

DFPS APS Facility Mobile Technology Evaluation

May 31, 2007

DFPS Performance Management Group

Maria Cervania

Michael Tecci

Adult Protective Services

Nora Douglas

Cody Brady

Olivia Derr

Management Reporting and Statistics

Brad Pierson

Cindy Cannon

DFPS APS Facility Mobile Technology Evaluation

Table of Contents

Part I: Executive Summary	Page 3
A. Background	4
B. Purpose	5
C. Specific Findings	5
D. Recommendations	11
Part II: Introduction	12
A. Background	14
B. Purpose	14
C. Limitations	15
D. Audience	15
E. Questions	15
F. Study Population	15
G. Reporting Period	15
H. Data Sources	16
I. Possible Confounding and Interaction Variables	17
J. Methods	18
Part III: Question 1: How is APS In-Home staff using the Mobile Technology?	20
A. Results	21
B. Conclusion	33
C. Next Steps	37
Part IV: Question 2: As a result of the Mobile Technology Implementation, is the APS In-Home program realizing efficiencies?	40
A. Results	41
B. Conclusion	45
C. Next Steps	47
Part V: Question 3: Has Mobile Technology maintained or improved quality of documentation?	48
A. Results	49
B. Conclusion	51
C. Next Steps	51
Part VI: Question 4: Does Mobile Technology have an impact on APS Performance Metrics?	52
A. Results	53
B. Conclusion	56
C. Next Steps	56
Part VII: Question 5: How have work processes changed for the APS In-Home program since the implementation of Mobile Technology?	57
A. Results	58
B. Conclusion	65
C. Next Steps	67
Part VIII: Conclusion	69
Part IX. Recommendations	79

Executive Summary

DFPS APS Facility Mobile Technology Evaluation

Executive Summary

The Texas Governor Rick Perry issued Executive Order RP 33 on April 14, 2004 instructing the Health and Human Services Commission (HHSC) to oversee a systemic reform of the Adult Protective Services (APS) program. The Governor's Office published a report in November of 2004 recommending 252 corrective actions intended to bring about system wide program reform. A series of corrective actions outlined in the Governor's report directed APS to use mobile technology to increase caseworker efficiency, and improve client outcomes through effective assessment and documentation.

In February of 2005, APS staff began working with contractors to design the Mobile Protective Services (MPS) software that would be used on the Tablet PC. At the same time, Senate Bill 6, passed into law after the 79th Legislative session, reinforced the reform agenda set forth by Governor Perry. The 79th Legislature added specific statutory language in Senate Bill 6, Section 1.80, mandating that the department implement a mobile technology project, including online transcription services designed to: increase caseworker access to department policy and family case history; facilitate communication between caseworkers and supervisors; allow timely and accurate data entry; and reduce backlogged investigations.¹

In response to the Governor's Executive Order and legislative mandate, DFPS and APS responded by developing the APS Mobile Technology Reform Initiative.

Background

The Adult Protective Services (APS) program is the first Texas Health and Human Services organization to complete a large-scale mobile computing initiative. Nationally, Texas APS is the first Adult Protective program to incorporate Tablet PCs into the day-to-day aspects of casework. The purpose of the APS Mobile Technology Initiative is to provide greater efficiency and flexibility to caseworkers, allowing case documentation and information access from the field.

To accomplish this, a mobile version of the case management system (IMPACT) was developed to allow access to key case details without relying on a wireless connection. This application, Mobile Protective Services (MPS), allows caseworkers to "check out" cases they need to use in the field, and then, "check in" all information they have documented at a later time. All Tablet PCs also are equipped with a wireless card intended for intermittent network access from the field.

At this time, the implementation of all APS caseworker Tablet PCs has been completed. Currently, 78 Facility caseworkers received their Tablet PCs since the initial APS Facility Tablet PC Implementation in November 2005. Even though the implementation process is complete, the project is far from over. The technologies being leveraged (e.g. Tablet PCs, XP Operating System, Wireless Broadband cards) are new and cutting edge tools.

The technologies being allocated (e.g. Tablet PCs, XP Operating System, Wireless Broadband cards) are all very new and cutting edge tools. DFPS is continuing to learn how best to support these users through timely resolution of problems and on-going communication and training needs. The APS Assistant Commissioner, Debra Wanser, has explained this type of major change as, "a process, not an event". The results in this report represent where DFPS and APS are today, and show a path towards a new approach to work when these new tools are fully maximized.

¹ Texas Legislature, Senate Bill 6, 79th Legislature (Regular).

Purpose

The purpose of the DFPS APS Facility Mobile Technology Evaluation is to investigate six research questions:

- How is APS Facility staff using the Mobile Technology?
- As a result of the Mobile Technology Implementation, is the APS Facility program realizing efficiencies?
- Has Mobile Technology maintained or improved quality of documentation?
- Does Mobile Technology have an impact on APS Performance Metrics?
- How have work processes changed for the APS Facility program since the implementation of Mobile Technology?

At the conclusion of the DFPS Facility APS Mobile Technology Evaluation, the document intends to enable external and internal DFPS policy makers and Program Managers to demonstrate performance; discover where improvements could be made to design or delivery methods; identify good practice and lessons for the future, and above all, be a positive learning experience. The DFPS Facility APS Mobile Technology Evaluation findings are expected to impact on APS policy decisions and enhance the implementation of Mobile Technology.

Specific Findings

Examine Mobile Technology Usage

Patterns in Mobile Technology Usage

(From the results of the APS Facility Tablet PC User Surveys)

- The percentage of those who use the Tablet PC outside of the office “every day” decreased between the first and second survey.
- The percentage of those who use it “a few times a month” or “never” increased slightly between the first and second survey.
- Facility respondents indicated that they use the Tablet PC in their “home” most often (76%) and equally often in their car and a state facility (34%).
- 83% of respondents to the second survey reported that they use the Tablet PC into an investigative location twenty-five percent of the time or less.

Barriers of Tablet PC Usage

(From the results of the APS Facility Tablet PC User Surveys)

- Respondents most often identified “Wireless Connectivity” as the biggest barrier to productive use of mobile technologies followed by Tablet PC Hardware.
- Respondents reported feeling uncomfortable taking the Tablet PC into facilities because of safety issues, the requirement to handwrite statements, and equipment management.
- For both surveys, respondents who reported that they use the Tablet PC outside of their office “every day” were significantly more likely to take the Tablet PC into a “State Facility” than were those who used the Tablet PC outside of the office “a few times a month” or “never”.
- There was a significant difference between groups for those who take the Tablet PC into non-state locations in the field such as restaurants or coffee shops.
- There were no significant differences between those who had worked for the APS Facility less than one year and those who had been with the agency for more than one year (from Survey Period 1).
- Respondents who used the Tablet PC outside of the office only “a couple of times a week” were more likely to identify concerns about the risk of damaging the Tablet PC or other mobile equipment than those who used it “every day”.
- There were no significant differences between usage in the client’s home and identification of barriers.

Client Reaction

(From the results of the APS Facility Tablet PC User Surveys)

- 19% of respondents to the second survey reported that when they used their Tablet PC in other investigative location, the reactions received were “positive” or “no reaction”.
- 72% left this answer blank or answered not applicable.
- Five Facility caseworkers commented in the open ended other section of this question saying that the Tablet PC was “distracting” or “intimidating” for clients. While another worker said that they “do not take it into the Facility.”

Wireless Connectivity

(From the results of the APS Facility Tablet PC User Surveys)

- Respondents to both surveys most often identified “Wireless Connectivity” as the biggest barrier to productive use of mobile technologies.
- Facility respondents to the first survey who reported using the Tablet PC “every day” or “a couple of times a week” were significantly more likely than respondents who reported using the Tablet PC “a few times a month” to report that they use the Tablet PC to work in IMPACT applications by entering data.
- Facility respondents who reported using the Tablet PC “every day” (Survey 1) were significantly more likely than those who reported using the Tablet PC “a few times a month” to report that they use the e-mail and internet applications.
- Respondents to the second survey, who use the Tablet PC “a couple of times a week” were significantly more likely than those who “never” use the Tablet PC to report that they “perform MPS synchronizations with IMPACT” and “check cases in or out from IMPACT to MPS”.
- From the first survey, there were no significant differences between workers who were with APS Facility for less than one year and those who had been with the agency longer.
- Respondents to the second survey, who had worked for APS Facility for “more than one year”, were significantly more likely to report that they perform MPS Synchronizations with IMPACT and check cases in and out from IMPACT to MPS than those who had worked for the agency for “less than one year”.
- For both of the surveys, there were no significant differences between groups based on frequency of Tablet PC use outside the office and respondent satisfaction with their ability to use the wireless service from home.
- In addition, no significant differences between respondents who had worked for APS Facility for “less than one year” and those who had worked “more than one year” appeared for either of the surveys.
- 26 percent of respondents during Survey 1 and 25 percent during Survey 2 “Disagreed” or “Strongly Disagreed” that they were satisfied with the wireless service from their homes. This is significant given that APS is moving towards a more mobile environment.
- Facility workers who are able to use wireless state that it enables them to access cases, information, create maps and connect with other workers and their supervisors.
- Wireless has increased casework flexibility and has improved the quality of their casework and documentation.
- However, many workers do not have access to wireless in rural areas, have sporadic wireless connections or the connection is too slow for many. Those who have access to wireless, and express that it aids effective fieldwork.
- The lack of connectivity, sporadic connections and slowness of transmission are still major issue in many parts of the state, particularly in the rural areas.
- Facility caseworkers “Agreed” or “Strongly Agreed” they were satisfied with the use of wireless service increased from 45% on Survey 1 to 49% during Survey 2.

Mobile Protection Services

- 68% of Facility respondents reported using MPS application to various degrees.
- 33% report not using the MPS application.
- Caseworkers had three main suggestions to access and enter information on the persons list, type in the allegation on the Allegation screen and a fuller IMPACT application when using wireless. In addition, Facility caseworkers want to be able to complete statement forms electronically and have them signed.

Tablet PC Features

- Respondents to the second survey used the portable keyboard 66 percent of the time to input text, followed by digital pen and transcription services, which each were used by 16 percent of Facility caseworkers.
- Facility respondents indicated that they use the Tablet PC in their “home” most often (76%) and equally often in their car and a state facility (34%).

Technical Support

- Ninety-three percent of respondents reported “good” or “moderate” support from the Customer Support Center on Survey 2 as compared to 55% during Survey 1.
- Similarly, 86% of Survey 2 respondents reported “good” or “moderate” support from regional technicians compared to 74% on Survey 1.
- There were no significant differences between the groups for tenure or frequency of use outside the office for either of the two surveys. This could be due to small sample size.

SpeakWrite Services

- There was a slight increase in “Total Number Staff Using SpeakWrite” and “Total SpeakWrite Words Dictated per Call” from FY 2005 and FY 2006.
- Staff reported 60% using the SpeakWrite, and 40% not utilizing the service.
- When asked about suggestions do you have to make use of the SpeakWrite service more valuable, the majority of respondents did not have any suggestions and reported that SpeakWrite is a valuable tool.
- There is a strong desire to maintain this service as a complement to the Tablet PCs.

Measure Changes in Efficiencies

Timeliness of Data Entry – Initial Attempted or Actual Face to Face Contacts

In 3rd and 4th Quarter data of:

- FY 2004, the days to record Face-to-Face Contacts ranged from 10.7 to 11.6 days.
- FY 2005, the days to record Face-to-Face Contacts ranged from 10.9 to 11.7 days.
- FY 2006, the days to record Face-to-Face Contacts ranged from 10.9 to 11.5 days
- The difference among the three fiscal years to record Face-to-Face Contacts in IMPACT is not statistically significant².

Timeliness of Data Entry –Completed Investigations

“Average Number of Days Between Intake to Completion” of an APS Facility Investigation by Month was:

- 25.3 days - FY2004, 3rd and 4th Quarters
- 39.1 days - FY2005, 3rd and 4th Quarters
- 27.4 days - FY2006, 3rd and 4th Quarters
- There was no significant difference between the time periods.

² SPSS T-Test for Independent Sample: p<= .05

Efficiency of Casework Due to Tablet PC

(From the results of the APS Facility Tablet PC User Surveys)

- There was a reduction in the number of respondents who reported “no change” in data entry time or that it “takes longer” to enter data using the Tablet PC (i.e. 67% and 56% from Survey 1 to Survey 2, respectively).
- Forty-five percent of Facility respondents reported “Some” or “Significant” improvements in data entry time savings as compared to 33% on the Survey 1.
- From Survey 1, Facility respondents who used the Tablet PC “every day” or “a couple of times a week” were more likely than those who reported never using the PC to report some time savings in completion of documentation.
- From Survey 2, there were no significant differences between groups on frequency of use or tenure.

Same Day Documentation

(From the results of the APS Facility Tablet PC User Surveys)

- 91 percent of Facility respondents to the second survey reported that ability to complete same day documentation for key case information using their Tablet PCs. (Because this is a new question, we do not know if this has changed since the time one survey.)
- When asked what barriers respondents experienced regarding same day documentation, the three main reasons for not documenting the same day were the time it takes to document, high caseloads, and functionality issues - particularly wireless connectivity.

Assess Documentation Quality Changes

(From the results of the APS Facility Tablet PC User Surveys)

- Between the first and second survey, there was an increase in the percentage of respondents who reported “some” improvement in documentation quality.
- Between the first and second survey, “no change from previous approach” has gone down.
- Positive comments include the increased flexibility described as the ability to document more timely and after hours, and looking up information.
- Other Facility respondents said that Mobile Technology has not changed the quality of their casework, and preferred desktop computers because of the larger screen and keyboard. Several requested the ability to complete witness statements electronically including an electronic signature would increase the usability of the Tablet PC.
- From Survey 1, Facility respondents who used the Tablet PC “outside of the office” every day” were more likely than those who reported using the PC “a few times a week” or “never” to report some or significant improvement in casework quality.
- From Survey 2, those who used the Tablet PC “a couple of times a week” were significantly more likely than those who reported using the Tablet PC a “few times a month” or “never” to report some or significant improvement in casework quality.
- When analyzing data from the first survey, there were no significant differences between those who had worked for APS for “less than one year” and those who had worked “more than one year” when comparing reports of improvement in casework quality.
- Respondents to the second survey, who had worked for APS for “less than one year”, were more likely than those who reported being with the agency for “more than one year” to report “some” or “significant” improvements in their ability to provide quality casework services when using the Tablet PC.

Identify Mobile Technology Impact on APS Performance as Measured by Established Metrics

The 3rd and 4th Quarter data for Face-to-Face Contacts Met was:

- In FY 2004, APS Facility caseworkers had a mean of 96.7% of Face-to-Face Contacts Met.
- In FY 2005, APS Facility caseworkers had a mean of 98.0% of Face-to-Face Contacts Met.
- In FY 2006, APS Facility caseworkers had a mean of 97.3 % of Face-to-Face Contacts Met.
- The difference of Face-to-Face contacts made between fiscal years is only statistically significant for FY 2004 and FY 2005.

The 3rd and 4th Quarter data for Completed Investigations Met was:

- In FY 2004, APS Facility caseworkers had a mean of 91.6% of Completed Investigations Met.
- In FY 2005, APS Facility caseworkers had a mean of 91.4% of Completed Investigations Met.
- In FY 2006, APS Facility caseworkers had a mean of 91.7 % of Completed Investigations Met.
- The difference of Completed Investigation made between fiscal years is not statistically significant.

Compare How Work Processes Changed

Overtime

- “Overtime Balance (in Hours)” for APS Caseworkers by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters³:
 - 2,193 hours – FY 2004
 - 2,957 hours – FY 2005
 - 1,848 hours – FY 2006
 - There was a significant difference between the time periods⁴.
- “Average Overtime Balance (in Hours)” for APS Caseworkers by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters⁵:
 - 13.6 hours – FY 2004
 - 16.1 hours – FY 2005
 - 14.2 hours – FY 2006
 - There was a significant difference between the time periods⁶.

Mobile Caseworker

(From the results of the APS Facility Tablet PC User Surveys)

- 14 percent of the respondents to the second survey reported that the degree to which they considered themselves a “mobile caseworker” was “significant” or “complete”.
- 67 percent reported that the degree in which they considered themselves a “mobile caseworker “was “mixed” or “somewhat”.
- 19 percent reported that they were “not at all” a “mobile caseworker”.

“What do you like most about performing casework in a more mobile environment?”

(From the results of the APS Facility Tablet PC User Surveys)

The 324 respondents’ answers fell into four main themes:

- Flexibility
- Timeliness of Documentation/Casework;
- Quality of Documentation/Casework; and
- Increased Efficiency and Productivity

³ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z and 5027A.

⁴ SPSS Analysis of Variance: $p \leq .05$

⁵ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z and 5027A.

⁶ SPSS Analysis of Variance: $p \leq .05$

“What do you like least about performing casework in a more mobile environment?”

(From the results of the APS Facility Tablet PC User Surveys)

The 58 Facility Respondents reported that the three main things they liked least about the mobile environment are:

- Technical issues including wireless connectivity and IMPACT usability, equipment management
- Deficiency of training; and
- Lack of understanding about Tablet PC expectations.

During the second survey, a separate section of questions were added to capture specific information about mobile technology for Facility workers only.

Mobile Technology Equipment Regularly Taken into a Facility

- 78% of Facility respondents report regularly taking their cameras into a facility.
- Only 21% take their Tablet PCs into a facility.
- Only 2% bring their portable printers.

Tablet PC s and Other Mobile Equipment Usage in a Facility

- 40% use the Tablet PC for case-related activities
- 53% do not use the Tablet PC in facility settings.
- When asked how else they use the Tablet PC, seven Facility respondents answered saying:
 - Photos;
 - MapQuesting;
 - Get information from IMPACT;
 - Documenting; and
 - Scheduling.

Barriers Using the Tablet PCs to Document Cases On Site (at a Facility)

Safety is a major barrier for Facility workers for using the Tablet PC in institutional settings.

- 62% indicate Equipment Safety
- 48% state Client Safety
- 52% cite a lack of workspace as a barrier to Tablet PC usage in facility settings.

