relationship of Early Prenatal Care to Birth Weight. Does First Trimester Care Make a Difference?* University of Nebraska—Omaha, 2001.

entered during their first trimester, 4 who entered in their second trimester, and 16 who entered in their third trimester. To draw reliable conclusions about the program's impact, sufficient birth information must be available for a sufficient number of mothers entering the program at each stage of pregnancy. Finally, 23 women entered the program after giving birth, so the program could not have had any impact on their birth outcomes. See Statutory Components, pages 29 through 34, for birth information.

If The Program Continues, Improvements Are Needed To Establish Outcomes

After evaluators called these problems to the attention of the responsible parties, the program developed proposals for addressing the problems in a corrective action plan. If the program is continued, further actions are needed to ensure that outcomes can be measured and achieved.

Corrective action plan acknowledges need to make improvements—The corrective action plan includes proposals for implementing urine analysis testing for the clients, capturing other outcome data on a regular basis, and reaching the target population earlier in their pregnancies.

- **Collecting urine analysis information**—If a woman submits to urine analysis tests through a substance abuse treatment center, CPS, or the courts, the pilot program will obtain these results on a regular basis. Because monies are now available, the program will also offer all other clients the opportunity to submit voluntarily to urine analysis tests on a weekly basis.

- **Gathering client health and well-being information**—The program's corrective action plan indicates that tools will be developed to measure quality-of-life issues (including health and well-being) at intake and at regular updates.

- **Reaching women early in their pregnancies**—The program plans on working with other community organizations

to provide outreach to women who are in an early stage of their pregnancies.

Action is needed to put necessary changes into effect—Although the corrective action plan is an acknowledgement that improvements are needed in these areas, program administrators should do several things to ensure that outcomes are measured and achieved. First, all service referrals should be updated so that program staff and formal collaborators know which services a woman has received. Participants' drug use should be monitored through urine analysis, as stated in the corrective action plan. Further, the program should develop policies and procedures for obtaining urine analysis information from CPS, the courts, or substance abuse treatment centers on a regular basis. Procedures should also be established for monitoring client health and well-being regularly through follow-up assessments. Finally, the pilot program needs to establish procedures for working with community organizations to recruit more women to participate in the program and during the early stages of their pregnancies.

Recommendations

1. When referrals are updated by the program coordinator or collaborators, they should indicate whether or not a client received a service.

2. The pilot program should monitor client drug usage through regular urine analysis testing, and establish policies and procedures for obtaining this information from CPS, the courts, or substance abuse treatment centers.

3. The pilot program should ensure that 3-month follow-up interviews are completed for all clients. The follow-up data should be promptly shared so that collaborators can track client progress.

4. The pilot program should develop procedures for working with community organizations to recruit more women to participate in the program and earlier in their pregnancies.

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STATUTORY EVALUATION COMPONENTS

Pursuant to Laws 1998, Ch. 176, §3, the Office of the Auditor General is required to include the following information in the Perinatal Substance Abuse Pilot Program evaluation.

B.1. The number, type, and location of integrated service models funded under this act.

As described in the Introduction and Background section (pages 1 through 11), only one integrated service model was funded in July 1999. The EMSA (Expectant Mothers with Substance Abuse) Esperanza program is housed at El Rio Health Center in Tucson, Arizona. The pilot program officially ends in June 2002.

B.2. The characteristics of the population included in each of the integrated service models.

The program enrolls women who are:

- Pregnant or up to 1 year postpartum;
- AHCCCS enrolled or eligible; and
- Using drugs or at risk of using drugs; or
- At risk of losing child custody due to drug use.

B.3. The services provided by the collaborative community partnerships and the models of collaboration used for each integrated service model.

Collaborators and the services they provide are described in the Introduction and Background (see pages 1 through 11). There are eight formal collaborators who have signed

memos of agreement to participate in the pilot program. These collaborators represent medical providers, substance abuse treatment facilities, a domestic violence agency, and a homeless drop-in shelter. Some of the services provided are as follows:

- **Medical Facilities**—El Rio Obstetrics and Gynecology and El Rio Midwifery are participants in the collaboration. The providers offer medical services for women throughout their participation in the pilot program. The Rural Health Office's mobile health clinic provides medical care and outreach for communities and individuals who may not have access to health care.

- **Substance Abuse Treatment Facilities**—CODAC Las Amigas and The Haven are residential substance abuse treatment centers. Women may stay at the centers for 6 to 12 months.[1] They receive substance abuse counseling and life-skills training, and in some cases, may have their children living with them on-site. La Frontera operates a methadone maintenance clinic. Clients receive daily doses of methadone in addition to case management and nursing services.

- **Domestic Violence Agency**—The Brewster Center is a domestic violence facility that offers both advocacy and shelter. Women receive services ranging from legal assistance to one-on-one counseling at both the outreach facility and within the shelter.

