



Office of Audit Services
Region I
John F. Kennedy Federal Building
Room 2425
Boston, MA 02203
(617) 565-2684

February 11, 2010

Report Number: A-01-08-00014

JudyAnn Bigby, MD
Secretary
Executive Office of Health and Human Services
One Ashburton Place, 11th Floor
Boston, MA 02108

Dear Dr. Bigby:

Enclosed is the U.S. Department of Health & Human Services (HHS), Office of Inspector General (OIG), final report entitled *Review of Medicaid Administrative Costs Claimed for the Massachusetts Department of Transitional Assistance*. We will forward a copy of this report to the HHS action official noted on the following page for review and any action deemed necessary.

The HHS action official will make final determination as to actions taken on all matters reported. We request that you respond to this official within 30 days from the date of this letter. Your response should present any comments or additional information that you believe may have a bearing on the final determination.

Section 8L of the Inspector General Act, 5 U.S.C. App., requires that OIG post its publicly available reports on the OIG Web site. Accordingly, this report will be posted at <http://oig.hhs.gov>.

If you have any questions or comments about this report, please do not hesitate to call me, or contact Curtis Roy, Audit Manager, at (617) 565-9281 or through email at Curtis.Roy@oig.hhs.gov. Please refer to report number A-01-08-00014 in all correspondence.

Sincerely,

/Michael J. Armstrong/
Regional Inspector General
for Audit Services

Enclosure

Direct Reply to HHS Action Official:

Ms. Jackie Garner, Consortium Administrator
Consortium for Medicaid and Children's Health Operations
Centers for Medicare & Medicaid Services
233 North Michigan Avenue, Suite 600
Chicago, IL 60601

Department of Health and Human Services

**OFFICE OF
INSPECTOR GENERAL**

**REVIEW OF MEDICAID
ADMINISTRATIVE COSTS
CLAIMED FOR THE
MASSACHUSETTS DEPARTMENT OF
TRANSITIONAL ASSISTANCE**



Daniel R. Levinson
Inspector General

February 2010
A-01-08-00014

Office of Inspector General

<http://oig.hhs.gov>

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OFFICE OF AUDIT SERVICES FINDINGS AND OPINIONS

The designation of financial or management practices as questionable, a recommendation for the disallowance of costs incurred or claimed, and any other conclusions and recommendations in this report represent the findings and opinions of OAS. Authorized officials of the HHS operating divisions will make final determination on these matters.

EXECUTIVE SUMMARY

BACKGROUND

The Federal and State Governments jointly fund and administer the Medicaid program. Section 1903(a)(7) of the Social Security Act permits States to claim Federal reimbursement for 50 percent of the costs of Medicaid administrative activities that are necessary for the proper and efficient administration of the State plan.

In Massachusetts, the Executive Office of Health and Human Services, Office of Medicaid (the State agency) administers the Medicaid program. The Executive Office of Health and Human Services, Department of Transitional Assistance (the Department) provides eligible low-income individuals and families with interim services, cash assistance, food stamp benefits, and emergency assistance to help them move towards self-sufficiency. To achieve its mission, the Department operates a variety of Federal- and State-funded financial assistance programs for families, elders, and disabled people. In addition, the Department contracts with the State agency to provide assistance with certain administrative duties.

The State agency's cost allocation plan describes the methods that the State agency used to equitably allocate the direct and indirect administrative costs incurred by the Department to individual programs, including Medicaid. The State agency identified and allocated the salaries, fringe benefits, and other administrative costs for caseworkers in field offices through the use of a random moment timestudy (RMS).

For Federal fiscal years (FYs) 2006 and 2007, the State agency claimed Medicaid administrative costs totaling \$51,959,125 (\$25,979,563 Federal share) incurred by the Department. We reviewed the portion of these costs that were allocated to Medicaid based on the final results of the RMS, which totaled \$48,426,516 (\$24,213,258 Federal share).

OBJECTIVE

Our objective was to determine whether the RMS that the State agency used to allocate certain Departmental administrative costs to Medicaid complied with Federal requirements.

SUMMARY OF FINDINGS

The RMS that the State agency used to allocate certain Departmental administrative costs to Medicaid did not fully comply with Federal requirements. Specifically:

- The State agency did not maintain adequate documentation to demonstrate that only activities involving Medicaid-eligible clients were allocated to Medicaid through the RMS.
- The RMS did not always follow acceptable statistical sampling methods.