Recommendations

Based on the APS Facility Mobile Technology Evaluation findings, the following recommendations are proposed to enhance the utilization of Mobile Technology, guide APS policy decisions and improve APS Facility direct delivery services:

- Analyze usage of Mobile Technology, work processes and working conditions in order to establish performance expectations and benchmarks for Tablet PC Usage and data entry timeliness.
- Research usability, environmental and technical resources that could expand solution and/or address barriers (e.g., finger print reader, natural handwriting directly into applications).
- Study work processes and working conditions in order to establish guidelines for when workers should and should not use the Tablet PC and accessories in client or collateral interviews outside a DFPS office.
- Make necessary policy changes in the APS Facility Program to enhance and support the use of the Mobile Technology solution.
- Include Mobile Technology performance expectations in all recruitment materials and worker job interviews.
- Develop and disseminate Best Practices for Mobile Technology.
- Incorporate best practices into guidelines for supervisors' use in instilling sound workload management strategies in new workers.
- Examine performance of workers using MPS frequently and determine if there is any significant improvement over workers not using this application.
- Expand MPS functionality so that workers can complete more of the case information when using the MPS format.
- Make changes in IMPACT to increase efficiency of use during client and collateral interviews.
- Explore alternative voice recognition software to determine if it can be made more functional. Continue SpeakWrite services to help workers complete their documentation timely in the interim.
- Improve user support efforts to ensure staff has operational equipment in a timely manner.
- Redesign worker training to address the complete role of mobile casework, including a greater focus on development of skills for use of mobile technology in client and collateral interviews.
- Provide training to supervisors to increase supervisor knowledge of mobile technology.
- Identify resources to provide on-going training, skills development and coaching to tenured workers.
- Address issues relating of wireless connectivity and speed by exploring further broadband technology/cards so that rural workers be connect wirelessly.
- Identifiers should be added to the Tablet PC survey so that the relationship between mobile technology usage, overtime balances, travel expenditures, and process compliance can be explored, and however, data should only be reported in the aggregate.
- The Mobile Technology Evaluation should be conducted annually, and include data that was not available during the first evaluation.
- Data sources from the first evaluation need to be reviewed and reports developed to increase the data quality and reportability.
- Possible confounding or interaction variables should be determined by stratified or logistic regression analysis to isolate direct positive or negative effects of the implementation of Mobile Technology.

Introduction

Introduction

The Texas Governor Rick Perry issued Executive Order RP 33 on April 14, 2004 instructing the Health and Human Services Commission (HHSC) to oversee a systemic reform of the Adult Protective Services (APS) program. The Governor's Office published a report in November of 2004 recommending 252 corrective actions intended to bring about system wide program reform. The recommendations were comprehensive and client-focused in nature.

A series of corrective actions outlined in the Governor's report directed APS to use mobile technology to increase caseworker efficiency, and improve client outcomes through effective assessment and documentation. In February of 2005, APS staff began working with contractors to design the Mobile Protective Services (MPS) software that would be used on the Tablet PC.

Senate Bill 6, passed into law after the 79th Legislative session, reinforced the reform agenda set forth by Governor Perry. The 79th Legislature added specific statutory language in Senate Bill 6, Section 1.80, mandating that the department implement the following technology projects:

- A mobile technology project, including online transcription services designed to:
 - Increase caseworker access to department policy and client case history;
 - Facilitate communication between caseworkers and supervisors;
 - Allow timely and accurate data entry; and
 - Reduce backlogged investigations.⁷

In response to the Governor's Executive Order and legislative mandate, DFPS and APS responded by developing the APS Mobile Technology Reform Initiative.

The purpose of the initiative was to provide APS In-Home and MH and MR Investigation (Facility) caseworkers greater efficiency through mobility, and to enhance Information Management Protecting Adults and Children in Texas (IMPACT); the DFPS case management system.

The implementation of Mobile Technology through the usage of Tablet PC has impacted how APS In-Home and Facility caseworkers perform their jobs in a variety of ways. In order to utilize this new technology to its fullest extent and truly transform APS field staff into "Mobile Caseworkers," it is important to measure the usage and application of the Tablet PC in the day-to-day life of APS In-Home and Facility caseworkers. The changes that result from using Tablet PCs are expected to improve internal agency staff efficiencies and ultimately help clients.

⁷ Texas Legislature, Senate Bill 6, 79th Legislative Session (Regular).

Background

The Adult Protective Services (APS) program is the first Texas Health and Human Services organization to complete a large-scale mobile computing initiative. Nationally, Texas APS is the first Adult Protective program to incorporate Tablet PCs into the day-to-day aspects of casework. The purpose of the APS Tablet PC Initiative is to provide greater efficiency and flexibility to caseworkers, allowing case documentation and information access from the field.

To accomplish this, a mobile version of IMPACT was developed to allow access to key case details without relying on a wireless connection. This application, Mobile Protective Services (MPS), allows caseworkers to “check out” cases they need to use in the field, and then, “check in” all information they have documented at a later time. All Tablet PCs also are equipped with a wireless card intended for intermittent network access from the field.

At this time, the implementation of all APS caseworker Tablet PCs has been completed. Currently, 78 Facility caseworkers received their Tablet PCs since the initial APS Facility Tablet PC Implementation in November 2005. Even though the implementation process is complete, the project is far from over. The technologies being leveraged (e.g. Tablet PCs, XP Operating System, Wireless Broadband cards) are new and cutting edge tools.

Also, DFPS is continuing to learn how best to support these users through timely resolution of problems and on-going communication and training needs. The APS Assistant Commissioner, Debra Wanser, has explained this type of major change as, “a process, not an event”. The results in this report represent where DFPS and APS are today, and show a path towards a new approach to work when these new tools are fully maximized.

Purpose

The purpose of the DFPS Facility APS Mobile Technology Evaluation is to:

- Examine Mobile Technology Usage;
- Measure Changes in Efficiencies;
- Assess Documentation Quality Changes;
- Identify Mobile Technology Impact on APS Performance as Measured by Established Metrics; and
- Compare How Work Processes Changed.

At the conclusion of the DFPS Facility APS Mobile Technology Evaluation, the document intends to enable external and internal DFPS policy makers and Program Managers to demonstrate performance; discover where improvements could be made to design or delivery methods; identify good practice and lessons for the future, and above all, be a positive learning experience. The DFPS Facility APS Mobile Technology Evaluation findings are expected to impact on APS policy decisions and enhance the implementation of Mobile Technology.

Limitations

During the Mobile Technology Implementation Phase (3rd Quarter Fiscal Year 2005), some of the survey responses may have been impacted due to the short time frame in which users had their Tablet PCs, and the complex nature of the Tablet PC functionality. However, the conclusion of the APS Mobile Technology Phase II (Full Caseworker Distribution) Preliminary Assessment Report, which is referenced in the **Qualitative Analysis** of the evaluation, includes recommendations to address all areas of concern.

At the same time as the mobile technology deployment, agency changes were instituted during the overall APS Renewal, which included, but limited to, improvements in Training, Staffing, Community Engagement, Caseload Management, and Performance Management. These elements limit the DFPS' ability to directly attribute an improvement in practice to the implementation of Mobile Technology.

Data provided in this report can be influenced by seasonal changes in intake rates and therefore any dips or spikes in intake rates may not have been influenced by changes in mobile technology.

Audiences

The DFPS APS Facility Mobile Technology Evaluation will be available to all Texas Department of Family and Protective Services staff, division administrators, program administrators, and supervisors, external organizations and groups, other state and federal agencies, and the general public.

Questions

The purpose of this report is to answer the following six questions:

- How is APS Facility staff using the Mobile Technology?
- As a result of the Tablet PC Implementation, is the APS Facility program realizing efficiencies?
- Has Mobile Technology maintained or improved quality of documentation?
- Does Mobile Technology have an impact on APS Performance Metrics?
- How have work processes changed for the APS Facility program since the implementation of Mobile Technology?

Study Population

The DFPS APS Facility Mobile Technology Evaluation (including both the **Quantitative** and **Qualitative Analysis**) included all APS Facility caseworkers employed "Prior", during and "Post" Mobile Technology Implementation Phase. The above quarters were analyzed to compare data and information associated with Mobile Technology when minimal or no influence on the study population, initial implementation, and after a year of utilizing the resources in direct service delivery.

Reporting Periods

Prior to Mobile Technology Implementation	3 rd and 4 th Quarters of Fiscal Year 2004
Mobile Technology Implementation Phase	3 rd and 4 th Quarters of Fiscal Year 2005
Mobile Technology Post Implementation Phase	3 rd and 4 th Quarters of Fiscal Year 2006

Data Sources

Examination of Mobile Technology Usage

GOAL: The evaluation assesses how APS Facility staff is using the Mobile Technology.

DATA SOURCES:

- APS Tablet PC User Survey
- Transcription Services (SpeakWrite) Data

LIMITATIONS

Data was not available for all the study periods:

- APS Tablet PC User Survey
(Implementation (January 2006), Post-Implementation Data (December 2006))
- Transcription Services (SpeakWrite) Data
(Implementation (FY 2005) and Post-Implementation (FY 2006) Data)

Measurement of Changes in Efficiencies

GOAL: The evaluation assesses if the use of the Mobile Technology resulted in maintained or improved efficiency of documentation for APS Facility staff.

DATA SOURCES:

- Quantitative Data from IMPACT System
- APS Tablet PC User Survey

LIMITATIONS:

- APS Tablet PC User Survey
(Implementation (January 2006), Post-Implementation Data (December 2006))

Assessment of Documentation Quality Changes

GOAL: The evaluation assesses if use of the Mobile Technology results in maintained or improved quality of documentation for APS Facility staff.

DATA SOURCES:

- APS Tablet PC User Survey

LIMITATIONS:

- APS Tablet PC User Survey
(Implementation (January 2006), Post-Implementation Data (December 2006))

Identification of Best Practices to Inform Performance Management

GOAL: The evaluation assesses the impact Mobile Technology implementation has had on policy and standards-related performance by APS Facility Caseworkers.

DATA SOURCES:

- Quantitative Data from IMPACT System

Comparison of How Work Processes Changed

GOAL: The evaluation assesses the impact Mobile Technology implementation has had on the composition of APS Facility work.

DATA SOURCES:

- Overtime Hours
- APS Tablet PC User Survey

LIMITATIONS:

- Overtime Hours
(Implementation and Post-Implementation Data)
- APS User Survey
(Implementation (January 2006), Post-Implementation Data (December 2006))

Possible Confounding or Interaction Variables

During the Mobile Technology Implementation Phase (3rd Quarter Fiscal Year 2005), DFPS and the APS Facility Program changes were instituted during the overall APS Renewal. These possible confounding or interaction variables limit the DFPS' ability to directly relate an improvement in practice to the implementation of Mobile Technology. The elements include, but are not limited to:

- Caseloads
- Workload
- Staff Tenure
- Turnover
- Culture Change
- Performance Management

Methods

The DFPS Performance Management Group coordinated and managed the APS Facility Mobile Technology Evaluation Project.

The evaluation targets on the six data sources to provide principal indicators used to measure the effects and impact of the APS Facility Mobile Technology Implementation. The targeted data sources were:

- Quantitative Data from IMPACT System;
- APS Tablet PC User Survey;
- Transcription Services (SpeakWrite) Data;
- Help Desk Calls;
- Overtime Hours; and
- Financial Data (Travel Expense).

Quantitative Data from IMPACT System

Measurement of Changes in Efficiencies

Quantitative data from the IMPACT System was used to assess if the use of the Mobile Technology resulted in maintained or improved efficiency of documentation for APS Facility staff. Specifically:

- “Average Number of Days Recorded in IMPACT” for Initial Attempted or Actual Face-to-Face Contacts; and
- “Average Number of Days Between Intake and Completion” of an APS Facility Investigation was analyzed for FY 2004, FY 2005 and FY 2006, 3rd and 4th Quarters.

An Analysis of Variance (ANOVA) was performed to test for significant differences among the three fiscal years for each indicator.

Identification of Best Practices to Inform Performance Management

Quantitative data from the IMPACT System was used to assess the impact Mobile Technology implementation has had on policy and standards-related performance by APS Facility Caseworkers. Specifically:

- “Percent of 24 Hour Contacts Met”; and
 - “Percent of Completed Investigations Met”
- was analyzed for FY 2005 and FY 2006, 3rd and 4th Quarters.

For each indicator, a t-test analysis assessed whether the mean percent of FY 2005 and FY 2006 were statistically different from each other.

APS Tablet PC User Survey

An Analysis of Variance (ANOVA) was used to analyze data from the following sections of the Tablet PC User Survey. An ANOVA tests for significant differences between groups of Mobile Technology users for different items within the survey. For example, ANOVAs were used to determine if there were differences in survey responses between groups who used the Tablet PC “more or less often” (i.e. frequency of Tablet PC usage outside the office) or for APS Facility staff who had been with the agency for “more or less than one year” (e.g. tenure).

Examination of Mobile Technology Usage

Results from the APS Tablet PC User Survey were used to assess how APS Facility staff is using the Mobile Technology.

Measurement of Changes in Efficiencies

Results from the APS Tablet PC User Survey were used to assess if the use of the Mobile Technology resulted in maintained or improved efficiency of documentation for APS Facility staff.

Assessment of Documentation Quality Changes

Results from the APS Tablet PC User Survey were used to assess if use of the Mobile Technology results in maintained or improved quality of documentation for APS Facility staff.

Comparison of How Work Processes Changed

Results from the APS Tablet PC User Survey were used to assess the impact Mobile Technology implementation has had on the composition of APS Facility work.

Transcription Services (SpeakWrite) Data

Examination of Mobile Technology Usage

Transcription Services (SpeakWrite) Data was used to assess how APS Facility staff was using the Mobile Technology. Frequencies were analyzed for FY 2005 and FY 2006, 3rd and 4th Quarters.

Help Desk Calls

Examination of Mobile Technology Usage

Data from Help Desk Tickets was used to assess how APS Facility staff was using the Mobile Technology. Frequencies and rates were analyzed for FY 2006, 3rd and 4th Quarters.

Overtime Hours

Comparison of How Work Processes Changed

Overtime Hours Data was used to assess the impact Mobile Technology implementation has had on the composition of APS In-Home work.

Question 1: How is APS staff using the Mobile Technology?

Data Analysis

Question 1: How is APS staff using the Mobile Technology?

Examination of Mobile Technology Usage

This section of the evaluation examines Mobile Technology usage patterns of the APS In-Home Staff. In addition, two support resources: Technical Support (e.g. Customer Support Center Help Desk, Regional IT staff and their APS Skilled Users) and SpeakWrite were also studied to look at how these services influenced the utilization of Mobile Technology.

APS Tablet PC User Survey

APS has conducted two surveys of caseworkers using the Tablet PCs in a mobile environment. The first survey was sent out in December 2005 (i.e. after the initial Tablet PCs were distributed). The second survey was sent to all caseworkers in November 2006. Over 72% (58 responses) of the 81 APS Facility caseworkers with Tablet PCs responded to the APS Tablet PC User Survey during Study Period 2 (December 2006). This response is less than the previous survey conducted during Study Period 1 (January 2006) (i.e. 64 responses out of 78 Facility caseworkers, or an 82% response rate) shortly after the full distribution of mobile technologies. APS Facility staff continues to have a high degree of interest and strong input regarding the benefits and challenges of mobile technology. The complete listing of survey questions and quantitative responses are included in Appendix A.⁸

Responses to Mobile Technology Usage Section of the Survey

The Mobile Technology Usage section of the survey asked respondents about their overall satisfaction and barriers using the Tablet PC, their common usage patterns, and any client experiences associated with the technology. Specific questions regarding using the Tablet PC in the client's home or another investigative location were asked in this section. The previous years' survey did not ask this specifically.⁹

Tables 1 and 2 represent the changes that occurred between the Survey Period 1 and 2.

Table 1: APS Tablet PC User Survey Quantitative Questions	January 2006 (Survey 1) n=64*	December 2006 (Survey 2) n=58*	% Change
How often do you use your Tablet PC outside of a DFPS office?			
Use the Tablet PC outside of the office <i>everyday</i>	30%	17%	↓
Use the Tablet PC outside of the office only <i>a few times a month</i> or <i>never</i>	41%	50%	↑
Where do you use your Tablet PC outside of a DFPS office? (Check all that apply.)			
My Home	75%	76%	↓
Car	36%	34%	↓
Client's Home	8%	5%	↓
Non-State Location in the Field	20%	12%	↓
State Facility	45%	34%	↓

⁸ APS Tablet PC User Surveys, January and December 2006.

⁹ APS Tablet PC User Surveys, January and December 2006.

* The percentages for the survey response will not total to 100%.

* The percentages for the survey response will not total to 100%.

Highlights of Table 1:

- The percentage of those who use the Tablet PC outside of the office “every day” decreased between the first and second survey (30% to 17%, respectively).
- The percentage of those who use it “a few times a month” or “never” increased slightly between the first and second survey (41% to 50%, respectively)
- Facility respondents indicated that they use the Tablet PC in their “home” most often (76%) and equally often in their car and a state facility (34%).

Table 2: APS Tablet PC User Survey Quantitative Questions	January 2006 (Survey 1) n=64*	December 2006 (Survey 2) n=58*	% Change
What is the biggest barrier you have experienced to productive use of the Tablet PC? (Check all that apply.)			
MPS application pages and information	13%	5%	↓
Ability to synchronize information from MPS to IMPACT	25%	7%	↓
Tablet PC hardware problems	30%	26%	↓
Understanding how to use the Tablet PC device (e.g., digital pen, software, portable keyboard)	19%	3%	↓
Wireless connectivity	47%	45%	↓
None	17%	26%	↑

Highlights of Table 2:

- Respondents most often identified “Wireless Connectivity” as the biggest barrier to productive use of mobile technologies followed by Tablet PC Hardware (47% and 45%, respectively).
- Between the Survey Periods 1 and 2, there were decreases in the percentage of respondents who reported barriers for the following uses.
 - Ability to synchronize information from MPS: 25% to 7%
 - Tablet PC hardware problems: 30% to 26%
 - Understanding how to use the Tablet PC device: 19% to 3%

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, the barriers to productive use of the Tablet PC, and the likeliness of taking the Tablet PC into the client’s home.

- For both surveys, respondents who reported that they use the Tablet PC outside of their office “every day” were significantly more likely to take the Tablet PC into a “State Facility” than were those who used the Tablet PC outside of the office “a few times a month” or “never”.
- There was a significant difference between groups for those who take the Tablet PC into non-state locations in the field such as restaurants or coffee shops.
- There were no significant differences between those who had worked for the APS Facility less than one year and those who had been with the agency for more than one year (from Survey Period 1).
- Respondents who used the Tablet PC outside of the office only “a couple of times a week” were more likely to identify concerns about the risk of damaging the Tablet PC or other mobile equipment than those who used it “every day”.
- There were no significant differences between usage in the client’s home and identification of barriers.