- **Homeless Drop-In Shelter**—Casa Paloma is a homeless drop-in shelter. Women receive basic necessities such as food, and may use the showers or laundry facilities. The shelter also maintains bed space for women who may stay in the residence for up to 2 years.

[1] Women can stay at The Haven for up to 6 months and at CODAC Las Amigas for up to 12 months.

In addition to the 8 formal collaborators, 24 agencies participate in the program as informal collaborators. This means that they do not have access to the Health Pro system. However, they provide services to program clients and they attend and participate in the monthly collaborator meetings. They represent medical, behavioral health, and social service providers, as well as a school district, Native American tribes, and legal counsel.

B.4. General demographic and treatment characteristics of the population served, including information from the intake and assessment screening.

Demographic information is reported for 67 clients enrolled in the program from November 1999 to May 2001. The typical pilot program client has given birth to two children, is Hispanic, 29 years old, not married, unemployed, and has less than a high school education.

- **Children**—On average, pilot program clients have given birth to two children. The number of children ranges from zero (currently pregnant) to six.

- **Ethnicity**—The majority of the women (46 percent) are Hispanic, 30 percent are Caucasian, 18 percent are Native-American, and 6 percent are African-American.

- **Age**—Women enrolled in the pilot program are, on average, 29 years old, and range in age from 19 to 42.

- **Marital Status**—80 percent of the clients are not married; 15 percent are married; and the remaining women (5 percent) are separated from their spouse.

- **Income and Employment Status**—Pilot program clients have an average monthly income of $322, ranging from $0-$4,000 per month. Approximately 78 percent of the clients are unemployed. For those women who are unemployed, 34 percent report no income, and the primary source of income for another 43 per-

cent is government assistance, including food stamps or temporary assistance for needy families (TANF). The remaining 22 percent of the women work on a full- or part-time basis.

- **Education**—56 percent of the women have less than a complete high school education and 44 percent have a high school education, equivalent, or higher. Only 7 percent of the clients are currently attending school.

- **Drug Use History**—Approximately 81 percent of the clients report using, at the time of intake, multiple drugs and another 18 percent use only one type of drug. The remaining 1 percent (one client) reported not using any drug. The three most commonly used drugs are cocaine, alcohol, and marijuana. Over half of the clients (61 percent) have used one or more types of drugs before intake. A typical client first used drugs between the ages of 17 and 20. Finally, 51 percent of the women report having received prior treatment for alcohol or drug abuse, which could include detoxification or outpatient treatment.

B.5. General information on the short-term and long-term outcomes of the services provided, including:

- **Successful strategies for reducing or eliminating substance-abusing behaviors**—The program did not collect sufficient data needed to assess outcomes (see Finding II, pages 21 through 27). The program did not sufficiently monitor client drug use, so evaluators were unable to determine if any of the clients actually reduced or eliminated substance-abusing behaviors. In addition, the program did not consistently use the Health Pro system to provide information about the services the clients received.

- **The status of the woman's and the family's well-being, including general health, employment, and housing status**—Again, the program did not adequately monitor any improvements to a client's health or well-being. Although these traits were assessed at

program intake, they were not consistently monitored at the required three-month intervals.

- **The drug status of the infant at birth**—As discussed in Finding II (pages 21 through 27), infant birth outcomes cannot be attributed to a woman's participation in the pilot program because too few women entered the program at each stage of pregnancy. However, information is available on the health and legal status of 43 children born to program clients.

  - **Drug Toxicity**—Of the 43 newborns, 22 tested positive for drugs at birth.

  - **Birth Weight**—The average weight of babies born to program clients is 6 pounds, 6 ounces. According to the National Healthy Start Association, a birth weight under 5 pounds, 8 ounces is considered to be a low birth weight. Evaluators compared the birth weights of babies born with positive drug toxicology screens and those with negative toxicology screens and found the weights to be 6 pounds, 3 ounces, and 6 pounds, 10 ounces, respectively.

  - **Apgar Score**—The program infants have an average 5-minute Apgar score of 8.5, with scores ranging from 0 to 10. The Apgar score is a tool used immediately after birth to evaluate a child's condition. A baby is rated with a score of zero to two for each of the five qualities, with two being the best condition. An overall score of seven or higher indicates that the baby is in good condition.

    Apgar—The five qualities monitored at 1, 5, and 10 minutes after birth:

    Appearance (color)
    Pulse (heartbeat)
    Grimace (reflex)
    Activity (muscle tone)
    Respiration (breathing)

  - **Legal Custody**— Child Protective Services (CPS) has legal custody of 19 of the 43 children.

- **The average length of treatment and average costs compared with estimated costs of non-treatment**—Because the pilot program did not collect sufficient information about the services clients received, evaluators cannot compare the costs of treatment for participating women against costs for women who did not participate. Further, since the pilot program does not directly provide services, it does not have information on the costs of the services that participants may receive.

- **The number of months the substance-abusing woman achieves a drug- and alcohol-free status**—The number of months a woman achieves a drug- and alcohol-free status is unknown because the program failed to conduct regular followups with clients (see Finding II, pages 21 through 27). As of March 2001, none of the clients had received the correct number of followups, which is how the program agreed to collect self-reported drug use data.