These errors affected both the accuracy of certain administrative costs that the State agency

claimed for the Department and the validity of the RMS used to allocate these costs to Medicaid in FYs 2006 and 2007. As a result of insufficient documentation, the State agency misallocated \$897,935 (\$448,968 Federal share) in administrative costs to the Medicaid program. We cannot express an opinion on the allowability of the remaining \$47,528,581 (\$23,764,290 Federal share) in Medicaid administrative costs because we cannot quantify the effect of the State agency's deviations from acceptable statistical sampling methods.

These errors occurred because the State agency did not establish adequate policies and procedures to ensure that it claimed Medicaid administrative costs in compliance with Federal requirements.

RECOMMENDATIONS

We recommend that the State agency:

- refund \$448,968 to the Federal government,
- establish policies and procedures to ensure that it maintains adequate documentation to demonstrate that only activities involving Medicaid-eligible clients are allocated to Medicaid through the RMS,
- work with CMS to determine what portion of the remaining \$23,764,290 in Medicaid administrative costs claimed for the Department for FYs 2006 and 2007 was unallowable under Federal requirements, and
- establish policies and procedures to ensure that the RMS results used to allocate costs to Medicaid follow acceptable statistical sampling methods by, at a minimum:
 - ensuring that the sampling method gives appropriate consideration to all hours worked by employees,
 - ensuring that either the random numbers used or a seed number is retained for each of the samples, and
 - ensuring that the sampling method calls for the proper treatment of invalid responses.

STATE AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

In its written comments on our draft report, the State agency agreed with our third recommendation but generally disagreed with our other three recommendations. The State agency maintained that the cases with insufficient documentation represented a small percentage of the total cases allocated and that some level of error should be acceptable. The State agency said that its new RMS system decreased the possibility of the transcription errors that, according to the State agency, were the major cause of the insufficient documentation. The State agency

further asserted that the RMS results used to allocate costs to Medicaid followed acceptable statistical sampling methods.

We continue to maintain that the State agency did not provide adequate documentation to demonstrate that only activities involving Medicaid-eligible clients were used to allocate administrative costs to Medicaid. We further maintain that the RMS results used to allocate costs to Medicaid did not follow acceptable statistical sampling methods. We therefore stand by our recommendations.

The State agency's comments are included in their entirety as the Appendix.

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INTRODUCTION

BACKGROUND

Medicaid Program

Pursuant to Title XIX of the Social Security Act (the Act), the Medicaid program provides medical assistance to certain low-income individuals and individuals with disabilities. The Federal and State Governments jointly fund and administer the Medicaid program. At the Federal level, the Centers for Medicare & Medicaid Services (CMS) administers the program. Each State administers its Medicaid program in accordance with a CMS-approved State plan. Although the State has considerable flexibility in designing and operating its Medicaid program, it must comply with applicable Federal requirements.

In Massachusetts, the Executive Office of Health and Human Services, Office of Medicaid (the State agency) administers the Medicaid program. Section 1903(a)(7) of the Act permits States to claim Federal reimbursement for 50 percent of the costs of Medicaid administrative activities that are necessary for the proper and efficient administration of the State plan.

Federal regulations (45 CFR, subpart E, § 95.507(a)(2)) require that cost allocation plans that States use to allocate costs to Medicaid conform to the accounting principles and standards in Office of Management and Budget (OMB) Circular A-87, “Cost Principles for State, Local, and Indian Tribal Governments.” The circular states that (1) costs are allocable to a particular cost objective if the goods or services involved are chargeable or assignable to the cost objective in accordance with the relative benefits received, (2) only allocable costs are allowable, and (3) costs must be reasonable and necessary for the proper administration of the program.¹

The Massachusetts Department of Transitional Assistance

The Executive Office of Health and Human Services, Department of Transitional Assistance (the Department) provides eligible low-income individuals and families with interim services, cash assistance, food stamp benefits, and emergency assistance to help them move towards self-sufficiency. To achieve its mission, the Department operates a variety of Federal- and State-funded financial assistance programs for families, elders, and disabled people. In addition, the Department contracts with the State agency to provide assistance with certain administrative duties. These activities include the processing of Medicaid applications, initial eligibility determinations, eligibility redeterminations, and other case management activities. The Department incurred administrative costs of \$310,036,027 during our audit period. Of this amount, \$248,897,638 represented the allocable cost base. The State agency subsequently allocated \$51,959,125 (\$25,979,563 Federal share) of the cost base to Medicaid. The remaining \$196,938,513 was allocated to State and other Federal programs.