* The percentages for the survey response will not total to 100%.

* The percentages for the survey response will not total to 100%.

New Questions – The following questions were only asked during Survey Period 2. The responses are included in this document to establish a baseline for subsequent evaluations.

Tables 3 through 6 represents the responses received during the Survey Period 2.

Table 3: APS Tablet PC User Survey Quantitative Questions	December 2006 (Survey 2) n=58*
How often do you take the Tablet PC into a client’s home or another investigative location?	
0-25% of the time	83%
25-50% of the time	9%
50-75% of the time	3%
75-100% of the time	5%

Highlights of Table 3:

- 83% of respondents to the second survey reported that they use the Tablet PC into an investigative location twenty-five percent of the time or less.

Table 4: APS Tablet PC User Survey Quantitative Questions December 2006 (Survey 2)
If you do not use (or rarely use) your Tablet PC in the client's home or other investigative location, please describe why not.
<p>Respondents reported feeling uncomfortable taking the Tablet PC into facilities because of safety issues, the requirement to handwrite statements, and equipment management.</p> <p>Some examples of comments are:</p> <p style="padding-left: 40px;">“Not comfortable taking such expensive equipment into uncontrolled environments.”</p> <p style="padding-left: 40px;">“As an AFC worker, we deal with clients that have mental retardation as well as mental illnesses. The clients with mental illness can be violent and unpredictable, therefore, I do not have my PC tablet accessible as the client could break it or use it as a weapon to hurt themselves, me or someone else.”</p> <p style="padding-left: 40px;">“We are required to take written statements on paper. We already have to carry statement forms, files and cameras to the various dorms and other location at the facility.”</p> <p style="padding-left: 40px;">“...no place at the facility to type [and] document sensitive information...”</p> <p style="padding-left: 40px;">“...I found that with the type of investigations [we do] in Facility and the written statements, it was not time productive for me and was easier to document at the office.”</p>

* The percentages for the survey response will not total to 100%.

Table 5: APS Tablet PC User Survey Quantitative Questions		December 2006 (Survey 2) n=58*
If you do use your Tablet PC in the client's home or other investigative location, in general what reactions have you received?		
Positive		5%
Negative		0%
No reaction		14%
Other, Please Specify _____		9%
Not applicable		48%
Left blank		24%

Highlights of Table 5:

- 19% of respondents to the second survey reported that when they used their Tablet PC in other investigative location, the reactions received were “positive” or “no reaction”.
- 72% left this answer blank or answered not applicable.

Five Facility caseworkers commented in the open ended other section of this question saying that the Tablet PC was “distracting” or “intimidating” for clients. While another worker said that they “do not take it into the Facility.”

Table 6: APS Tablet PC User Survey Quantitative Questions		December 2006 (Survey 2) n=58*
When using the Tablet PC outside of a DFPS office, I most commonly input text (i.e., take notes, complete forms, write) with the:		
Digital pen alone (e.g., use in MS Journal)		9%
Digital Pen on the Tablet Input Panel (TIP) (e.g., use in MPS or MS Word)		16%
Portable keyboard		66%
Buttons on the device		2%
Voice Recognition		5%
Transcription Service (any method of SpeakWrite)		16%
Not applicable		14%
Other, please specify _____		3%

Highlights of Table 6:

- Respondents to the second survey use the portable keyboard 66% of the time to input text followed by digital pen and transcription services which each are used by 16% of Facility caseworkers.
- Facility respondents indicated that they use the Tablet PC in their “home” most often (76%) and equally often in their car and a state facility (34%).

* The percentages for the survey response will not total to 100%.

* The percentages for the survey response will not total to 100%.

Responses to the Features Section of the Survey

The Features section of the survey asked respondents about various aspects of the Tablet PCs such as screen size, handwriting and voice recognition. For the purposes of the APS Facility Mobile Technology Evaluation, questions and responses related to MPS’ abilities and any suggestions for changes/improvements are included in our analysis.¹⁰

A mobile version of the case management system (IMPACT) was developed to allow access to key case details without relying on a wireless connection. This application, Mobile Protective Services (MPS), allows caseworkers to “check out” cases they need to use in the field, and then “check in” all information they have documented at a later time.¹¹ (APS Facility cases have external documentation, including witness statements, photos, and diagrams that are not stored or retrievable electronically.)

New Questions – The following questions were only asked during Survey Period 2. The responses are included in this document to establish a baseline for subsequent evaluations.

Tables 7 and 8 represents the responses received during the Survey Period 2.

Table 7: APS Tablet PC User Survey Quantitative Questions		December 2006 (Survey 2) n=58*
Do you use the MPS application?		
Yes		28%
Sometimes		40%
No		33%

Highlights of Table 7:

- 68% of Facility respondents reported using MPS application to various degrees.
- 33% report not using the MPS application.

Table 8: APS Tablet PC User Survey Qualitative Questions December 2006 (Survey 2)
What additional functionality (if any) would you like to see in the MPS application?
Facility Caseworkers had three main suggestions to expand the functionality of MPS including allowing workers to access and enter information on the persons list, type in the allegation on the Allegation screen and a fuller IMPACT application when using wireless. In addition, Facility caseworkers want to be able to complete statement forms electronically and have them signed.
"Ability to type in the allegation on the allegation screen. I would also be nice to be able to connect and retrieve Person information on a search away form the office..."
"Facility Statement forms on line that can be written on and signed on the screen to be printed out later. (Policy change required.)
"Be able to complete Investigations Conclusion page."

¹⁰ APS Tablet PC User Surveys, January and December 2006.

¹¹ APS Tablet PC User Surveys, January and December 2006.

* The percentages for the survey response will not total to 100%.

Responses to the Connectivity Section of the Survey

The Connectivity section of the survey asked respondents about their usage and needs of wireless connectivity. In addition to the performance of the technology, it is important to understand the importance of this feature to the field staff and how they are using it.¹²

Tables 9 through 12 represents the changes that occurred between the Survey Period 1 and 2.

Table 9: APS Tablet PC User Survey Quantitative Questions	January 2006 (Survey 1) n=64*	December 2006 (Survey 2) n=58*	% Change
Which of the following activities do you most commonly perform when connected wirelessly? (Check all that apply)			
Perform an MPS Synchronization with IMPACT	25%	28%	↑
Check cases in or out from IMPACT to MPS (e.g., download new intake, check case in, etc)	34%	28%	↓
Work in the IMPACT application by entering information	41%	45%	↑
Access the IMPACT application briefly (e.g. look up information)	42%	47%	↑
Send and/or receive e-mail	44%	60%	↑
Access the internet	33%	31%	↓
Access documents on the network (e.g., H: or S: drives)	Not Asked	24%	
None	14%	9%	↓

Highlights Table 9:

Facility respondents reported increased activities when connected wirelessly from Survey 1 to Survey 2:

- Email: 44% to 60%
- Brief use of IMPACT: 42% to 47%
- Working in IMPACT: 41% to 45%
- MPS synching with IMPACT 25% to 28%

Activities that decreased when connected wirelessly from Survey 1 to Survey 2 include:

- Checking cases in or out through MPS: 34% to 28%
- Accessing the internet: 33% to 31%

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, and most commonly performed activities when connected wirelessly.

- Facility respondents to the first survey who reported using the Tablet PC “every day” or “a couple of times a week” were significantly more likely than respondents who reported using the PC “a few times a month” to report that they use the Tablet PC to work in IMPACT applications by entering data.
- Facility respondents who reported using the Tablet PC “every day” (Survey 1) were significantly more likely than those who reported using the Tablet PC “a few times a month” to report that they use the e-mail and internet applications.
- Respondents to the second survey, who use the Tablet PC “a couple of times a week” were significantly more likely than those who “never” use the Tablet PC to report that they “perform MPS synchronizations with IMPACT “and “check cases in or out from IMPACT to MPS”.
- Those who use the PC “a couple of time a week” were more likely than those who use it “a few times a month” to report using the Tablet PC when connected wirelessly to “access the internet”.

¹² APS Tablet PC User Surveys, January and December 2006.

* The percentages for the survey response will not total to 100%.

* The percentages for the survey response will not total to 100%.

Analyses of whether tenure was a significant factor in respondent perceptions of timesavings yielded significant results for the data from the first survey:

- From the first survey:
 - There were no significant differences between workers who were with APS Facility for less than one year and those who had been with the agency longer.
- From the second survey:
 - Respondents to the second survey, who had worked for APS Facility for “more than one year”, were significantly more likely to report that they perform MPS Synchronizations with IMPACT and check cases in and out from IMPACT to MPS than those who had worked for the agency for “less than one year”.

Table 10: APS Tablet PC User Survey Quantitative Questions	January 2006 (Survey 1) n=64*	December 2006 (Survey 2) n=58*	% Change
Please rate your satisfaction regarding ability of use.			
I am satisfied with the ability to use the wireless service from my home:			
Strongly Disagree	13%	5%	↓
Disagree	16%	5%	↓
Neutral	14%	26%	↑
Agree	25%	28%	↑
Strongly agree	20%	21%	↑
Unable to use	Not asked	5%	
Not applicable	13%	10%	↓

Highlights of Table 10:

- Facility caseworkers “agreed” or “strongly agreed” they were satisfied with the use of wireless service increased from 45% on Survey 1 to 49% during Survey 2.

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, tenure, and satisfaction regarding ability of wireless use. There was:

- For both of the surveys, there were no significant differences between groups based on frequency of Tablet PC use outside the office and respondent satisfaction with their ability to use the wireless service from home.
- In addition, no significant differences between respondents who had worked for APS Facility for “less than one year” and those who had worked “more than one year” appeared for either of the surveys.

* The percentages for the survey response will not total to 100%.

* The percentages for the survey response will not total to 100%.

Table 11: APS Tablet PC User Survey
Qualitative Questions
December 2006 (Survey 2)

How does wireless aid effective fieldwork?

Facility workers who are able to use wireless state that it enables them to access cases, information, create maps and connect with other workers and their supervisors. Wireless has increased casework flexibility and has improved the quality of their casework and documentation. However, many workers do not have access to wireless in rural areas, have sporadic wireless connections or the connection is too slow for many. Those who have access to wireless, and express that it aids effective fieldwork are saying:

“If a new case is received while out I the field, it can be pulled up and the narrative read. “

“Give the investigator the ability to look up information, such as grading bruises or other injuries.”

“It’s extremely useful, especially when I forget my statement sheets, or get lost on the way to a facility, or when I am expecting an important email from the boss; it’s very reassuring to be connected at all times.”

“Allows the opportunity to document while in the field.”

Table 12: APS Tablet PC User Survey
Qualitative Questions
December 2006 (Survey 2)

How does wireless hinder effective fieldwork?

The lack of connectivity, sporadic connections and slowness of transmission are still major issue in many parts of the state particularly in the rural areas.

“Loses signal, signal not available in rural areas.”

“No connection.”

Responses to the Support Section of the Survey

The Support section of the survey elicited information from respondents about the quality of support they receive from the Customer Support Center Help Desk, regional IT staff and their APS Facility Skilled Users. For the purposes of the APS Facility Mobile Technology Evaluation, questions and responses related to Customer Support Center Help Desk and Regional IT Staff, and any suggestions for changes/improvements are included in our analysis.¹³

Table 13 represents the changes that occurred between the Survey Period 1 and 2.

Table 13: APS Tablet PC User Survey Quantitative Questions	January 2006 (Survey 1) n=64*	December 2006 (Survey 2) n=58*	% Change
Rate the assistance you have received from the following support services.			
Customer Support Center (e.g. CSC, Help Desk) when reporting a Tablet PC problem over the phone			
Good	38%	59%	↑
Moderate	17%	34%	↑
Poor	11%	3%	↓
Not Applicable	34%	3%	↓
Regional technicians when they are addressing a Tablet PC problem			
Good	55%	52%	↓
Moderate	19%	34%	↑
Poor	9%	9%	–
Not Applicable	17%	5%	↓

Highlights Table 13:

- Ninety-three percent of respondents reported “good” or “moderate” support from the Customer Support Center on Survey 2 as compared to 55% during Survey 1.
- Similarly, 86% of Survey 2 respondents reported “good” or “moderate” support from regional technicians compared to 74% on Survey 1.

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, and satisfaction with the Customer Support Center (e.g. CSC, Help Desk).

- There were no significant differences between the groups for tenure or frequency of use outside the office for either of the two surveys. This could be due to small sample size.

¹³ APS Tablet PC User Surveys, January and December 2006.

* The percentages for the survey response will not total to 100%.

* The percentages for the survey response will not total to 100%.

Responses to the Transcription Section of the Survey

The Transcription section of the survey elicited information from respondents about their usage of the SpeakWrite service and what methods of submission they most frequently use. Comments related to improvements were also requested.¹⁴

New Questions – The following questions were only asked during Survey Period 2. The responses are included in this document to establish a baseline for subsequent evaluations.

Tables 14 and 15 represents the responses received during the Survey Period 2.

Table 14: APS Tablet PC User Survey Quantitative Questions	December 2006 (Survey 2) n=58*
Which submission method do you use for the SpeakWrite dictation/transcription services? (Select all that apply)	
Calling from the phone in my office	28%
Calling from a cellular phone in the field	7%
Calling from a phone in my home	17%
Recording on the Tablet PC in my office and sending via SpeakEasy	22%
Recording on the Tablet PC in the field and sending via SpeakEasy	9%
Recording on the Tablet PC in my home and sending via SpeakEasy	10%
Not applicable - I do not use the SpeakWrite service	53%

Highlights of Table 14:

- 53% of Facility respondents report that they do not use SpeakWrite.
- 47% of Facility staff that submit transcription requests to SpeakWrite.

Table 15: APS Tablet PC User Survey Qualitative Questions December 2006 (Survey 2)
What suggestions do you have to make use of the SpeakWrite service more valuable?
All Facility respondents who use SpeakWrite say it is a great service.

¹⁴ APS Tablet PC User Surveys, January and December 2006.

* The percentages for the survey response will not total to 100%.

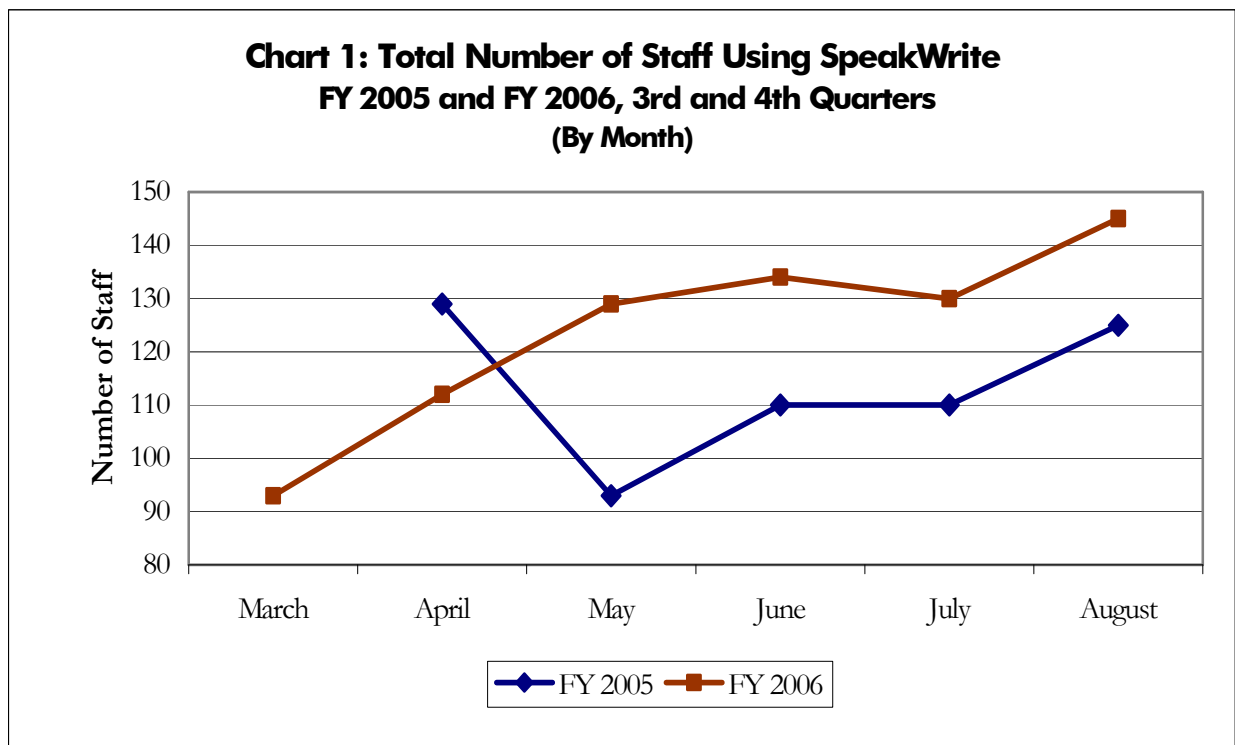
Transcription Services (SpeakWrite) Data

Formerly CyberSecretaries, SpeakWrite is a service that allows caseworkers to dictate work-related material into a phone, digital recorder, desktop PC or Tablet PC, and produces a text transcript of the recording for the employee via e-mail. SpeakWrite also accepts handwritten documentation by fax or e-mail "hand-written" notes to be transcribed, and also, sent back via e-mail.

According to the HHSC Service Level Agreement with SpeakWrite, on average, dictations are returned within three hours. The final product can be cut and pasted into IMPACT, court reports, letters, or other documents. DFPS has provided this tool to assist staff in managing workload, and is intended to allow caseworkers more time out in the field and less time in front of a computer. This system has consistently been reported as fairly easy and intuitive to use by direct delivery staff.¹⁵

Charts 1 and 2, and Table 16¹⁶ are illustrations of the "Total Number of Staff Using SpeakWrite", "Total SpeakWrite Words Dictated per Call", and "Total Calls per Staff". (Currently, "Total Number of Staff Using SpeakWrite", "Total SpeakWrite Words Dictated per Call", and "Total Calls per Staff" are aggregated together for APS In-Home and Facility.)

When comparing the three different fiscal years to one another, there was a slight increase in the "Total Calls per Staff" between FY 2005 and FY 2006, 3rd and 4th Quarters, but the difference between the fiscal years is negligible.