- **The relapse rates for women who return to substance-abusing behaviors after achieving drug- and alcohol-free status**—Relapse rates are also not reported due to the absence of critical drug use information (see the above paragraph and Finding II, pages 21 through 27).

B.6. Pursuant to Laws 2000, Ch. 393, §13, the Office of the Auditor General is to include a report on the expanded services and additional populations served with the $200,000 appropriation of TANF funds.

This portion of the evaluation could not be completed as required. The program's plan for using the funds was not approved until March 2001; thus, it was unable to spend any of the money until that point.

Agency Response

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Office of the Director

1740 W. Adams Street
Phoenix, Arizona 85007-2670
(602) 542-1025
(602) 542-1062 FAX

JANE DEE HULL, GOVERNOR
CATHERINE R. EDEN, DIRECTOR

Ms. Debra K. Davenport
Auditor General
Office of the Auditor General
2910 North 44th Street, Suite 410
Phoenix, Arizona 85004

Dear Ms. Davenport:

Thank you for giving us an opportunity to respond to your office's evaluation of the Perinatal Substance Abuse Pilot Program. We agree with the report, both of its findings, and all of its recommendations. We plan to implement both findings' stated recommendations, should the Legislature choose to continue the program.

We are particularly pleased that you and your staff highlighted the many accomplishments of this program. Thirty-two agencies successfully collaborated in providing integrated medical and behavioral treatment and social services to pregnant and post-partum women. Collaborators met regularly, learned about services available to these women, and reported high satisfaction with the pilot project. The bottom line is that 58 percent of the babies born to mothers who enrolled in the program before giving birth were born drug-free. Moreover, 85 percent of these babies were born with a normal birth weight. Given the tremendous social and financial ramifications of babies being born drug addicted or with low birth weight, we believe theses numbers indicate that the program was ultimately a success.

We regret that the Auditor General was not able to conclude definitely whether the program had a positive outcome due to data limitations. We are working to improve our data collection efforts, as recommended in your report. The recent addition of TANF monies to the program now allows us to purchase the urinalyses testing recommended in the report. Indeed, we recently entered into a contract to purchase such services. This will enhance our ability to monitor our clients and demonstrate positive program outcomes. Other data collection obstacles, such as enticing volunteer collaborators to enter data into a database, will be addressed as the program matures.

In your report, you note that the health status of newborns could not be attributed to the program because most women entered the program late in their pregnancy or postpartum. You recommend that the program work to recruit more participants earlier in their pregnancies. While we will, as recommended in the report, place added effort into reaching program participants earlier in their pregnancies, we believe it is necessary to recognize the difficulties in doing so, and the health and social benefits of treating these women at any stage in their pregnancies and postpartum.

Thank you for giving us this opportunity to respond to the report. We appreciate your staff's professionalism and responsiveness in conducting this evaluation.

Sincerely,

Catherine R. Eden
Director

Other Performance Audit Reports Issued Within the Last 12 Months

01-1 Department of Economic Security—Child Support Enforcement
01-2 Department of Economic Security—Healthy Families Program
01-3 Arizona Department of Public Safety—Drug Abuse Resistance Education (D.A.R.E.) Program
01-4 Arizona Department of Corrections—Human Resources Management
01-5 Arizona Department of Public Safety—Telecommunications Bureau
01-6 Board of Osteopathic Examiners in Medicine and Surgery
01-7 Arizona Department of Corrections—Support Services
01-8 Arizona Game and Fish Commission and Department—Wildlife Management Program
01-9 Arizona Game and Fish Commission—Heritage Fund
01-10 Department of Public Safety—Licensing Bureau
01-11 Arizona Commission on the Arts
01-12 Board of Chiropractic Examiners
01-13 Arizona Department of Corrections—Private Prisons
01-14 Arizona Automobile Theft Authority
01-15 Department of Real Estate
01-16 Department of Veterans' Services Arizona State Veteran Home, Veterans' Conservatorship / Guardianship Program, and Veterans' Services Program
01-17 Arizona Board of Dispensing Opticians
01-18 Arizona Department of Corrections—Administrative Services and Information Technology
01-19 Arizona Department of Education—Early Childhood Block Grant
01-20 Department of Public Safety—Highway Patrol
01-21 Board of Nursing
01-22 Department of Public Safety—Criminal Investigations Division
01-23 Department of Building and Fire Safety
01-24 Arizona Veterans' Service Advisory Commission
01-25 Department of Corrections—Arizona Correctional Industries
01-26 Department of Corrections—Sunset Factors
01-27 Board of Regents
01-28 Department of Public Safety—Criminal Information Services Bureau, Access Integrity Unit, and Fingerprint Identification Bureau
01-29 Department of Public Safety—Sunset Factors
01-30 Family Builders Program

Future Performance Audit Report

Homeless Youth Intervention Program