¹A cost objective is a function, organization subdivision, contract, grant, or activity for which costs are incurred.

State Agency Cost Allocation Methodology

The State agency assigned two categories of administrative costs to the Medicaid program: direct costs and indirect costs. Direct costs are expenditures that can be identified specifically with a particular final cost objective. Indirect costs are expenditures that benefit more than one cost objective and thus are not readily assignable to individual cost objectives.

The State agency's cost allocation plan describes the methods that the State agency used to equitably allocate the direct and indirect administrative costs incurred by the Department to individual programs, including Medicaid. The State agency identified and allocated the salaries, fringe benefits, and other administrative costs for caseworkers in field offices through the use of a random moment timestudy (RMS).

The RMS is a sampling method designed to determine the amount of effort that a group of employees spends on various activities. The RMS consists of a number of individual moment observations of employee activities at random intervals. Based on the observations of the randomly selected moments, the total effort of the employees can be estimated with a high degree of confidence and should approximate the same results as having observed 100% of the employees' time. The basic requirement in selecting a random sample is that every moment in the sampling universe has an equal chance of being selected for the sample.

The State agency used the RMS results to allocate the costs of the Department caseworkers who were responsible for processing applications, determining whether individuals were eligible for various programs, including Medicaid; redetermining Medicaid eligibility; and providing other case management activities. The State agency used two RMS methodologies during our audit period: (1) effective until July 1, 2007, a telephone-based system in which interviewers contacted randomly selected caseworkers at various times throughout the quarter and asked a series of questions to identify the activities and programs that the caseworkers were working on at that specific moment and (2) effective since July 1, 2007, a web-based system in which randomly selected caseworkers responded to a survey by describing the activities and programs that they were working on at that specific moment. Under both methodologies, the State agency calculated the percentages of responses related to the various programs and allocated administrative costs to each program based on these percentages.

OBJECTIVE, SCOPE, AND METHODOLOGY

Objective

Our objective was to determine whether the RMS that the State agency used to allocate certain Departmental administrative costs to Medicaid complied with Federal requirements.

Scope

For Federal fiscal years (FYs) 2006 and 2007, the State agency claimed Medicaid administrative costs totaling \$51,959,125 (\$25,979,563 Federal share) incurred by the Department. We

reviewed the portion of these costs that were allocated to Medicaid based on the final results of the RMS, which totaled \$48,426,516 (\$24,213,258 Federal share).

Our objective did not require an understanding or assessment of the State agency's or the Department's internal control structure. We limited our review to obtaining an understanding of the Medicaid administrative costs allocated through the RMS and to determining whether the RMS used acceptable statistical sampling methods. In addition, we did not review the services associated with these costs to determine if they were allowable for reimbursement under the Medicaid program.

We performed our fieldwork at the State agency in Boston, Massachusetts, from October 2008 to July 2009.

Methodology

To accomplish our audit objective, we:

- reviewed applicable Federal laws, regulations, and guidance;
- interviewed officials and reviewed policies with the State agency and the Department;
- reviewed the cost allocation plan approved by the Division of Cost Allocation of the U.S. Department of Health and Human Services;
- obtained an understanding of the State agency's methodology for allocating administrative costs incurred by the Department to Medicaid;
- reviewed the documentation supporting the activities sampled in the RMS;
- verified the Medicaid eligibility of beneficiaries for whom administrative costs were charged to Medicaid through the RMS;
- reviewed the RMS for statistical validity; and
- reviewed the calculations of Medicaid administrative costs incurred by the Department for mathematical accuracy.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

FINDINGS AND RECOMMENDATIONS

The RMS that the State agency used to allocate certain Departmental administrative costs to Medicaid did not fully comply with Federal requirements. Specifically:

- The State agency did not maintain adequate documentation to demonstrate that only activities involving Medicaid-eligible clients were allocated to Medicaid through the RMS.

- The RMS did not always follow acceptable statistical sampling methods.