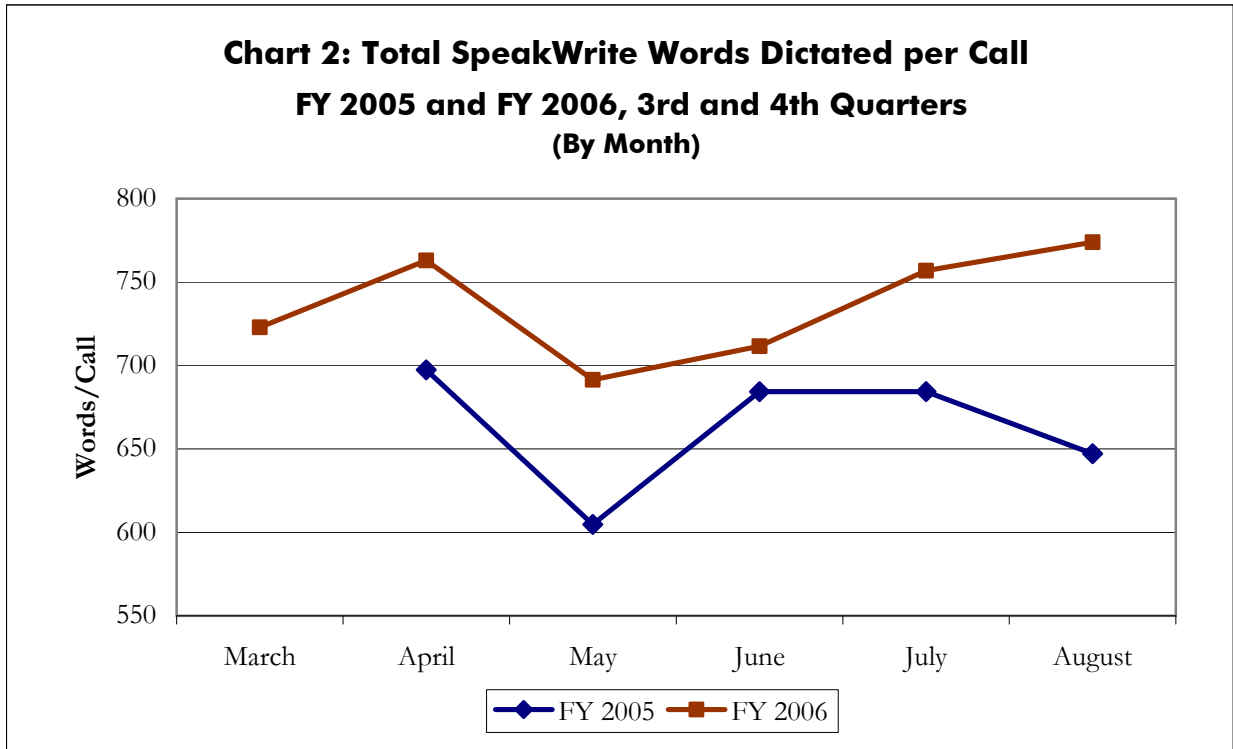


Highlights of Chart 1:

- There was a slight increase in "Total Number Staff Using SpeakWrite" from FY 2005 and FY 2006, 3rd and 4th Quarters.
- The average number of staff using SpeakWrite:
 - 113 employees – FY 2005, 3rd and 4th Quarters.
 - 124 employees – FY 2006, 3rd and 4th Quarters.

¹⁵ The Department of Family and Protective Services (DFPS), DFPS Intranet, March 27, 2007.

¹⁶ Data compiled from SpeakWrite Monthly Report.



Highlights of Chart 2:

- There was an increase in “Total SpeakWrite Words Dictated per Call” from FY 2005 and FY 2006, 3rd and 4th Quarters.
- The average number SpeakWrite words dictated per call:
 - 664 words – FY 2005, 3rd and 4th Quarters
 - 737 words – FY 2006, 3rd and 4th Quarters

Conclusion and Next Steps - Examination of Mobile Technology Usage

Conclusion

Frequency of Tablet PC Usage

- The percentage of those who use the Tablet PC outside of the office “every day” decreased between the first and second survey (i.e. 30% to 17%, respectively).
- The percentage of those who use it “a few times a month” or “never” increased slightly between the first and second survey (i.e. 41% to 50%, respectively).
- Facility respondents indicated that they use the Tablet PC in their “home” most often (76%) and equally often in their car and a state facility (34%).
- 83% of respondents to the second survey reported that they use the Tablet PC into an investigative location twenty-five percent of the time or less.

Barriers of Tablet PC Usage

- Respondents most often identified “Wireless Connectivity” as the biggest barrier to productive use of mobile technologies followed by Tablet PC Hardware (i.e. 47% and 45%, respectively).
- Respondents reported feeling uncomfortable taking the Tablet PC into facilities because of safety issues, the requirement to handwrite statements, and equipment management.
- Between the Survey Periods 1 and 2, there were decreases in the percentage of respondents who reported barriers for the following uses.
 - Ability to synchronize information from MPS: 25% to 7%
 - Tablet PC hardware problems: 30% to 26%
 - Understanding how to use the Tablet PC device: 19% to 3%

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, the barriers to productive use of the Tablet PC, and the likeliness of taking the Tablet PC into the client’s home.

- For both surveys, respondents who reported that they use the Tablet PC outside of their office “every day” were significantly more likely to take the Tablet PC into a “State Facility” than were those who used the Tablet PC outside of the office “a few times a month” or “never”.
- There was a significant difference between groups for those who take the Tablet PC into non-state locations in the field such as restaurants or coffee shops.
- There were no significant differences between those who had worked for the APS Facility less than one year and those who had been with the agency for more than one year (from Survey Period 1).
- Respondents who used the Tablet PC outside of the office only “a couple of times a week” were more likely to identify concerns about the risk of damaging the Tablet PC or other mobile equipment than those who used it “every day”.
- There were no significant differences between usage in the client’s home and identification of barriers.

Client Reaction

- 19% of respondents to the second survey reported that when they used their Tablet PC in other investigative location, the reactions received were “positive” or “no reaction”.
- 72% left this answer blank or answered not applicable.

Five Facility caseworkers commented in the open ended other section of this question saying that the Tablet PC was “distracting” or “intimidating” for clients. While another worker said that they “do not take it into the Facility.”

Wireless Connectivity

- Respondents to both surveys most often identified “Wireless Connectivity” as the biggest barrier to productive use of mobile technologies.

Most Commonly Performed Activities When Connected Wirelessly

Facility respondents reported increased activities when connected wirelessly from Survey 1 to Survey 2:

- Email: 44% to 60%
- Brief use of IMPACT: 42% to 47%
- Working in IMPACT: 41% to 45%
- MPS syncing with IMPACT 25% to 28%

Activities that decreased when connected wirelessly from Survey 1 to Survey 2 include:

- Checking cases in or out through MPS: 34% to 28%
- Accessing the internet: 33% to 31%

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, and most commonly performed activities when connected wirelessly.

- Facility respondents to the first survey who reported using the Tablet PC “every day” or “a couple of times a week” were significantly more likely than respondents who reported using the PC “a few times a month” to report that they use the Tablet PC to work in IMPACT applications by entering data.
- Facility respondents who reported using the Tablet PC “every day” (Survey 1) were significantly more likely than those who reported using the Tablet PC “a few times a month” to report that they use the e-mail and internet applications.
- Respondents to the second survey, who use the Tablet PC “a couple of times a week” were significantly more likely than those who “never” use the Tablet PC to report that they “perform MPS synchronizations with IMPACT” and “check cases in or out from IMPACT to MPS”.
- Those who use the PC “a couple of time a week” were more likely than those who use it “a few times a month” to report using the Tablet PC when connected wirelessly to “access the internet”.

Analyses of whether tenure was a significant factor in respondent perceptions of time savings yielded significant results for the data from the first survey:

- From the first survey:
 - There were no significant differences between workers who were with APS Facility for less than one year and those who had been with the agency longer.
- From the second survey:
 - Respondents to the second survey, who had worked for APS Facility for “more than one year”, were significantly more likely to report that they perform MPS Synchronizations with IMPACT and check cases in and out from IMPACT to MPS than those who had worked for the agency for “less than one year”.

Satisfaction Regarding Ability of Wireless Use

- Facility caseworkers “Agreed” or “Strongly Agreed” they were satisfied with the use of wireless service increased from 45% on Survey 1 to 49% during Survey 2.

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, tenure, and satisfaction regarding ability of wireless use. There was:

- For both of the surveys, there were no significant differences between groups based on frequency of Tablet PC use outside the office and respondent satisfaction with their ability to use the wireless service from home.
- In addition, no significant differences between respondents who had worked for APS Facility for “less than one year” and those who had worked “more than one year” appeared for either of the surveys.
- 26 percent of respondents during Survey 1 and 25 percent during Survey 2 “Disagreed” or “Strongly Disagreed” that they were satisfied with the wireless service from their homes. This is significant given that APS is moving towards a more mobile environment.

How does wireless aid effective fieldwork?

Facility workers who are able to use wireless state that it enables them to access cases, information, create maps and connect with other workers and their supervisors. Wireless has increased casework flexibility and has improved the quality of their casework and documentation. However, many workers do not have access to wireless in rural areas, have sporadic wireless connections or the connection is too slow for many. Those who have access to wireless, and express that it aids effective fieldwork.

How does wireless hinder effective fieldwork?

The lack of connectivity, sporadic connections and slowness of transmission are still major issue in many parts of the state, particularly in the rural areas.

Mobile Protection Services

- 68% of Facility respondents reported using MPS application to various degrees.
- 33% report not using the MPS application.
- Caseworkers had three main suggestions to access and enter information on the persons list, type in the allegation on the Allegation screen and a fuller IMPACT application when using wireless. In addition, Facility caseworkers want to be able to complete statement forms electronically and have them signed.

Tablet PC Features

- Respondents to the second survey used the portable keyboard 66 percent of the time to input text, followed by digital pen and transcription services, which each were used by 16 percent of Facility caseworkers.
- Facility respondents indicated that they use the Tablet PC in their “home” most often (76%) and equally often in their car and a state facility (34%).

Technical Support

- Ninety-three percent of respondents reported “good” or “moderate” support from the Customer Support Center on Survey 2 as compared to 55% during Survey 1.
- Similarly, 86% of Survey 2 respondents reported “good” or “moderate” support from regional technicians compared to 74% on Survey 1.

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, and satisfaction with the Customer Support Center (e.g. CSC, Help Desk).

- There were no significant differences between the groups for tenure or frequency of use outside the office for either of the two surveys. This could be due to small sample size.

SpeakWrite Services

- There was a slight increase in “Total Number Staff Using SpeakWrite” from FY 2005 and FY 2006.
- The average number of staff using SpeakWrite:
 - 113 employees – FY 2005
 - 124 employees – FY 2006
- There was an increase in “Total SpeakWrite Words Dictated per Call” from FY 2005 and FY 2006.
- The average number SpeakWrite words dictated per call:
 - 664 words – FY 2005
 - 737 words – FY 2006
- When submitting transcription requests to SpeakWrite, staff reported:
 - 53% of Facility respondents report that they do not use SpeakWrite.
 - 47% of Facility staff that submit transcription requests to SpeakWrite.
- All Facility respondents who use SpeakWrite say it is a great service.

Next Steps

The APS Facility Mobile Technology Evaluation will not include the following data from this report, but hope it will be included as a data source in subsequent evaluations.

- Tablet PC Synchronization Report
- Tablet PC Check-In/Check-Out Report
- Wireless Connectivity Report
- Mobile Technology Usability Study
- Help Desk

Tablet PC Synchronization Report

There are two main ways for caseworkers to use the Tablet PC to record client information: wireless connection and MPS. The APS Tablet PC Synchronization Report displays the last time each APS (In-Home and Facility) worker synched his or her Tablet PC, using the Mobile Protective Services (MPS) application, with IMPACT. MPS is an application that resides on the Tablet PCs to enable caseworkers to become “mobile” out in the field. It contains key IMPACT documentation pages for any cases “checked out” of IMPACT by the worker. MPS allows synchronization between the documentation stored on the Tablet PC and the full case record in IMPACT. Currently, “Total Number of APS Tablet PC Synchronizations” is aggregated together for APS In-Home and Facility. To be more useful in evaluating Mobile Technology Usage, reporting the data separately for APS In-Home and Facility, plus calculating the percentage of Tablet PC users who sync per month would provide more detail in Tablet PC Synchronization.

Tablet PC Check-In/Check-Out Report

The Tablet PC Check-In/Check-Out Report shows how many APS In-Home and Facility cases are being checked in and out by a particular worker through their Tablet PC (using the MPS application). The DFPS Information Resource Management Division runs the report at approximately 4:00PM everyday, collecting the data for a 24-hour period each time. The report was originally requested in January 2007, and the data collection started on January 15, 2007. Due to the data limitations, the APS Facility Mobile Technology Evaluation will not include any data from this report.

Wireless Connectivity Report

DFPS Tablet PCs use a wireless card to access the DFPS network including IMPACT and e-mail on an as-needed basis. Wireless access is not required to use the documentation benefits of the Tablet PC. However, staff will have the flexibility to use wireless as they see fit to perform casework if a wireless connection is available.¹⁷

The wireless access will operate similar to a cellular phone signal, and does not rely on the caseworker to be in a particular location. The wireless plan allows for unlimited minutes and does not have roaming charges associated; there will be no additional cost to the worker or the region. However, just like cellular phones, there may not always be a wireless connection are not available in parts of the state.¹⁸

Due to the report in “In Development” status, the APS Facility Mobile Technology Evaluation will not include any data from this report.

¹⁷ Texas Department of Family and Protective Services (DFPS), DFPS Renewal – APS Reform, Mobile Computing Fact Sheet, June 9, 2005.

¹⁸ Texas Department of Family and Protective Services (DFPS), DFPS Renewal – APS Reform, Mobile Computing Fact Sheet, June 9, 2005.

Mobile Technology Usability Study

The Mobile Technology Usability Project Initiative defines, encourages, improves and assists in transitioning users to a mobile work environment. It is focused specifically on formalizing a usability group within DFPS to ensure that there is user input for adding, modifying, and enhancing the DFPS Mobile Technology applications. Efforts include gathering information in all aspects of a user’s day when it comes to Mobile Technology, and accounting for issues staff are dealing with regarding the applications, Tablet PCs, software, hardware, and assistance from the Customer Service Center. Once information is gathered, the Usability Group makes recommendations and suggestions for improvements in every area that a user’s Mobile Technology interactions within DFPS.

Due to the study in “In Development” status, the APS Facility Mobile Technology Evaluation will not include any data from this report.

Help Desk Calls

The Customer Support Center (e.g. CSC, Help Desk) is the resource that APS caseworkers contact when experiencing any IT-related difficulties, including problems with the Tablet PCs. The support is provided free of charge and is assistance is available 24 hours a day, 7 days a week.

Table 16 represents the Number of APS Tablet PC Help Closed Desk Tickets processed in FY 2006, 3rd and 4th Quarters. (Currently, Number of APS In-Home and Facility Tablet PC Help Closed Desk Tickets are aggregated together). The data is limited to this timeframe since the first APS Tablet PC Help Desk Tickets received in FY 2005, 3rd and 4th Quarters, totaled only 20. This sum was not a sufficient to compare the fiscal years.

Table 16: APS Tablet PC Closed Help Desk Tickets FY 2006		
	Number	Percent
Help Desk Topics		
Air Card	161	18%
Screen	146	16%
System	123	13%
Hardware	99	11%
Keyboard	63	7%
Windows XP	54	6%
MPS	53	6%
IMPACT	43	5%
Other	39	4%
LANDesk	36	4%
Software	29	3%
Camera	25	3%
Outlook	15	2%
Internet	13	1%
SpeakWrite	11	1%
VPN	9	1%
PDD	1	0%
TOTAL	920	100%

Highlights of Table 16:

- When reporting technical difficulties with the CSC, the CSC staff reported generating the majority of the Help Desk Tickets in the following topics:
 - 18% - Air Card
 - 16% - Screen
 - 13% - System
 - 11% - Hardware

Question 2: Is the program realizing efficiencies as a result of the Mobile Technology implementation?

Question 2: Is the program realizing efficiencies as a result of the Mobile Technology implementation?

Measurement of Changes in Efficiencies

This section of the evaluation quantifies the changes in efficiencies in APS Facility Program direct delivery services, and investigates if Mobile Technology influenced any difference.

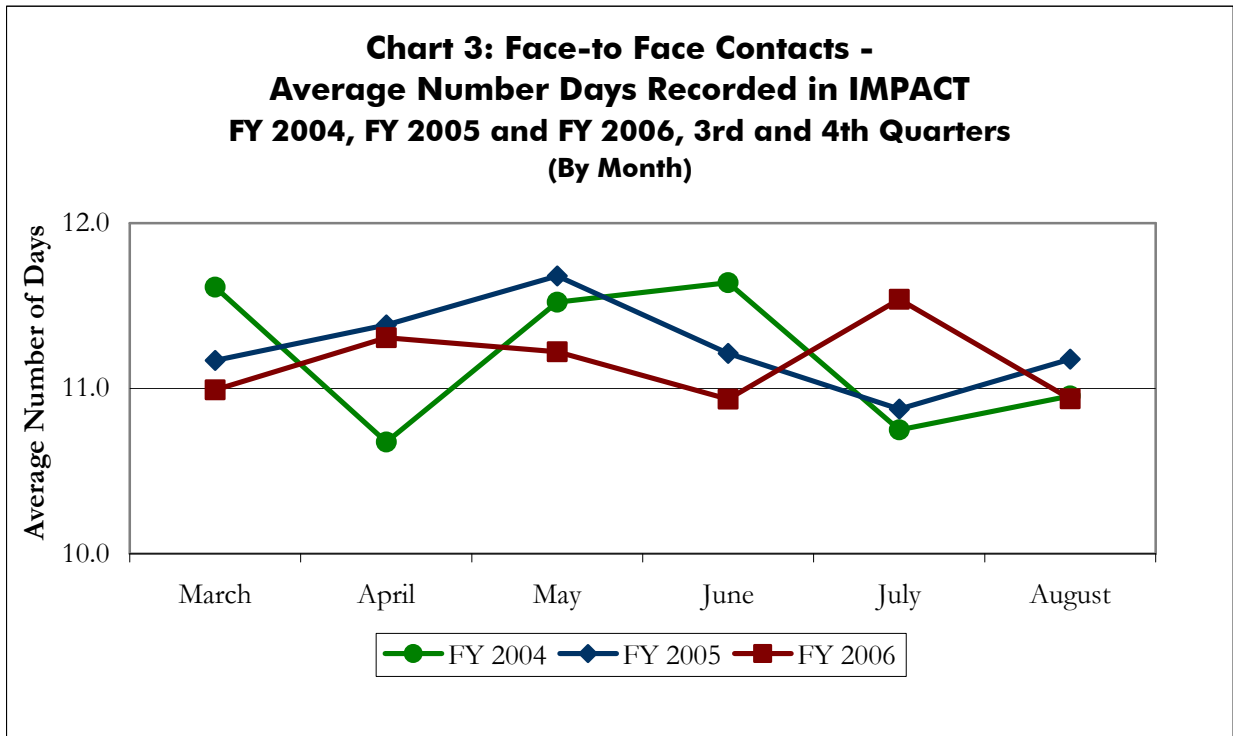
Quantitative Data from IMPACT System

Timeliness of Data Entry - The caseworker documents each case in IMPACT completely, accurately, and in a timely manner according to policy.

Accurate and thorough documentation of an investigation is a crucial part of the investigative process. Facility Abuse and Neglect Reports are prepared for and read by persons outside DFPS. State Facilities are highly visible organizations and problems of abuse and neglect are often the subject of media and/or legal inquiry. Therefore, it is essential that the investigator document in a manner clearly understood by people who will approach the case from various perspectives.¹⁹

Reports must be completed in a timely manner. An administrator or contractor CEO may be waiting for a report in order to take disciplinary action against an alleged perpetrator. Delayed reports may negatively impact the safety and well being of persons served.²⁰

Chart 3 looks at the Timeliness of Data Entry by showing the “Average Number of Days Recorded in IMPACT” for Face-to-Face Contacts.



¹⁹ Texas Department of Family and Protective Services (DFPS), APS Facility Policy Handbook, 5100 Importance of Documentation, September 2000.

²⁰ Texas Department of Family and Protective Services (DFPS), APS Facility Policy Handbook, 5100 Importance of Documentation, September 2000.

Highlights of Chart 3:

Chart 3 is the “Average Number of Days Recorded in IMPACT ” for Face-to-Face by Month for FY 2005, and FY2006, 3rd and 4th Quarters ²¹.

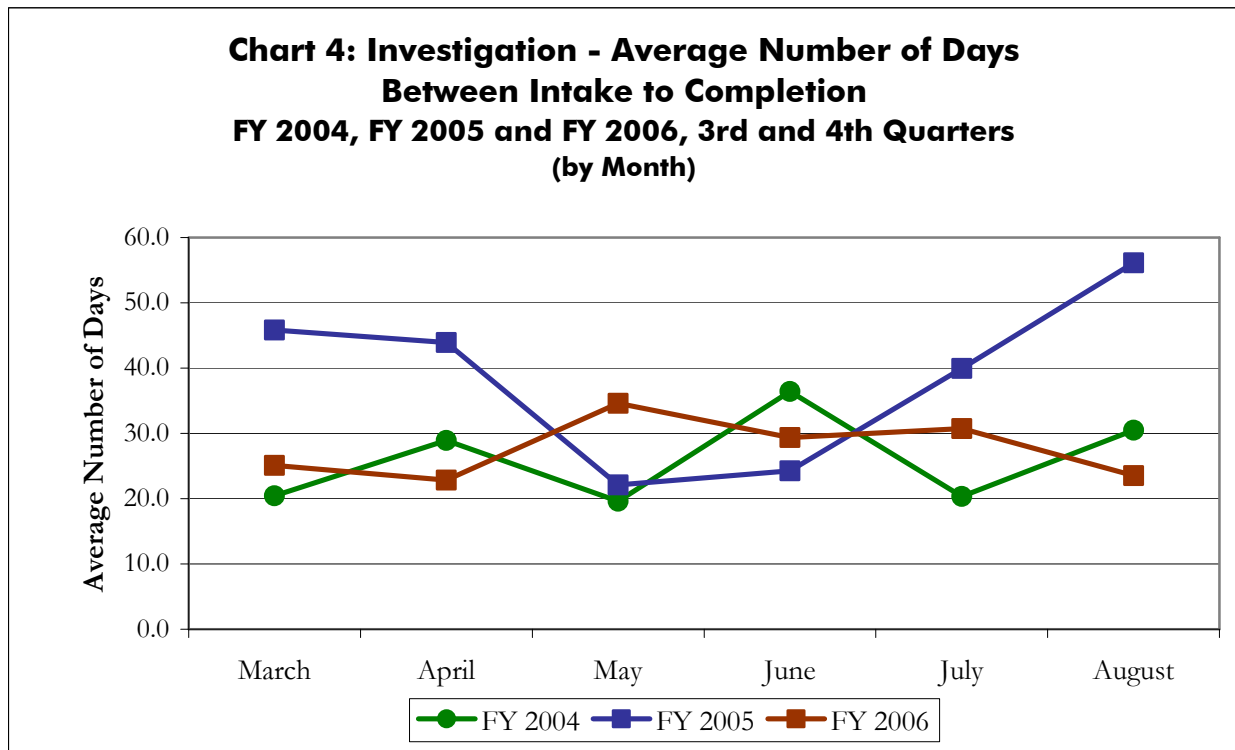
- In FY 2004, the days to record Face-to-Face Contacts ranged from a low of 10.7 to 11.6 days
- In FY 2005, the days to record Face-to-Face Contacts ranged from a low of 10.9 to 11.7 days.
- In FY 2006, the days to record Face-to-Face Contacts ranged from a low of 10.9 to 11.5 days

An Analysis of Variance (ANOVA) was performed to test for differences among the three fiscal years.

- The difference in mean days to record Face-to-Face Contacts in IMPACT between the fiscal years is not statistically significant²².

Duration of Active Investigations - APS Staff investigate reported abuse, neglect, or exploitation to determine whether the reported situation exists and, if so, the extent to which it adversely affects the elderly person or adult with disabilities.²³

Chart 4 looks at the Duration of Active Investigation by showing the “Average Number of Days Between Intake and Completion” of an APS Facility Investigation.



Highlights of Chart 4:

Chart 4 is the Average Number of Days Between Intake to Completion of an APS Facility Investigation by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters ²⁴.

- 25.3 days - FY2004, 3rd and 4th Quarters
- 39.1 days - FY2005, 3rd and 4th Quarters
- 27.4 days - FY2006, 3rd and 4th Quarters

²¹ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z & 5027A.

²² SPSS T-Test for Independent Sample: p<= .05

²³ Texas Department of Family and Protective Services (DFPS), APS Policy Handbook, 3100 Investigation, October 2002.

²⁴ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z & 5027A.

An Analysis of Variance (ANOVA) was performed to test for differences among the three fiscal years.

- The 3rd and 4th Quarter Mean for the three fiscal years is 31.4 days for the Investigation to progress from Intake to the Completion.
- There was no significant difference between the time periods.

APS Tablet PC User Survey

Responses to the Efficiency Section of the Survey

The Efficiency and Quality (the results of the Quality section will be covered in the next portion of the evaluation) section of the survey asked respondents about any benefits they have gained in the time spent documenting casework, conducting more or less fieldwork and any quality improvements they have found using a Tablet PC. Since some new workers to APS Facility have always used a Tablet PC, only those with one or more years of experience in an APS Facility caseworker position were asked questions regarding comparisons to previous methods.²⁵

Tables 17 and 18 represents the changes that occurred between the Survey Period 1 and 2.

Table 17: APS Tablet PC User Survey Quantitative Questions	January 2006 (Survey 1) n=64*	December 2006 (Survey 2) n=58*	% Change
If you have been a caseworker for one year or more, rate the items below for time savings and efficiency regarding the use of the Tablet PC as compared to your previous methods (prior to Tablet PC):			
Completion of documentation closer to the time of actual contact			
Takes longer	11%	11%	—
No change	48%	47%	↓
Some time savings	28%	24%	↓
Significant time savings	13%	18%	↑
Data entry time using the Tablet PC			
Takes longer	20%	20%	—
No change	47%	36%	↓
Some time savings	22%	36%	↑
Significant time savings	11%	9%	↓

Highlights of Table 17:

- There was a reduction in the number of respondents who reported “no change” in data entry time or that it “takes longer” to enter data using the Tablet PC (i.e. 67% and 56% from Survey 1 to Survey 2, respectively).
- Forty-five percent of Facility respondents reported “Some” or “Significant” improvements in data entry time savings as compared to 33% on the Survey 1.

²⁵ APS Tablet PC User Surveys, January and December 2006.

* The percentages for the survey response will not total to 100%.

* The percentages for the survey response will not total to 100%.

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC usage outside the office or tenure, and efficiency of their casework because of the Tablet PCs. Respondents who used the Tablet PC:

Survey Period 1

- Respondents who used the Tablet PC “every day” or “a couple of times a week” were more likely than those who reported never using the PC to report some time savings in completion of documentation.

Survey Period 2

- There were no significant differences between groups based on frequency of use or tenure.

New Questions – The following questions were only asked during Survey Period 2. The responses are included in this document to establish a baseline for subsequent evaluations.

Table 18 represents the responses received during the Survey Period 2.

Table 18: APS Tablet PC User Survey Quantitative Questions	December 2006 (Survey 2) n=58*
Are you able to do any same day documentation using your Tablet PC?	
Yes	91%
No	9%
If you answered, "Yes" to above, what case actions do you document the same day? (Check all that apply)	
Case Initiation/Investigation	53%
Face-to-Face Contacts	62%
Not applicable	9%

Highlights of Table 18:

- 91% of Facility respondents to the second survey reported that ability to complete same day documentation for key case information using their Tablet PCs. Because this is a new question we do not know if this has changed since the time one survey.

Table 19: APS Tablet PC User Survey Qualitative Questions December 2006 (Survey 2)
What barriers have you experienced regarding completion of same day documentation?
When asked what barriers respondents experienced regarding same day documentation, the three main reasons for not documenting the same day were the time it takes to document, high caseloads, and functionality issues - particularly wireless connectivity. Some examples of comments were: “Not enough time to work several investigations, complete investigations and document.” “Case load/work demands.” “Wireless connectivity.”

* The percentages for the survey response will not total to 100%.

Conclusion and Next Steps - Measurement of Changes in Efficiencies

Conclusion

Timeliness of Data Entry – Initial Attempted or Actual Face to Face Contacts

“Average Number of Days Recorded in IMPACT” for Face-to-Face by Month for FY 2005, and FY2006, 3rd and 4th Quarters²⁶ were comparable between the fiscal years.

- In FY 2004, the days to record Face-to-Face Contacts ranged from a low of 10.7 to 11.6 days
- In FY 2005, the days to record Face-to-Face Contacts ranged from a low of 10.9 to 11.7 days.
- In FY 2006, the days to record Face-to-Face Contacts ranged from a low of 10.9 to 11.5 days

An Analysis of Variance (ANOVA) was performed to test for differences among the three fiscal years.

- The difference among the three fiscal years to record Face-to-Face Contacts in IMPACT is not statistically significant²⁷.

Timeliness of Data Entry –Completed Investigations

“Average Number of Days Between Intake to Completion” of an APS Facility Investigation by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters²⁸.

- 25.3 days - FY2004, 3rd and 4th Quarters
- 39.1 days - FY2005, 3rd and 4th Quarters
- 27.4 days - FY2006, 3rd and 4th Quarters

An Analysis of Variance (ANOVA) was performed to test for differences among the three fiscal years.

- The 3rd and 4th Quarter Mean for the three fiscal years is 31.4 days for the Investigation to progress from Intake to the Completion.
- There was no significant difference between the time periods.

Efficiency of Casework Due to Tablet PC

- There was a reduction in the number of respondents who reported “no change” in data entry time or that it “takes longer” to enter data using the Tablet PC (i.e. 67% and 56% from Survey 1 to Survey 2, respectively).
- Forty-five percent of Facility respondents reported “Some” or “Significant” improvements in data entry time savings as compared to 33% on the Survey 1.

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC usage outside the office or tenure, and efficiency of their casework because of the Tablet PCs.

Respondents who used the Tablet PC:

Survey Period 1

- Respondents who used the Tablet PC “every day” or “a couple of times a week” were more likely than those who reported never using the PC to report some time savings in completion of documentation.

Survey Period 2

- There were no significant differences between groups based on frequency of use or tenure.

²⁶ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z & 5027A.

²⁷ SPSS T-Test for Independent Sample: $p \leq .05$

²⁸ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z & 5027A.

Same Day Documentation

- 91 percent of Facility respondents to the second survey reported that ability to complete same day documentation for key case information using their Tablet PCs. (Because this is a new question, we do not know if this has changed since the time one survey.)
- When asked what barriers respondents experienced regarding same day documentation, the three main reasons for not documenting the same day were the time it takes to document, high caseloads, and functionality issues - particularly wireless connectivity.

Next Steps

The APS Mobile Technology Evaluation will not include the following data from this report, but hope it will be included as a data source in subsequent evaluations.

- Qualitative Data from APS Facility Casereading System

Qualitative Data from APS Facility Casereading System

The qualitative information used to manage APS Performance comes from APS Quality Assurance (QA) Casereading. The APS Quality Assurance Specialists began analyzing APS Facility cases in FY 2007 (there is no comparative information available for this data source). They read two cases per worker in their assigned regions or units, and enter the scores into an online QA Casereading System. The Casereading instrument for APS Facility Program addresses all major policy requirements for Process Compliance, Evidence Collection, and Analysis of Evidence.²⁹

Specifically, the Casereading program standards, or items, are goal oriented. Some items are objective, focusing on deadlines met or the presence or absence of certain documentation features. Others call for quality judgments on the part of Quality Assurance Specialists. The items in each program area's instrument are divided into three broad groups, or scales. These scales are:

- **Facility**
 - Process Compliance Scale
 - Evidence Collection Scale
 - Analysis of Evidence Scale

Table 20 looks at the Evidence Collection Scale Items from the APS Facility Casereading System.

Table 20: APS Facility Case Reading – Evidence Collection Scale Items ³⁰ FY 2007
Evidence Collection Scale
5. Were photographs taken to document the existence or non-existence of alleged physical injuries according to policy?
6. Was all other relevant demonstrative evidence (e.g. photographs and/or diagrams of the scene) collected when appropriate?
9. Were statements taken from all relevant witnesses?
10. Do contacts listed under Summary of Evidence indicate that the investigator explored alternate methods of communication with the victim and other witnesses unable to communicate verbally and obtained an interpreter when needed?
11. Were witness statement forms completed properly?
12. Do the statements indicate that the investigator qualified the witnesses?
13. Do the statements provide a detailed account of the witnesses' knowledge of the incident?
14. Was all other relevant documentary evidence collected (e.g., client injury form, staff assignment logs, duty rosters, physician orders, progress notes, etc.)?
15. Did the investigator address all allegations identified at intake and any additional allegations identified during the course of investigation?
5. Were photographs taken to document the existence or non-existence of alleged physical injuries according to policy?

²⁹ Texas Department of Family and Protective Services, APS Performance Orientation Manual, 2007.

³⁰ Texas Department of Family and Protective Services, APS Facility Case Reading Tool, FY 2006.

Question 3: Has Mobile Technology maintained or improved quality of documentation?

Question 3: Has Mobile Technology maintained or improved quality of documentation?

Assessment of Documentation Quality Changes

This section of the evaluation reviews APS Facility Program documentation quality change, and whether Mobile Technology is useful in the improvement.

APS Tablet PC User Survey

Responses to the Quality Section of the Survey

The Efficiency and Quality (the results of the Efficiency section was covered in the previous portion of the evaluation) section of the survey asked respondents about any benefits they have gained in the time spent documenting casework, conducting more or less fieldwork and any quality improvements they have found using a Tablet PC.

Table 21 represents the changes that occurred between the Survey Period 1 and 2.

Table 21: APS Tablet PC User Survey Quantitative Questions	January 2006 (Survey 1) n=64*	December 2006 (Survey 2) n=58*	% Change
Do you feel you are able to provide better quality casework services based on Tablet PC use?			
Yes, significant quality improvements	8%	5%	↓
Yes, some quality improvements	23%	41%	↑
No change from previous approach	58%	40%	↓
No, the Tablet PC has decreased my casework quality	5%	5%	—
Not applicable	6%	9%	↑

Highlights of Table 21:

- Between the first and second survey, there was an increase in the percentage of respondents who reported “some” improvement in documentation quality from 23% to 41% for Survey 1 and Survey 2, respectively.
- Between the first and second survey, “no change from previous approach” has gone down from 58% to 40%.

Positive comments include the increased flexibility described as the ability to document more timely and after hours, and looking up information.

“The tablet has eliminated ‘down time’... because the tablet gives me the freedom to work anywhere.”

“Being able to document after hours to keep up with work deadlines.”

Other Facility respondents said that Mobile Technology has not changed the quality of their casework, and preferred desktop computers because of the larger screen and keyboard. Several requested the ability to complete witness statements electronically including an electronic signature would increase the usability of the Tablet PC.

* The percentages for the survey response will not total to 100%.

* The percentages for the survey response will not total to 100%.

An ANOVA was performed to test for differences among the frequency of Tablet PC Usage outside the office, quality of their casework because of the Tablet PCs.

Survey Period 1

- Respondents who used the Tablet PC outside of the office “every day” were more likely than those who reported using the PC “a few times a week” or “never” to report some or significant improvement in casework quality.

Survey Period 2

- Those who used the Tablet PC “a couple of times a week” were significantly more likely than those who reported using the Tablet PC a “few times a month” or “never” to report some or significant improvement in casework quality.

An ANOVA was also conducted using Survey Period 1 and 2 data on the differences within tenure, and quality of their casework because of the Tablet PCs. Specifically, the analyses compared respondents who had worked for APS for less than one year or more than one year.

- When analyzing data from the first survey, there were no significant differences between those who had worked for APS for “less than one year” and those who had worked “more than one year” when comparing reports of improvement in casework quality.
- Respondents to the second survey, who had worked for APS for “less than one year”, were more likely than those who reported being with the agency for “more than one year” to report “some” or “significant” improvements in their ability to provide quality casework services when using the Tablet PC.

Conclusion and Next Steps - Assessment of Documentation Quality Changes

Conclusion

- Between the first and second survey, there was an increase in the percentage of respondents who reported “some” improvement in documentation quality from 23% to 41% for Survey 1 and Survey 2, respectively.
- Between the first and second survey, “no change from previous approach” has gone down from 58% to 40%.
- Positive comments include the increased flexibility described as the ability to document more timely and after hours, and looking up information.
- Other Facility respondents said that Mobile Technology has not changed the quality of their casework, and preferred desktop computers because of the larger screen and keyboard. Several requested the ability to complete witness statements electronically including an electronic signature would increase the usability of the Tablet PC.