These errors affected both the accuracy of certain administrative costs that the State agency claimed for the Department and the validity of the RMS used to allocate these costs to Medicaid in FYs 2006 and 2007. As a result of insufficient documentation, the State agency misallocated \$897,935 (\$448,968 Federal share) in administrative costs to the Medicaid program. We cannot express an opinion on the allowability of the remaining \$47,528,581 (\$23,764,290 Federal share) in Medicaid administrative costs because we cannot quantify the effect of the State agency's deviations from acceptable statistical sampling methods.

These errors occurred because the State agency did not establish adequate policies and procedures to ensure that it claimed Medicaid administrative costs in compliance with Federal requirements.

FEDERAL REQUIREMENTS

The CMS "State Medicaid Manual," section 4302.2(G)(2), states: "When FFP is claimed for any functions performed as case management administrative activities under § 1903(a) of the Act, documentation must clearly demonstrate that the activities were provided to Medicaid applicants or eligibles, and were in some way connected with determining eligibility or administering services covered under the State plan."

2 CFR part 225, App. A, § C.1 (formerly OMB Circular A-87, Att. A, § C.1) states that allowable costs must be necessary and reasonable for proper and efficient administration of the program, be allocable to Federal awards, and be adequately documented.

2 CFR part 225, App. B, § 8.h.6.a (formerly OMB Circular A-87, Att. B, § 8.h.6.a) states that sampling methods used to allocate salaries to Federal awards must meet acceptable statistical sampling methods.

2 CFR part 225, App. B, § 8.h.6.a (i), (ii) and (iii) (formerly OMB Circular A-87, Att. B, § 8.h.6.a (i),(ii), and (iii)) states that the sampling universe must include all of the employees whose salaries and wages are to be allocated based on the sample results, the entire time period involved must be covered by the sample, and the results must be statistically valid and applied to the period being sampled.

The Department of Health and Human Services, Division of Cost Allocation’s “Review Guide for Cost Allocation Plans” states that the sampling universe should give appropriate consideration to all hours worked by the employee, including flex-time or nonstandard work schedules, and that appropriate support must be provided for excluding hours from the sample universe.

NONCOMPLIANCE WITH FEDERAL REQUIREMENTS

Inadequate Documentation

The State agency did not maintain adequate documentation to demonstrate that only activities involving Medicaid-eligible clients were used to allocate administrative costs to Medicaid through the RMS, as required by section 4302.2(G)(2) of the State Medicaid Manual. Specifically, the State agency could not provide documentation to support the Medicaid eligibility of 3.3 percent of clients. These clients were involved in 141 RMS-identified activities related to eligibility redeterminations and other case management activities. The State agency allocated the costs of these activities to Medicaid even though it could not document the Medicaid eligibility of the clients involved in the activities. Our recalculation of the allocation rates excluding these 141 RMS-identified activities resulted in a reduced Medicaid allocation rate for each of the eight quarters in FYs 2006 and 2007. We then recalculated the State agency’s claim for administrative costs incurred by the Department using our revised rates. The results of our recalculation indicated that the State agency misallocated \$897,935 (\$448,968 Federal share) in administrative costs to Medicaid during FYs 2006 and 2007.

Deviations From Acceptable Statistical Sampling Methods

The RMS did not always follow acceptable statistical sampling methods, as required by 2 CFR part 225, App. B, § 8.h.6.a, for the following reasons:

- Acceptable statistical sampling methods state that the sample should cover the entire time period involved in the sampling universe, as explained in 2 CFR part 225, App. B, § 8.h.6.a(ii). However, the State agency’s RMS methodology excluded certain time periods from the sample. Specifically:
 - The sample did not give appropriate consideration to all hours worked by employees. Under both RMS methodologies used during our audit period, employee moments were selected from 9:00 am to 12:00 pm and from 1:00 pm to 4:00 pm. Because the State agency included only 6 hours of each work day in the sample even though employees worked either a 7.5 hour regular schedule or a 9.5 hour “flexitime” schedule, at least 20 percent of each employee’s possible moments were excluded from the sample each day.
 - Under the RMS methodology effective until July 1, 2007, a sample start time between 9:00 am and 9:09 am was randomly selected on a weekly basis, and moments were then selected at 8-minute intervals after that start time. For example, if a 9:02 am start time was selected on Monday, no other moments (eg., 9:00 am, 9:01 am, 9:03

am) from 9:00 through 9:08 am could be selected for the rest of the week. Similarly, since the second moment selected for Monday would be 8 minutes after the first, at 9:10 am, all other moments from 9:09 through 9:16 am could not be selected for the rest of the week.