An ANOVA was performed to test for differences among the frequency of Tablet PC Usage outside the office, quality of their casework because of the Tablet PCs.

Survey Period 1

- Respondents who used the Tablet PC outside of the office “every day” were more likely than those who reported using the PC “a few times a week” or “never” to report some or significant improvement in casework quality.

Survey Period 2

- Those who used the Tablet PC “a couple of times a week” were significantly more likely than those who reported using the Tablet PC a “few times a month” or “never” to report some or significant improvement in casework quality.

An ANOVA was also conducted using Survey Period 1 and 2 data on the differences within tenure, and quality of their casework because of the Tablet PCs. Specifically, the analyses compared respondents who had worked for APS for less than one year or more than one year.

- When analyzing data from the first survey, there were no significant differences between those who had worked for APS for “less than one year” and those who had worked “more than one year” when comparing reports of improvement in casework quality.
- Respondents to the second survey, who had worked for APS for “less than one year”, were more likely than those who reported being with the agency for “more than one year” to report “some” or “significant” improvements in their ability to provide quality casework services when using the Tablet PC.

Next Steps

The APS Facility Mobile Technology Evaluation will not include the following data from this report, but hope it will be included as a data source in subsequent evaluations.

- APS Documentation Quality Metrics

APS will determine which documentation quality metrics need to be measured in order to better link outcomes with mobile technology usage.

Due to the identification of Documentation Quality Metrics in “In Development” status, the APS Mobile Technology Evaluation will not include any data from this report, but hope it will be included as a data source in subsequent evaluations.

Question 4: Does Mobile Technology have an impact on APS Performance Metrics?

Question 4: Does Mobile Technology have an impact on APS Performance Metrics?

Mobile Technology Impact on APS Performance as Measured by Established Metrics

This section of the evaluation analyzes the effect that Mobile Technology has on APS Facility Program Performance Metrics associated with direct delivery services.

Quantitative Data from IMPACT

Timeliness of Face-to-Face Contact with Alleged Victim (1st Actual or Attempted Face to Face) –

The caseworker must attempt a face-to-face visit with the client within the time frame specified by the priority of the report. The initial face-to-face contact ensures timely contact for the protection of the client and the collection of evidence.³¹

The goal of the 1st Actual or Attempted Face-to-Face (FTF) Contact with the Client is to begin gathering evidence to determine the truth of the allegation(s) and to reach an understanding of the client's overall situation. The caseworker notes any factors, which place the client at risk of abuse, neglect, or exploitation.³²

An APS Facility FTF contact with the client must be attempted or conducted within the timeframes for the given case priority:³³

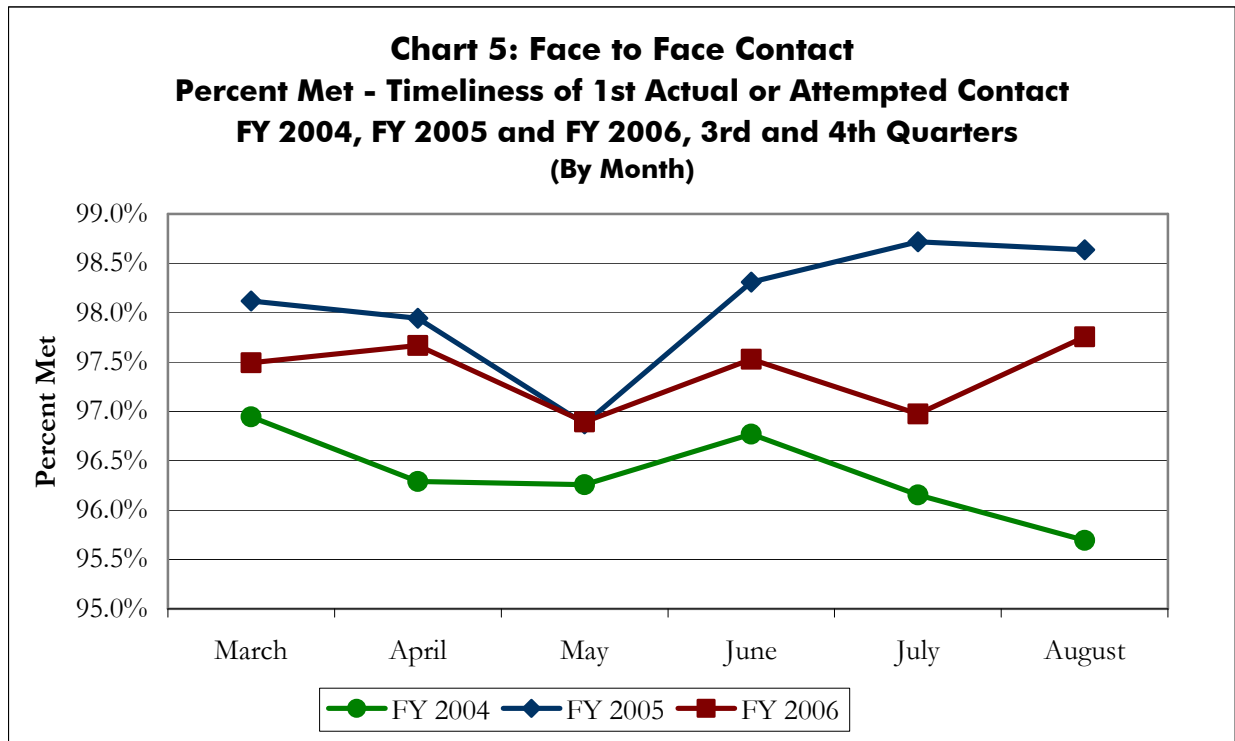
- Priority 1 - 24 hours
- Priority 2 - 3 days
- Priority 3 - 7 days

³¹ Texas Department of Family and Protective Services (DFPS), APS Policy Handbook, 3200 Face-to-Face Contact, October 2002.

³² Texas Department of Family and Protective Services (DFPS), APS Policy Handbook, APS Memorandum from Debra Wanser, Policy #05-010R, Revised Policy on Initial Face-to-Face Contact with Client, July 18, 2005.

³³ Texas Department of Family and Protective Services (DFPS), APS Facility Policy Handbook, 3210 Requirements for Face to Face Contact with Alleged Victim, April 2004.

Chart 5 represents the percent of Face-to-Face Contacts Met for the 3rd and 4th Quarters for FY 2004, FY 2005 and FY 2006.



Highlights of Chart 5:

Overall, FY 2005 has better performance than FY 2004 and FY 2006, 3rd and 4th Quarters.

- In FY 2004, APS caseworkers had a mean of 96.7% of Face-to-Face Contacts Met.
- In FY 2005, APS caseworkers had a mean of 98.0% of Face-to-Face Contacts Met.
- In FY 2006, APS caseworkers had a mean of 97.3 % of Face-to-Face Contacts Met.

An Analysis of Variance (ANOVA) was performed to test for differences among the three fiscal years.

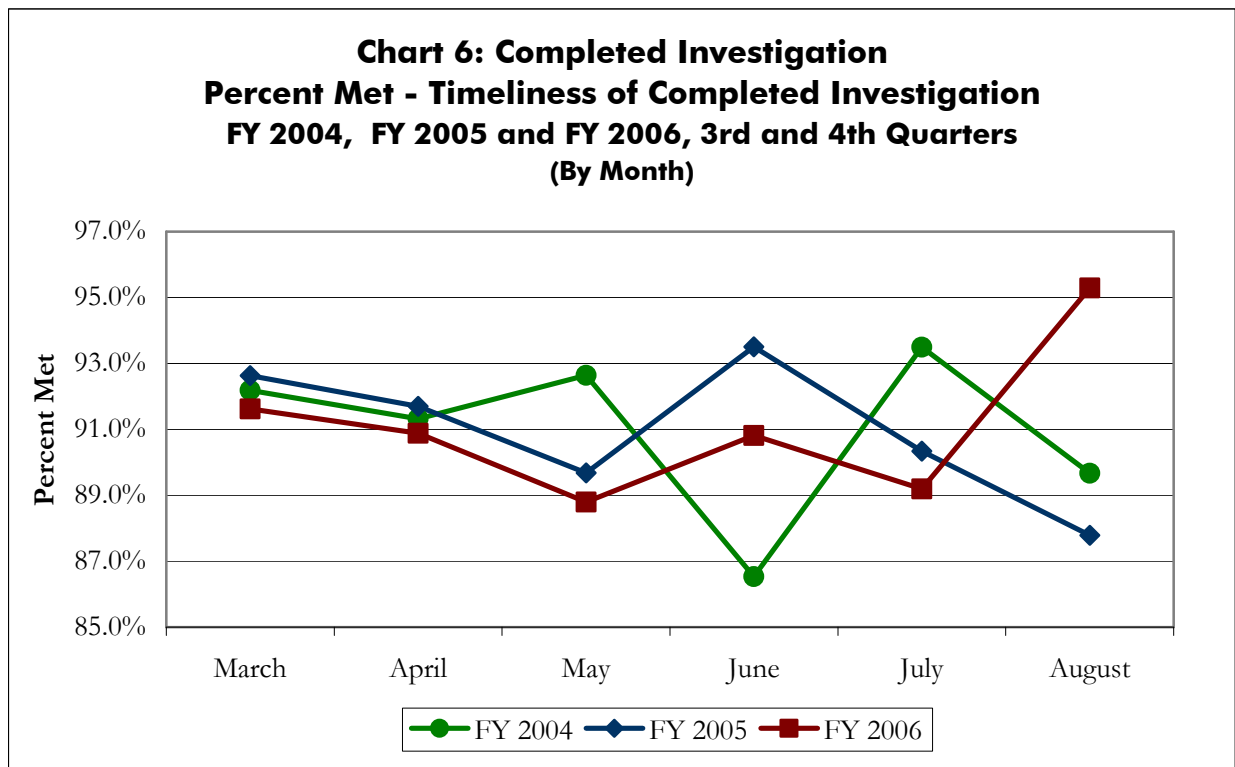
- The difference of Face-to-Face contacts made between fiscal years is only statistically significant for FY 2004 and FY 2005.

Timeliness of Completion (Completed Investigation) –

The Facility investigator completes Priority I and II investigations within 14 calendar days of receipt of the report by the department. If the 14th day falls on a weekend or holiday, the report is completed by the next business day, excluding authorization of an extension.

The Facility investigator completes Priority III investigations within 21 calendar days of receipt of the report by the department. If the 21st day falls on a weekend or holiday, the report is completed by the next business day, excluding authorization of an extension.

Chart 6 represents the percent of Completed Investigations Met for the 3rd and 4th Quarters for FY 2004, FY2005 and FY 2006.



Highlights of Chart 6:

Overall, all fiscal years, 3rd and 4th Quarters, were comparable to one another:

- In FY 2004, APS caseworkers had a mean of 91.6% of Completed Investigations Met.
- In FY 2005, APS caseworkers had a mean of 91.4% of Completed Investigations Met.
- In FY 2006, APS caseworkers had a mean of 91.7 % of Completed Investigations Met.

An Analysis of Variance (ANOVA) was performed to test for differences among the three fiscal years.

- The difference of Completed Investigations Met between fiscal years is not statistically significant.

Conclusion and Next Steps - Mobile Technology Impact on APS In-Home Performance as Measured by Established Metrics

Conclusion

Overall, FY 2005 has better performance than FY 2004 and FY 2006, 3rd and 4th Quarters for Face-to-Face Contacts Met.

- In FY 2004, APS caseworkers had a mean of 96.7% of Face-to-Face Contacts Met.
- In FY 2005, APS caseworkers had a mean of 98.0% of Face-to-Face Contacts Met.
- In FY 2006, APS caseworkers had a mean of 97.3 % of Face-to-Face Contacts Met.
- The difference of Face-to-Face contacts made between fiscal years is only statistically significant for FY 2004 and FY 2005.

Overall, all fiscal years, 3rd and 4th Quarters, were comparable to one another for Completed Investigations Met:

- In FY 2004, APS caseworkers had a mean of 91.6% of Completed Investigations Met.
- In FY 2005, APS caseworkers had a mean of 91.4% of Completed Investigations Met.
- In FY 2006, APS caseworkers had a mean of 91.7 % of Completed Investigations Met.
- The difference of Completed Investigation made between fiscal years is not statistically significant.

Next Steps

The APS Mobile Technology Evaluation will not include the following data from this report, but hope it will be included as a data source in subsequent evaluations:

- Include Mobile Technology performance expectations in all recruitment materials and worker job interviews.
- Analyze usage of Mobile Technology, work processes and working conditions in order to establish performance expectations and benchmarks for Tablet PC Usage and data entry timeliness.

**Question 5: How have work processes changed since the implementation of
Mobile Technology?**

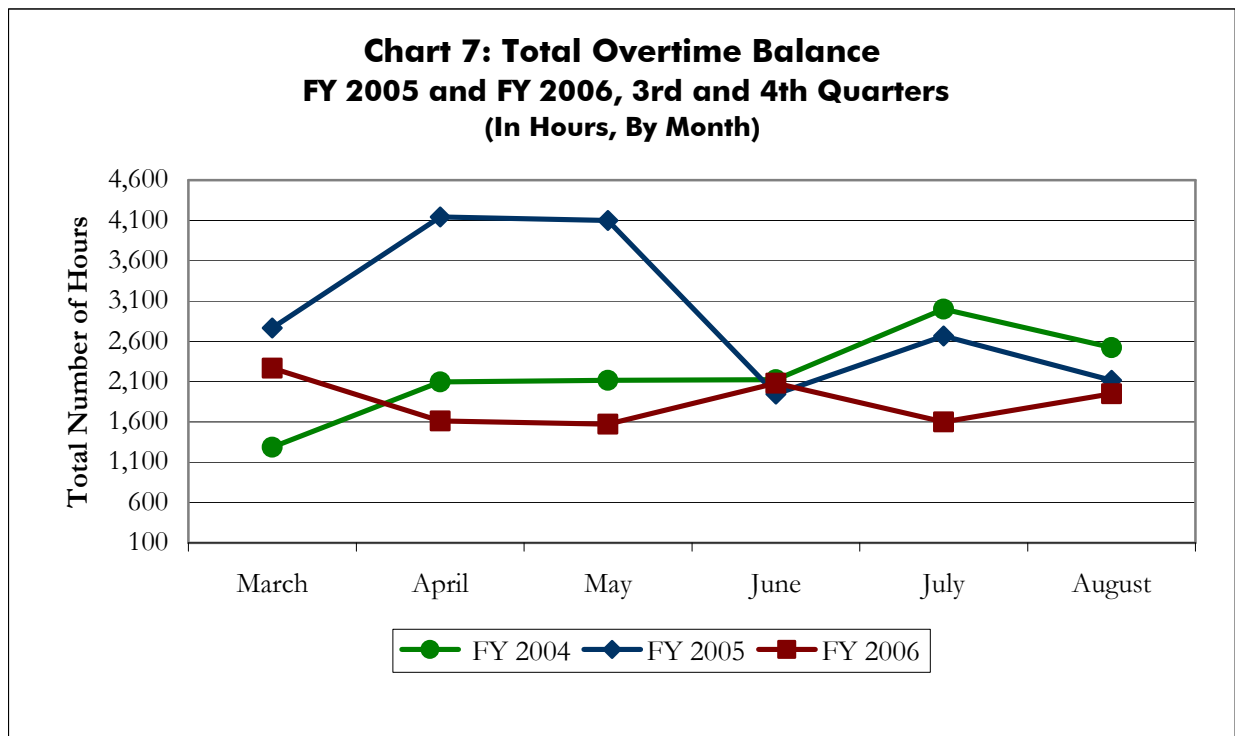
Question 5: How have work processes changed since the implementation of Mobile Technology?

Comparison of How Work Processes Changed

Overtime Balance

Fair Labor Standards Act (FLSA) non-exempt employees accrue overtime any time they physically work more than 40 hours in a workweek (“physically worked” does not include paid holidays or paid leave).³⁴

Chart 7 and 8 looks at the Overtime Usage of APS Workers by showing the “Overtime Balance (in Hours)” and “Average Overtime Balance”. (Currently, “Overtime Balance (in Hours)” and “Average Overtime Balance” are aggregated together for APS In-Home and Facility.)



Highlights of Chart 7:

Chart 7 is the “Overtime Balance (in Hours)” for APS Caseworkers by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters³⁵:

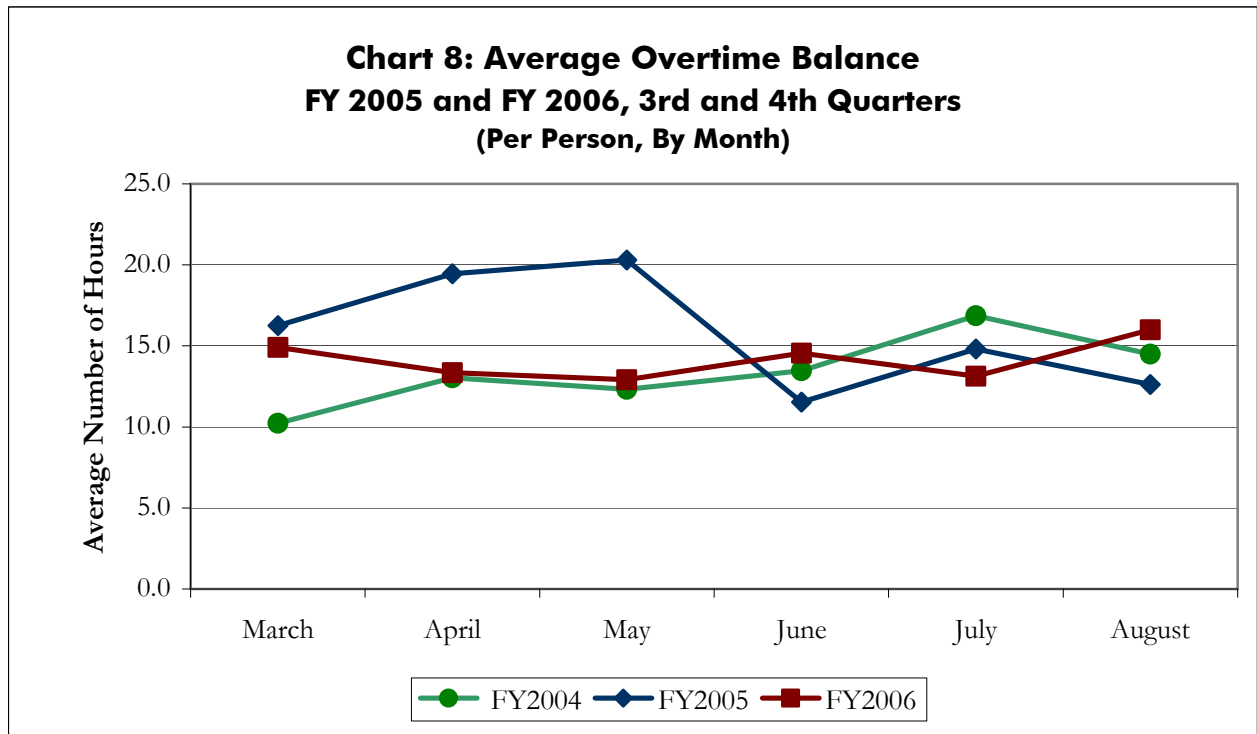
- 2,193 hours – FY 2004, 3rd and 4th Quarters
- 2,957 hours – FY 2005, 3rd and 4th Quarters
- 1,848 hours – FY 2006, 3rd and 4th Quarters

An Analysis of Variance (ANOVA) was performed to test for differences among the three fiscal years.