- Under the RMS methodology effective until July 1, 2007, employees could not be selected more than once per week. For example, if a moment for an employee was selected for the RMS on Monday, all of the employee's remaining moments would be excluded from the sample until the following week.

Accordingly, because all possible moments did not have an equal chance of being selected, the State agency introduced a bias that invalidated the randomness of the samples. In addition, as a result of excluding certain moments in the samples, State agency based the allocation of the administrative costs for the employees' complete work schedules on sample results associated with only a portion of employees' work schedules.

- Acceptable statistical sampling methods involve using a random number generator to produce (1) a set of random numbers used to select the sample and (2) the "seed number" needed to recreate the random number selection so that the sample can be independently validated. The State agency did not retain either the random numbers used or a seed number. As a result, we could not confirm whether the RMS was statistically valid, as required by 2 CFR part 225, App. B, § 8.h.6.a(iii).
- Acceptable statistical sampling methods call for the proper treatment of invalid responses. For the quarter ended September 30, 2007, 1,119 of the 3,600 selected moments, or 31 percent, did not result in valid responses. These moments included employees on their "flex" day off and employees who did not respond within the 72-hour limit. As a result, the exclusion of these selected moments potentially biased the sample results.

Because of these deviations from acceptable statistical sampling methods, the State agency was unable to provide reasonable assurance that its statistical methodology was valid and that the sampled items represented the population as a whole. Therefore, the State agency potentially misallocated a portion of the remaining \$47,528,581 (\$23,764,290 Federal share) in Medicaid administrative costs that the State agency claimed for the Department.

EFFECT OF STATE AGENCY'S OMISSIONS AND DEVIATIONS

The State agency's failure to maintain adequate documentation and its deviations from acceptable statistical sampling methods affected both the accuracy of the costs that the State agency claimed for the Department for FYs 2006 and 2007 and the validity of the RMS used to allocate these costs to Medicaid. As a result of the inadequate documentation, the State agency misallocated \$897,935 (\$448,968 Federal share) in administrative. We cannot express an opinion on the allowability of the remaining \$47,528,581 (\$23,764,290 Federal share) in Medicaid administrative costs because we cannot quantify the effect of the State agency's deviations from acceptable statistical sampling methods.

LACK OF ADEQUATE POLICIES AND PROCEDURES

The failure to maintain adequate documentation and the deviations from acceptable statistical sampling methods in the RMS occurred because the State agency did not establish adequate policies and procedures to ensure that its claim for Medicaid administrative costs incurred by the Department complied with Federal requirements.

RECOMMENDATIONS

We recommend that the State agency:

- refund \$448,968 to the Federal government,
- establish policies and procedures to ensure that it maintains adequate documentation to demonstrate that only activities involving Medicaid-eligible clients are allocated to Medicaid through the RMS,
- work with CMS to determine what portion of the remaining \$23,764,290 in Medicaid administrative costs claimed for the Department for FYs 2006 and 2007 was unallowable under Federal requirements, and
- establish policies and procedures to ensure that the RMS results used to allocate costs to Medicaid follow acceptable statistical sampling methods by, at a minimum:
 - ensuring that the sampling method gives appropriate consideration to all hours worked by employees,
 - ensuring that either the random numbers used or a seed number is retained for each of the samples, and
 - ensuring that the sampling method calls for the proper treatment of invalid responses.

STATE AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

In its comments on our draft report, the State agency agreed with our third recommendation but generally disagreed with our other three recommendations. We summarize and respond to the State agency's specific comments below.

Recommendation 1

State Agency Comments

The State agency agreed with the factual basis for our finding that it had misallocated \$897,935 (\$448,968 Federal share) in administrative costs to Medicaid. However, it noted that this misallocation was attributable to 141 individuals whose Medicaid eligibility could not be

validated because these individuals' Social Security numbers could not be located in the State Agency's database. The State agency maintained that the missing Social Security numbers were largely the product of transcription errors. The State agency further noted that errors found in the Office of Inspector General's review decreased from an average of 19 per quarter in the old RMS system effective for the first 7 quarters of our audit period to 5 errors in the new RMS system effective for the last quarter of the audit period.