- The 3rd and 4th Quarter Mean for the three fiscal years is 2,333 hours for Overtime Balance (in Hours).
- There was a significant difference between the time periods³⁶.

³⁴ Texas Health and Human Services (HHS) Commission, HHS Enterprise Human Resource Manual, 2003.

³⁵ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z & 5027A (See Appendix XX for definitions).



Highlights of Chart 8:

Chart 8 is the “Average Overtime Balance (in Hours)” for APS Caseworkers by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters³⁷:

- 13.6 hours – FY 2004, 3rd and 4th Quarters
- 16.1 hours – FY 2005, 3rd and 4th Quarters
- 14.2 hours – FY 2006, 3rd and 4th Quarters

An Analysis of Variance (ANOVA) was performed to test for differences among the three fiscal years.

- The 3rd and 4th Quarter Mean for the three fiscal years is 14.7 hours for Average Overtime Balance (in Hours).
- There was a significant difference between the time periods³⁸.

³⁶ SPSS Analysis of Variance: $p \leq .05$

³⁷ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z & 5027A (See Appendix XX for definitions).

³⁸ SPSS Analysis of Variance: $p \leq .05$

APS Tablet PC User Survey

Responses to the Efficiency and Quality Sections of the Survey

The Efficiency and Quality (the results of this section were covered in a previous portion of the evaluation) section of the survey asked respondents about any benefits they have gained in the time spent documenting casework, conducting more or less fieldwork and any quality improvements they have found using a Tablet PC. Since some new workers to APS have always used a Tablet PC, only those with one or more years of experience in an APS caseworker position were asked questions regarding comparisons to previous methods.³⁹

Table 22 represents the changes that occurred between the Survey Period 1 and 2.

Table 22: APS Tablet PC User Survey Quantitative Questions	January 2006 (Survey 1) n=64*	December 2006 (Survey 2) n=58*	% Change
If you have been a caseworker for one year or more, rate the items below for time savings and efficiency regarding the use of the Tablet PC as compared to your previous methods (prior to Tablet PC):			
Travel time savings since receiving the Tablet PC			
Takes longer	2%	7%	↑
No change	75%	71%	↓
Some time savings	17%	18%	—
Significant time savings	6%	4%	↓

Highlights Table 22

- 71% of Facility respondents report “no change” in timesavings and efficiency regarding the use of the Tablet PC in Survey 2 as compared to 75% in Survey 1.

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC usage outside the office, and amount of travel time savings respondents reported because of the Tablet PCs.

- Respondents who used the Tablet PC “every day” were significantly more likely than those who reported using the Tablet PC “a few times a month” or “never” to report some or significant time savings. Those who used the Tablet PC “every day” were the least likely to report “no change”.
- Results on this item for the second survey showed no significant differences between groups.

Analyses of whether tenure was a significant factor in respondent perceptions of time savings yielded significant results for the data from the first survey.

- There were no significant differences between respondents who had worked for APS for “less than one year” and those who had worked “more than one year” for either of the surveys.

³⁹APS Tablet PC User Surveys, January and December 2006.

* The percentages for the survey response will not total to 100%.

* The percentages for the survey response will not total to 100%.

Responses to the Mobile Casework Section of the Survey

The Mobile Casework section of the survey asked respondents about the degree to which they felt they were a mobile caseworker. Comments regarding the positive and negatives of this work approach were also requested.⁴⁰

New Questions – The following questions were only asked during Survey Period 2. The responses are included in this document to establish a baseline for subsequent evaluations.

Tables 23 and 24 represents the responses received during the Survey Period 2.

Table 23: APS Tablet PC User Survey Qualitative Questions	December 2006 (Survey 2) n=58*
To what degree do you consider yourself a "mobile caseworker"?	
Not at all – I am completely reliant on using my computer in an office environment	19%
Somewhat – A significant portion of my job is reliant on using my computer on an office environment	38%
Mixed – I am split between my reliance on an office and mobile environments for using my computer	29%
Significant – Almost all of my job responsibilities and computer use are not reliant on an office environment	7%
Completely – I am able to meet all of my job responsibilities and use my computer without reliance on an office	7%

Highlights of Table 23:

- 14% of the respondents to the second survey reported that the degree to which they considered themselves a “mobile caseworker” was “significant” or “complete”.
- 67% reported that the degree in which they considered themselves a “mobile caseworker” was “mixed” or “somewhat”.
- 19% reported that they were “not at all” a “mobile caseworker”.

⁴⁰ APS Tablet PC User Surveys, January and December 2006.

* The percentages for the survey response will not total to 100%.

Table 24: APS Tablet PC User Survey Qualitative Questions December 2006 (Survey 2)
What do you like most about performing casework in a more mobile environment?
What do you like least about performing casework in a more mobile environment?

When asked what they liked most about the mobile environment, the answers fell into four main themes:

- Flexibility
- Timeliness of Documentation/Casework;
- Quality of Documentation/Casework;
- Increased Efficiency and Productivity

Workers described the benefits of the increased flexibility in a variety of ways, including receiving and documenting cases at home and on the road, increased efficiency with documentation timeliness and travel planning. Below are a few comments that capture those themes.

“Untethered to the office to get documentation completed. Allows more efficiency with travel.”

“It is a great information tool, and allows for faster data entry.”

“Ability to view information while on call.”

“Being able to immediately input or correct data.”

Facility Respondents reported that the three main things they liked least about the mobile environment are technical issues including wireless connectivity and IMPACT usability, equipment management and a lack of training and understanding about Table PC expectations.

“Lack of wireless connectivity.”

“Lots of things to carry.”

“Places to do the work.”

“Having the capability but not knowing how to use it.”

During the second survey, a separate section of questions were added to capture specific information about mobile technology for Facility workers only.

New Questions – The following questions were only asked during Survey Period 2. The responses are included in this document to establish a baseline for subsequent evaluations.

Table 25: APS Tablet PC User Survey Quantitative Questions (Facility Workers Only)	December 2006 (Survey 2) n=58*
What barriers exist when using the Tablet PC to document cases on site? (Check all that apply)	
Lack of work space	52%
Lack of time	33%
Distance to place used for documentation	14%
Concern for safety of clients	48%
Concern for risk of damaging Tablet PC	62%
Lack of functionality	41%
Not applicable – no barriers exist	7%

Highlights of Table 25:

Safety is a major barrier for Facility workers for using the Tablet PC in institutional settings.

- 62% indicate Equipment Safety
- 48% state Client Safety
- 52% cite a lack of workspace as a barrier to Tablet PC usage in facility settings.

Table 26: APS Tablet PC User Survey Quantitative Questions (Facility Workers Only)	December 2006 (Survey 2) n=58*
How have you used the Tablet PC and other mobile equipment in facility? (Check all that apply.)	
To document cases between interviews	33%
To gather witness statements	7%
To print materials on site	3%
Not applicable/Do not use on site	53%

Highlights of Table 26:

- 40% use the Tablet PC for case-related activities
- 53% do not use the Tablet PC in facility settings.

When asked how else they use the Tablet PC, seven Facility respondents answered saying,

- “Photos”, “MapQuesting”, “Get information from IMPACT”, “Documenting”, and “Scheduling”.

* The percentages for the survey response will not total to 100%.

* The percentages for the survey response will not total to 100%.

Table 27: APS Tablet PC User Survey Quantitative Questions (Facility Workers Only)	December 2006 (Survey 2) n=58*
What mobile technology equipment do you regularly take into facility? (Check all that apply.)	
Tablet PC	21%
Portable keyboard	10%
Digital camera	78%
Portable printer	2%
Tablet PC charger	3%
Bump case	7%
Not applicable – I don't use in the facility	9%

Highlights of Table 27:

- 78% of Facility respondents report regularly taking their cameras into a facility.
- Only 21% take their Tablet PCs into a facility.
- Only 2% bring their portable printers.

* The percentages for the survey response will not total to 100%.

Conclusion and Next Steps - Comparison of How Work Processes Changed

Conclusion

Overtime

- “Overtime Balance (in Hours)” for APS Caseworkers by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters⁴¹:
 - 2,193 hours – FY 2004
 - 2,957 hours – FY 2005
 - 1,848 hours – FY 2006
 - There was a significant difference between the time periods⁴².
- “Average Overtime Balance (in Hours)” for APS Caseworkers by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters⁴³:
 - 13.6 hours – FY 2004
 - 16.1 hours – FY 2005
 - 14.2 hours – FY 2006
 - There was a significant difference between the time periods⁴⁴.

Mobile Caseworker

- 14 percent of the respondents to the second survey reported that the degree to which they considered themselves a “mobile caseworker” was “significant” or “complete”.
- 67 percent reported that the degree in which they considered themselves a “mobile caseworker” was “mixed” or “somewhat”.
- 19 percent reported that they were “not at all” a “mobile caseworker”.

“What do you like most about performing casework in a more mobile environment?”

When the 58 Facility respondents were asked what they liked most about the mobile environment, the answers fell into four main themes:

- Flexibility
- Timeliness of Documentation/Casework;
- Quality of Documentation/Casework; and
- Increased Efficiency and Productivity

Workers described the benefits of the increased flexibility in a variety of ways, including receiving and documenting cases at home and on the road, increased efficiency with documentation timeliness and travel planning.

“What do you like least about performing casework in a more mobile environment?”

The 58 Facility Respondents reported that the three main things they liked least about the mobile environment are:

- Technical issues including wireless connectivity and IMPACT usability, equipment management
- Deficiency of training; and
- Lack of understanding about Tablet PC expectations.

⁴¹ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z and 5027A.

⁴² SPSS Analysis of Variance: $p \leq .05$

⁴³ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z and 5027A.

⁴⁴ SPSS Analysis of Variance: $p \leq .05$

During the second survey, a separate section of questions were added to capture specific information about mobile technology for Facility workers only.

Mobile Technology Equipment Regularly Taken into a Facility

- 78% of Facility respondents report regularly taking their cameras into a facility.
- Only 21% take their Tablet PCs into a facility.
- Only 2% bring their portable printers.

Tablet PC s and Other Mobile Equipment Usage in a Facility

- 40% use the Tablet PC for case-related activities
- 53% do not use the Tablet PC in facility settings.
- When asked how else they use the Tablet PC, seven Facility respondents answered saying:
 - Photos;
 - MapQuesting;
 - Get information from IMPACT;
 - Documenting; and
 - Scheduling.

Barriers Using the Tablet PCs to Document Cases On Site (at a Facility)

Safety is a major barrier for Facility workers for using the Tablet PC in institutional settings.

- 62% indicate Equipment Safety
- 48% state Client Safety

- 52% cite a lack of workspace as a barrier to Tablet PC usage in facility settings.

Next Steps

The APS Mobile Technology Evaluation will not include the following data from this report, but hope it will be included as a data source in subsequent evaluations.

- Qualitative Data from APS Facility Casereading System

Qualitative Data from APS Facility Casereading System

The qualitative information used to manage APS Performance comes from APS Quality Assurance (QA) Casereading. The APS Quality Assurance Specialists began analyzing APS Facility cases in FY 2007 (there is no comparative information available for this data source). They read two cases per worker in their assigned regions or units, and enter the scores into an online QA Casereading System. The Casereading instrument for APS Facility Program addresses all major policy requirements for Process Compliance, Evidence Collection, and Analysis of Evidence.⁴⁵

Specifically, the Casereading program standards, or items, are goal oriented. Some items are objective, focusing on deadlines met or the presence or absence of certain documentation features. Others call for quality judgments on the part of Quality Assurance Specialists. The items in each program area's instrument are divided into three broad groups, or scales. These scales are:

- **Facility**
 - Process Compliance Scale
 - Evidence Collection Scale
 - Analysis of Evidence Scale

Table 30 looks at the Process Compliance Scale Items from the APS Facility Casereading System.

Table 30: APS Facility Case Reading – Process Compliance Scale Items ⁴⁶ FY 2007
Process Compliance Scale
1. Was the allegation, as stated in the intake report, consistent with APS policy regarding incidents requiring investigation?
2. Did the investigator or designee immediately (within one hour) notify the administrator or designee of the agency's receipt of intake or the discovery of a new allegation during the investigation?
3. Did the investigator or designee notify law enforcement within one hour of APS notification of any allegation involving abuse/neglect of a child; or an allegation of serious physical injury, sexual abuse or death involving an adult?
4. HCSW ONLY: Was a copy of the intake form faxed to DADS State Office of Consumer Services and Rights Protection within 24 hours of initial APS Notification, or the next working day?
7. Was a face-to-face interview conducted or attempted with the alleged victim within the time frame required?
8. Were all witnesses interviewed face to face?
16. If the allegation, or any portion of it, was not within the purview of APS to investigate (e.g., client rights or administrative issues, clinical practice issues involving a licensed professional, or theft of property not considered exploitation), was a referral made to the facility using Form 2323?
17. If this investigation was conducted at an ICF-MR facility, did the investigator complete Form 2325 (ICF-MR Facility Investigative Report) and submit it to the facility administrator within 5 working days?
18. Was the evidence accurately and concisely summarized in the "Summary of the Evidence" section of the report?
25. Was the final report submitted to the administrator within the time frame based on the case priority, unless an extension was granted?
26. Did the investigator document the investigation in IMPACT completely and accurately?

⁴⁵ Texas Department of Family and Protective Services, APS Performance Orientation Manual, 2007.

⁴⁶ Texas Department of Family and Protective Services, APS Facility Case Reading Tool, FY 2006.

Table 31 looks at the Analysis of Evidence Scale Items from the APS Facility Casereading System.

Table 31: APS Facility Case Reading – Analysis of Evidence Scale Items ⁴⁷ FY 2007	
Analysis of Evidence Scale	
19.	Did the investigator document points of agreement in the "Analysis of the Evidence"?
20.	Did the investigator document points of disagreement in the "Analysis of the Evidence"?
21.	Did the investigator assess the credibility of the evidence gathered?
22.	Did the Analysis discuss policy, program, and training issues of DADS/DSHS or their contractors relevant to the investigation?
23.	When a finding was established, did the investigator present a probable version of events consistent with the finding?
24.	When a finding was reached, did the investigator establish a preponderance of evidence supporting the finding? For inconclusive cases , did the investigator make a persuasive case that the evidence did not permit a confirmed or unconfirmed finding?

⁴⁷ Texas Department of Family and Protective Services, APS Facility Case Reading Tool, FY 2006.

Conclusion

Conclusion

The Adult Protective Services (APS) program is the first Texas Health and Human Services organization to complete a large-scale mobile computing initiative. Nationally, APS is the first Adult Protective program to incorporate Tablet PCs into the day-to-day aspects of casework. The purpose of the APS Mobile Technology Initiative is to provide greater efficiency and flexibility to caseworkers, allowing case documentation and information access from the field.

To accomplish this, a mobile version of the case management system (IMPACT) was developed to allow access to key case details without relying on a wireless connection. This application, Mobile Protective Services (MPS), allows caseworkers to “check out” cases they need to use in the field, and then, “check in” all information they have documented at a later time. All Tablet PCs also are equipped with a wireless card intended for intermittent network access from the field.

At this time, the implementation of all APS caseworker Tablet PCs has been completed. Currently, 78 Facility caseworkers received their Tablet PCs since the initial APS Facility Tablet PC Implementation in November 2005. Even though the implementation process is complete, the project is far from over.

The technologies being allocated (e.g. Tablet PCs, XP Operating System, Wireless Broadband cards) are all very new and cutting edge tools. DFPS is continuing to learn how best to support these users through timely resolution of problems and on-going communication and training needs. The APS Assistant Commissioner, Debra Wanser, has explained this type of major change as, “a process, not an event”. The results in this report represent where DFPS and APS are today, and show a path towards a new approach to work when these new tools are fully maximized.

There were several limitations that emerged in performing the DFPS APS In-Home Mobile Technology Evaluation. During the Mobile Technology Implementation Phase (3rd Quarter Fiscal Year 2005), some of the survey responses may have been impacted due to the short time frame in which users had their Tablet PCs, and the complex nature of the Tablet PC functionality. However, the conclusion of the APS Mobile Technology Phase II (Full Caseworker Distribution) Preliminary Assessment Report, which is referenced in the **Qualitative Analysis** of the evaluation, includes recommendations to address all areas of concern. At the same time as the mobile technology deployment, agency changes were instituted during the overall APS Renewal, which included, but limited to, improvements in Training, Client Outcomes, Staffing, Community Engagement, Caseload Management, and Performance Management. These elements limit the DFPS’ ability to directly attribute an improvement in practice to the implementation of Mobile Technology. Also, data provided in this report can be influenced by seasonal changes in intake rates and therefore any dips or spikes in intake rates may not have been influenced by changes in mobile technology.

At the conclusion of the DFPS In-Home APS Mobile Technology Evaluation, the document intends to enable external and internal DFPS policy makers and Program Managers to demonstrate performance; discover where improvements could be made to design or delivery methods; identify good practice and lessons for the future, and above all, be a positive learning experience. The DFPS In-Home APS Mobile Technology Evaluation findings are expected to impact on APS policy decisions and enhance the implementation of Mobile Technology.

Examine Mobile Technology Usage

This section of the evaluation examines Mobile Technology usage patterns of the APS In-Home Staff. In addition, two support resources: Technical Support and SpeakWrite were also studied to look at how these services influenced the utilization of Mobile Technology.

Frequency of Tablet PC Usage

- The percentage of those who use the Tablet PC outside of the office “every day” decreased between the first and second survey (i.e. 30% to 17%, respectively).
- The percentage of those who use it “a few times a month” or “never” increased slightly between the first and second survey (i.e. 41% to 50%, respectively).
- Facility respondents indicated that they use the Tablet PC in their “home” most often (76%) and equally often in their car and a state facility (34%).
- 83% of respondents to the second survey reported that they use the Tablet PC into an investigative location twenty-five percent of the time or less.

Barriers of Tablet PC Usage

- Respondents most often identified “Wireless Connectivity” as the biggest barrier to productive use of mobile technologies followed by Tablet PC Hardware (i.e. 47% and 45%, respectively).
- Respondents reported feeling uncomfortable taking the Tablet PC into facilities because of safety issues, the requirement to handwrite statements, and equipment management.
- Between the Survey Periods 1 and 2, there were decreases in the percentage of respondents who reported barriers for the following uses.
 - Ability to synchronize information from MPS: 25% to 7%
 - Tablet PC hardware problems: 30% to 26%
 - Understanding how to use the Tablet PC device: 19% to 3%

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, the barriers to productive use of the Tablet PC, and the likeliness of taking the Tablet PC into the client’s home.

- For both surveys, respondents who reported that they use the Tablet PC outside of their office “every day” were significantly more likely to take the Tablet PC into a “State Facility” than were those who used the Tablet PC outside of the office “a few times a month” or “never”.
- There was a significant difference between groups for those who take the Tablet PC into non-state locations in the field such as restaurants or coffee shops.
- There were no significant differences between those who had worked for the APS Facility less than one year and those who had been with the agency for more than one year (from Survey Period 1).
- Respondents who used the Tablet PC outside of the office only “a couple of times a week” were more likely to identify concerns about the risk of damaging the Tablet PC or other mobile equipment than those who used it “every day”.
- There were no significant differences between usage in the client’s home and identification of barriers.

Client Reaction

- 19% of respondents to the second survey reported that when they used their Tablet PC in other investigative location, the reactions received were “positive” or “no reaction”.
- 72% left this answer blank or answered not applicable.

Five Facility caseworkers commented in the open ended other section of this question saying that the Tablet PC was “distracting” or “intimidating” for clients. While another worker said that they “do not take it into the Facility.”

Wireless Connectivity

- Respondents to both surveys most often identified “Wireless Connectivity” as the biggest barrier to productive use of mobile technologies.

Most Commonly Performed Activities When Connected Wirelessly

Facility respondents reported increased activities when connected wirelessly from Survey 1 to Survey 2:

- Email: 44% to 60%
- Brief use of IMPACT: 42% to 47%
- Working in IMPACT: 41% to 45%
- MPS syncing with IMPACT 25% to 28%

Activities that decreased when connected wirelessly from Survey 1 to Survey 2 include:

- Checking cases in or out through MPS: 34% to 28%
- Accessing the internet: 33% to 31%

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, and most commonly performed activities when connected wirelessly.

- Facility respondents to the first survey who reported using the Tablet PC “every day” or “a couple of times a week” were significantly more likely than respondents who reported using the PC “a few times a month” to report that they use the Tablet PC to work in IMPACT applications by entering data.
- Facility respondents who reported using the Tablet PC “every day” (Survey 1) were significantly more likely than those who reported using the Tablet PC “a few times a month” to report that they use the e-mail and internet applications.
- Respondents to the second survey, who use the Tablet PC “a couple of times a week” were significantly more likely than those who “never” use the Tablet PC to report that they “perform MPS synchronizations with IMPACT” and “check cases in or out from IMPACT to MPS”.
- Those who use the PC “a couple of time a week” were more likely than those who use it “a few times a month” to report using the Tablet PC when connected wirelessly to “access the internet”.

Analyses of whether tenure was a significant factor in respondent perceptions of time savings yielded significant results for the data from the first survey:

- From the first survey:
 - There were no significant differences between workers who were with APS Facility for less than one year and those who had been with the agency longer.
- From the second survey:
 - Respondents to the second survey, who had worked for APS Facility for “more than one year”, were significantly more likely to report that they perform MPS Synchronizations with IMPACT and check cases in and out from IMPACT to MPS than those who had worked for the agency for “less than one year”.

Satisfaction Regarding Ability of Wireless Use

- Facility caseworkers “Agreed” or “Strongly Agreed” they were satisfied with the use of wireless service increased from 45% on Survey 1 to 49% during Survey 2.

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, tenure, and satisfaction regarding ability of wireless use. There was:

- For both of the surveys, there were no significant differences between groups based on frequency of Tablet PC use outside the office and respondent satisfaction with their ability to use the wireless service from home.
- In addition, no significant differences between respondents who had worked for APS Facility for “less than one year” and those who had worked “more than one year” appeared for either of the surveys.
- 26 percent of respondents during Survey 1 and 25 percent during Survey 2 “Disagreed” or “Strongly Disagreed” that they were satisfied with the wireless service from their homes. This is significant given that APS is moving towards a more mobile environment.

How does wireless aid effective fieldwork?

Facility workers who are able to use wireless state that it enables them to access cases, information, create maps and connect with other workers and their supervisors. Wireless has increased casework flexibility and has improved the quality of their casework and documentation. However, many workers do not have access to wireless in rural areas, have sporadic wireless connections or the connection is too slow for many. Those who have access to wireless, and express that it aids effective fieldwork.

How does wireless hinder effective fieldwork?

The lack of connectivity, sporadic connections and slowness of transmission are still major issue in many parts of the state, particularly in the rural areas.

Mobile Protection Services

- 68% of Facility respondents reported using MPS application to various degrees.
- 33% report not using the MPS application.
- Caseworkers had three main suggestions to access and enter information on the persons list, type in the allegation on the Allegation screen and a fuller IMPACT application when using wireless. In addition, Facility caseworkers want to be able to complete statement forms electronically and have them signed.

Tablet PC Features

- Respondents to the second survey used the portable keyboard 66 percent of the time to input text, followed by digital pen and transcription services, which each were used by 16 percent of Facility caseworkers.
- Facility respondents indicated that they use the Tablet PC in their “home” most often (76%) and equally often in their car and a state facility (34%).

Technical Support

- Ninety-three percent of respondents reported “good” or “moderate” support from the Customer Support Center on Survey 2 as compared to 55% during Survey 1.
- Similarly, 86% of Survey 2 respondents reported “good” or “moderate” support from regional technicians compared to 74% on Survey 1.

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC Usage outside the office, and satisfaction with the Customer Support Center (e.g. CSC, Help Desk).

- There were no significant differences between the groups for tenure or frequency of use outside the office for either of the two surveys. This could be due to small sample size.

SpeakWrite Services

- There was a slight increase in “Total Number Staff Using SpeakWrite” and “Total SpeakWrite Words Dictated per Call” from FY 2005 and FY 2006.
- Staff reported 60% using the SpeakWrite, and 40% not utilizing the service.
- When asked about suggestions do you have to make use of the SpeakWrite service more valuable, the majority of respondents did not have any suggestions and reported that SpeakWrite is a valuable tool.
- There is a strong desire to maintain this service as a complement to the Tablet PCs.

Measure Changes in Efficiencies

Timeliness of Data Entry – Initial Attempted or Actual Face to Face Contacts

“Average Number of Days Recorded in IMPACT ” for Face-to-Face by Month for FY 2005, and FY2006, 3rd and 4th Quarters⁴⁸ were comparable between the fiscal years.

- In FY 2004, the days to record Face-to-Face Contacts ranged from a low of 10.7 to 11.6 days
- In FY 2005, the days to record Face-to-Face Contacts ranged from a low of 10.9 to 11.7 days.
- In FY 2006, the days to record Face-to-Face Contacts ranged from a low of 10.9 to 11.5 days

An Analysis of Variance (ANOVA) was performed to test for differences among the three fiscal years.

- The difference among the three fiscal years to record Face-to-Face Contacts in IMPACT is not statistically significant⁴⁹.

Timeliness of Data Entry –Completed Investigations

“Average Number of Days Between Intake to Completion” of an APS Facility Investigation by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters⁵⁰.

- 25.3 days - FY2004, 3rd and 4th Quarters
- 39.1 days - FY2005, 3rd and 4th Quarters
- 27.4 days - FY2006, 3rd and 4th Quarters

An Analysis of Variance (ANOVA) was performed to test for differences among the three fiscal years.

- The 3rd and 4th Quarter Mean for the three fiscal years is 31.4 days for the Investigation to progress from Intake to the Completion.
- There was no significant difference between the time periods.

Efficiency of Casework Due to Tablet PC

- There was a reduction in the number of respondents who reported “no change” in data entry time or that it “takes longer” to enter data using the Tablet PC (i.e. 67% and 56% from Survey 1 to Survey 2, respectively).
- Forty-five percent of Facility respondents reported “Some” or “Significant” improvements in data entry time savings as compared to 33% on the Survey 1.

An Analysis of Variance (ANOVA) was performed to test for differences among the frequency of Tablet PC usage outside the office or tenure, and efficiency of their casework because of the Tablet PCs.

Respondents who used the Tablet PC:

Survey Period 1

- Respondents who used the Tablet PC “every day” or “a couple of times a week” were more likely than those who reported never using the PC to report some time savings in completion of documentation.

Survey Period 2

- There were no significant differences between groups based on frequency of use or tenure.

⁴⁸ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z & 5027A.

⁴⁹ SPSS T-Test for Independent Sample: $p \leq .05$

⁵⁰ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z & 5027A.

Same Day Documentation

- 91 percent of Facility respondents to the second survey reported that ability to complete same day documentation for key case information using their Tablet PCs. (Because this is a new question, we do not know if this has changed since the time one survey.)
- When asked what barriers respondents experienced regarding same day documentation, the three main reasons for not documenting the same day were the time it takes to document, high caseloads, and functionality issues - particularly wireless connectivity.

Assess Documentation Quality Changes

- Between the first and second survey, there was an increase in the percentage of respondents who reported “some” improvement in documentation quality from 23% to 41% for Survey 1 and Survey 2, respectively.
- Between the first and second survey, “no change from previous approach” has gone down from 58% to 40%.
- Positive comments include the increased flexibility described as the ability to document more timely and after hours, and looking up information.
- Other Facility respondents said that Mobile Technology has not changed the quality of their casework, and preferred desktop computers because of the larger screen and keyboard. Several requested the ability to complete witness statements electronically including an electronic signature would increase the usability of the Tablet PC.

An ANOVA was performed to test for differences among the frequency of Tablet PC Usage outside the office, quality of their casework because of the Tablet PCs.

Survey Period 1

- Respondents who used the ‘Tablet PC outside of the office’ every day” were more likely than those who reported using the PC “a few times a week” or “never” to report some or significant improvement in casework quality.

Survey Period 2

- Those who used the Tablet PC “a couple of times a week” were significantly more likely than those who reported using the Tablet PC a “few times a month” or “never” to report some or significant improvement in casework quality.

An ANOVA was also conducted using Survey Period 1 and 2 data on the differences within tenure, and quality of their casework because of the Tablet PCs. Specifically, the analyses compared respondents who had worked for APS for less than one year or more than one year.

- When analyzing data from the first survey, there were no significant differences between those who had worked for APS for “less than one year” and those who had worked “more than one year” when comparing reports of improvement in casework quality.
- Respondents to the second survey, who had worked for APS for “less than one year”, were more likely than those who reported being with the agency for “more than one year” to report “some” or “significant” improvements in their ability to provide quality casework services when using the Tablet PC.

Identify Mobile Technology Impact on APS Performance as Measured by Established Metrics

Overall, FY 2005 has better performance than FY 2004 and FY 2006, 3rd and 4th Quarters for Face-to-Face Contacts Met.

- In FY 2004, APS caseworkers had a mean of 96.7% of Face-to-Face Contacts Met.
- In FY 2005, APS caseworkers had a mean of 98.0% of Face-to-Face Contacts Met.
- In FY 2006, APS caseworkers had a mean of 97.3 % of Face-to-Face Contacts Met.
- The difference of Face-to-Face contacts made between fiscal years is only statistically significant for FY 2004 and FY 2005.

Overall, all fiscal years, 3rd and 4th Quarters, were comparable to one another for Completed Investigations Met:

- In FY 2004, APS caseworkers had a mean of 91.6% of Completed Investigations Met.
- In FY 2005, APS caseworkers had a mean of 91.4% of Completed Investigations Met.
- In FY 2006, APS caseworkers had a mean of 91.7 % of Completed Investigations Met.
- The difference of Completed Investigation made between fiscal years is not statistically significant.

Compare How Work Processes Changed

Overtime

- “Overtime Balance (in Hours)” for APS Caseworkers by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters⁵¹:
 - 2,193 hours – FY 2004
 - 2,957 hours – FY 2005
 - 1,848 hours – FY 2006
 - There was a significant difference between the time periods⁵².
- “Average Overtime Balance (in Hours)” for APS Caseworkers by Month for FY 2004, FY 2005, and FY2006, 3rd and 4th Quarters⁵³:
 - 13.6 hours – FY 2004
 - 16.1 hours – FY 2005
 - 14.2 hours – FY 2006
 - There was a significant difference between the time periods⁵⁴.

Mobile Caseworker

- 14 percent of the respondents to the second survey reported that the degree to which they considered themselves a “mobile caseworker” was “significant” or “complete”.
- 67 percent reported that the degree in which they considered themselves a “mobile caseworker” was “mixed” or “somewhat”.
- 19 percent reported that they were “not at all” a “mobile caseworker”.

⁵¹ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z and 5027A.

⁵² SPSS Analysis of Variance: $p \leq .05$

⁵³ APS Tablet PC Users: Job Codes: 5023Z, 5024Z, 5025Z, 5026Z and 5027A.

⁵⁴ SPSS Analysis of Variance: $p \leq .05$

“What do you like most about performing casework in a more mobile environment?”

When the 58 Facility respondents were asked what they liked most about the mobile environment, the answers fell into four main themes:

- Flexibility
- Timeliness of Documentation/Casework;
- Quality of Documentation/Casework; and
- Increased Efficiency and Productivity

Workers described the benefits of the increased flexibility in a variety of ways, including receiving and documenting cases at home and on the road, increased efficiency with documentation timeliness and travel planning.

“What do you like least about performing casework in a more mobile environment?”

The 58 Facility Respondents reported that the three main things they liked least about the mobile environment are:

- Technical issues including wireless connectivity and IMPACT usability, equipment management
- Deficiency of training; and
- Lack of understanding about Tablet PC expectations.

During the second survey, a separate section of questions were added to capture specific information about mobile technology for Facility workers only.

Mobile Technology Equipment Regularly Taken into a Facility

- 78% of Facility respondents report regularly taking their cameras into a facility.
- Only 21% take their Tablet PCs into a facility.
- Only 2% bring their portable printers.

Tablet PC s and Other Mobile Equipment Usage in a Facility

- 40% use the Tablet PC for case-related activities
- 53% do not use the Tablet PC in facility settings.
- When asked how else they use the Tablet PC, seven Facility respondents answered saying:
 - Photos;
 - MapQuesting;
 - Get information from IMPACT;
 - Documenting; and
 - Scheduling.

Barriers Using the Tablet PCs to Document Cases On Site (at a Facility)

Safety is a major barrier for Facility workers for using the Tablet PC in institutional settings.

- 62% indicate Equipment Safety
- 48% state Client Safety
- 52% cite a lack of workspace as a barrier to Tablet PC usage in facility settings.

Next Steps

The APS Mobile Technology Evaluation will not include the following data in this report, but hope it will be included as a data source in subsequent evaluations:

- Tablet PC Synchronization Report
- Tablet PC Check-In/Check-Out Report
- Wireless Connectivity Report
- Mobile Technology Usability Study
- Help Desk
- Qualitative Data from APS Facility Casereading System
- APS Documentation Quality Metrics
- Mobile Technology Performance Expectations and Benchmarks for Tablet PC Usage and Data Entry Timeliness

Recommendations

Recommendations

Based on the APS Facility Mobile Technology Evaluation findings, the following recommendations are proposed to enhance the utilization of Mobile Technology, guide APS policy decisions and improve APS Facility direct delivery services:

- Analyze usage of Mobile Technology, work processes and working conditions in order to establish performance expectations and benchmarks for Tablet PC Usage and data entry timeliness.
- Research usability, environmental and technical resources that could expand solution and/or address barriers (e.g., finger print reader, natural handwriting directly into applications).
- Study work processes and working conditions in order to establish guidelines for when workers should and should not use the Tablet PC and accessories in client or collateral interviews outside a DFPS office.
- Make necessary policy changes in the APS Facility Program to enhance and support the use of the Mobile Technology solution.
- Include Mobile Technology performance expectations in all recruitment materials and worker job interviews.
- Develop and disseminate Best Practices for Mobile Technology.
- Incorporate best practices into guidelines for supervisors' use in instilling sound workload management strategies in new workers.
- Examine performance of workers using MPS frequently and determine if there is any significant improvement over workers not using this application.
- Expand MPS functionality so that workers can complete more of the case information when using the MPS format.
- Make changes in IMPACT to increase efficiency of use during client and collateral interviews (ex: drop down boxes for the CARE tool).
- Explore alternative voice recognition software to determine if it can be made more functional. Continue SpeakWrite services to help workers complete their documentation timely in the interim.
- Improve user support efforts to ensure staff has operational equipment in a timely manner.
- Redesign worker training to address the complete role of mobile casework, including a greater focus on development of skills for use of mobile technology in client and collateral interviews.
- Provide training to supervisors to increase supervisor knowledge of mobile technology.
- Identify resources to provide on-going training, skills development and coaching to tenured workers.
- Address issues relating of wireless connectivity and speed by exploring further broadband technology/cards so that rural workers be connect wirelessly.
- Identifiers should be added to the Tablet PC survey so that the relationship between mobile technology usage, overtime balances, travel expenditures, and process compliance can be explored, and however, data should only be reported in the aggregate.
- The Mobile Technology Evaluation should be conducted annually, and include data that was not available during the first evaluation.
- Data sources from the first evaluation need to be reviewed and reports developed to increase the data quality and reportability.
- Possible confounding or interaction variables should be determined by stratified or logistic regression analysis to isolate direct positive or negative effects of the implementation of Mobile Technology.