The State agency reiterated that these misallocated cases represented only 3.3% of the total cases sampled. The State agency said that it is both the State agency's and Department's position that some level of human error should be acceptable in a system that relies on a high volume of transcription activities between different parties. Accordingly, the State agency and the Department "respectfully suggest that the principle of an acceptable error rate should apply when evaluating state performance in this area."

Office of Inspector General Response

The State agency acknowledged that it could not validate the Medicaid eligibility of 141 cases. Section 4302.2(G)(2) of the CMS "State Medicaid Manual" instructs States to maintain documentation that clearly demonstrates that the activities were provided to Medicaid applicants or eligible beneficiaries. Further, section 4302 does not allow for an acceptable level of error. The State agency did not provide adequate documentation to demonstrate that only activities involving Medicaid-eligible clients were used to allocate administrative costs to Medicaid. Therefore, we maintain that our recommendation is valid.

Recommendation 2

State Agency Comments

The State agency maintained that its new RMS system, which relies on e-mail to query staff members rather than phone calls, decreases the possibility of transcription errors. It reiterated that, in the quarter that began July 1, 2007, only five ineligible transcription errors were found.

Office of Inspector General Response

The State agency did not address our recommendation to establish policies and procedures for maintaining documentation to demonstrate that it used only activities involving Medicaid-eligible clients to allocate administrative costs to Medicaid. A new computer system that reduces the likelihood of transcription errors does not constitute policies and procedures. Therefore, we maintain that our recommendation is valid.

Recommendation 3

State Agency Comments

The State agency agreed with our recommendation. Specifically, the State agency stated that it “will review [the Office of Inspector General’s] findings of this study and [the State agency’s] responses in detail with CMS to determine any action CMS wishes to undertake.”

Recommendation 4

State Agency Comments

The State agency presented the following reasons for disagreeing with this recommendation:

- The State agency noted that both its old and new RMS systems were approved by the Division of Cost Allocation. The State agency asserted that conducting the RMS during the core hours of 9:00 am to 12:00 pm and 1:00 pm to 4:00 pm produced a better response rate and was more accurate and cost effective than the alternatives of extending the survey hours or surveying the staff according to individual work schedules. It also stated: “The work performed by [Department] staff is not highly variable during different work hours and the hours in the RMS sample are considered by [the Department] to be representative of the total work hours of [the Department] staff.”
- The State agency acknowledged that the Department was not able to locate the “seed numbers” for the old RMS system that was effective for the first 7 quarters of our audit period. However, the State agency asserted that its new RMS system, which it began using during the last quarter of our audit period, selects random moments using a random moment generator. It further noted: “The new system does not rely on a “seed number” as it does not use the same logic as the old system. The logic for the new system is maintained with the system documentation. Prior period samples are maintained in the database and can be reviewed at anytime.”
- The State agency asserted that the goal in establishing the current RMS system was to have a statistically valid sample that was acceptable to the Division of Cost Allocation. It also stated that the Division of Cost Allocation approved a plan requiring 2,000 valid responses and that the State agency far exceeded the number of required valid responses. The State agency said that it “over-sampled” to ensure that the appropriate numbers of staff were sampled and that the practice of oversampling was acceptable and standard in RMS processes.

Office of Inspector General Response

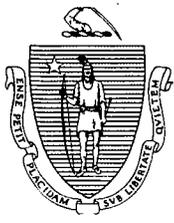
We continue to maintain that the RMS results used to allocate costs to Medicaid did not follow acceptable statistical sampling methods for the following reasons:

- The State agency submitted the RMS procedures to the Division of Cost Allocation as part of the approval process for its Cost Allocation Plan. Departmental Appeals Board decision No. 370, issued in December 1982, found that “. . . an approved [Cost Allocation Plan] does not constitute prior approval to deviate from applicable statutes and regulations.” In addition, we maintain that the State agency did not provide appropriate support to demonstrate that the exclusion of certain moments from the sample universe did not potentially bias the sample results. We also note that the State agency did not address the fact that moments were only selected once every 8 minutes and employees could not be selected more than once per week under the old RMS.
- Contrary to the State agency’s assertion, the consultant who designed the new RMS system told us that the system does produce a “seed number” but does not save its value. As a result, we continue to maintain that we cannot confirm whether the RMS was statistically valid.
- We agree with the State agency’s assertion that it met the minimum of 2,000 valid responses for the quarter that ended September 30, 2007. However, the State agency did not identify the reason for invalid responses under the new RMS. Under the old RMS, activities that the caseworkers were performing at the selected moments were assigned to a particular program or programs or to general administration. Under the new RMS, caseworker activities were also assigned to an additional category called “missing moments.” These missing moments were not counted in the RMS results. The State agency informed us that missing moments were attributed to employees who did not respond to the RMS within a 72-hour limit. Although the 1,119 missing moments may have included some employees who were on vacation or sick leave for the entire 72-hour limit, such employees are unlikely to have accounted for all of the 1,119 missing moments. Thus, the 1,119 invalid responses almost certainly included caseworkers who were scheduled to work but did not respond when they were sampled in the new RMS. Therefore, we continue to maintain that the exclusion of the missing moments from the RMS results potentially biased the cost allocation process.

Accordingly, we maintain that our recommendation is valid.

We have included the State agency’s comments in their entirety as the Appendix.

APPENDIX



DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

JUDYANN BIGBY, M.D.
Secretary

APPENDIX: STATE AGENCY COMMENTS

The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Office of Medicaid
One Ashburton Place
Boston, MA 02108

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MassHealth

January 7, 2010

Michael J. Armstrong
Regional Inspector General, Audit Services
HHS/OIG/OAS
Region I
JFK Federal Building
Boston, MA 02203

RE: Audit Report No: A-01-08-00014 Medicaid Administrative Costs Claimed for the Massachusetts Department of Transitional Assistance

Dear Mr. Armstrong,

Thank you for the opportunity to review and comment on Draft Audit Report No. : A-01-08-00014 Medicaid Administrative Costs Claimed for the Massachusetts Department of Transitional Assistance.

Our responses to the report's specific recommendations are as follows:

Recommendation:

1) Refund \$448,968 to the Federal Government:

Response:

This recommendation is based on the OIG finding of 141 non-validated cases. These cases were considered non-validated because the Executive Office of Health and Human Services (EOHHS) and the Department of Transitional Assistance (DTA) could not locate the individuals in our databases by their Social Security Number. EOHHS and DTA agree with the factual basis for the finding, specifically, that 141 cases could not be validated. However, 141 non-validated cases represent only 3.3% of the total cases being sampled. The 141 cases that could not be located and, therefore, could not be validated were the product of communication / transcription errors between the DTA case manager and EOHHS' Federal Revenue Management Unit (Fed Rev) that performed the Random Moment Sample (RMS). During the last quarter reviewed by the auditors (8 quarters were reviewed in total), DTA developed a new, more automated RMS system that went into effect July 1, 2007. The OIG review found that errors in the new system decreased significantly from an average of 19 per quarter in the old system for the period from 10/1/06 to 6/30/07 to 5 errors in the new system in period from 7/1/07 to 9/30/07.

It is EOHHS' and DTA's position that some level of human error should be acceptable in a system which is dependent on a high volume of transcription activities between different parties. Moreover, it is reasonable to presume that, if the 141 non-validated cases are purely the result of transcription errors, all such *actual* cases were properly receiving DTA assistance and Medicaid benefits. Therefore, there is little to no risk that these cases, while unidentifiable at the time of audit, represented an improper payment to ineligible individuals.

In its Supplemental Nutrition Assistance Program (SNAP) formerly known as the Food Stamp Program, DTA must perform Quality Control reviews to ensure that its payment error rate is carefully managed. When a state's payment error rate exceeds 6%, the state is placed on corrective action by the United

States Department of Agriculture's Food and Nutrition Service (FNS). Additionally, when a state's payment error rate exceeds the national average, a state loses its ability to collect FNS performance bonus awards and is subject to financial penalties if the situation exists for two (2) consecutive years. When a state's payment error rate is at or below the national average, the state is both held harmless as to corrective action and to being subject to financial penalties and is eligible for FNS performance bonus awards. In this instance, 141 non-validated cases represent a 3.3% error rate. EOHHS and DTA respectfully suggest that the principle of an acceptable error rate should apply when evaluating state performance in this area

Recommendation:

2) Establish policies and procedures to ensure that it maintains adequate documentation to demonstrate that only activities involving Medicaid-eligible clients are allocated to Medicaid through the RMS:

Response:

In the July 1, 2007, EOHHS and DTA implemented a new RMS system which relies on e-mail to query staff members rather than phone calls. This new system decreases the possibility of transcription errors. In the July 1, 2007 quarter, only 5 ineligible transcription errors were found.

Recommendation:

3) Work with CMS to determine what portion of the remaining \$23,764,290 in Medicaid administrative costs claimed for the Department for FYs 2006 and 2007 was unallowable under Federal requirements:

Response:

We will review the findings of this study and our responses in detail with CMS to determine any action CMS wishes to undertake.

Recommendation:

4) Establish policies and procedures to ensure that the RMS results used to allocate costs to Medicaid follow acceptable statistical sampling methods by, at a minimum:

A) Ensuring that the sampling method give appropriate consideration to all hours worked by employees.

Response:

Currently, EOHHS and DTA survey staff from 9:00 AM – 12:00 PM and 1:00 PM – 4:00 PM, Monday through Friday. This schedule was negotiated by EOHHS, DTA and the federal Division of Cost Allocation (DCA). The original RMS plan was submitted to DCA on July 21, 1999 and approval was granted in May 2000. (Please see Attachment A, p. 10)

In July, 2007, EOHHS and DTA implemented a new e-mail-based RMS system, replacing the original telephone-based system. The new system was put in place to ensure better accuracy of responses, to simplify management of the RMS, and to provide a convenient and less obtrusive method for staff to record time. When the e-mail RMS system was put in place, EOHHS and DTA continued the same survey schedule of 9:00 AM – 12:00 PM and 1:00 PM – 4:00 PM which was approved by DCA in August, 2008. (Please see Attachment B, p. 2) The work performed by DTA staff is not highly variable during different work hours and the hours in the RMS sample are considered by DTA to be representative of the total work hours of DTA staff.

Increasing the work hours in the RMS sample raises many concerns. If the sample is extended to longer hours, for instance 8:00 AM – 12:00 PM and 1:00 PM – 4:00 PM, the response rate of staff will be considerably decreased because staff work flexible hours. The other option of tailoring the RMS sample to specific staff work hours is unworkable. Currently, approximately 400 staff is surveyed each quarter. At DTA, flex time is encouraged and leave time under the intermittent Family Medical Leave

Act (FMLA) is not uncommon. Additionally, individual staff schedules are not maintained centrally and are negotiated with supervisors. Moving to a system that is based on individual staff hours would be infeasible to implement and monitor, and the cost of implementing and monitoring such a system would not be cost effective. Errors in maintaining such a system would likely be numerous, thereby undercutting the very purpose of achieving accuracy for which the system would be changed.

B) Ensuring that either the random numbers used or a seed number is retained for each of the samples:

Response:

Unfortunately, DTA was not able to locate the "seed number" for the RMS under the original system. Having the seed number would enable OIG to re-generate the starting point of a monthly random sample. However, in July 1, 2007, EOHHS and DTA implemented a new RMS system. The new system selects random moments using a random number generator and then assigns the moment to an eligible worker. Every active worker in the system is eligible for every moment (e.g., the same worker could theoretically be assigned all moments). The new system does not rely on a "seed number" as it does not use the same logic as the old system. The logic for the new system is maintained with the system documentation. Prior period samples are maintained in the database and can be reviewed at any time.

C) Ensuring that the sampling method calls for the proper treatment of invalid responses:

Response:

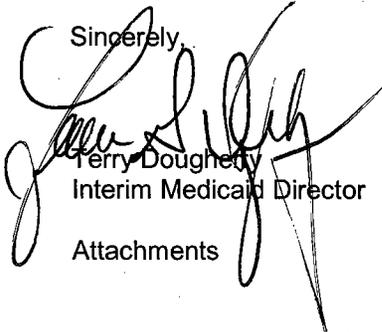
The shared EOHHS and DTA goal in establishing its current RMS system was to have a statistically valid sample that was acceptable to DCA. DCA approved a plan requiring 2,000 valid responses. EOHHS has far exceeded the required number of valid responses which is substantiated in the OIG draft report.

Due to flexible schedules, sick, personal, and vacation leave, and intermittent FMLA leave, all of which are present among DTA staff, it is possible that many staff will not be available during the time periods surveyed. DTA has considered these occurrences and has "over-sampled" in order to ensure that the appropriate numbers of staff are sampled. This practice is acceptable and standard in RMS processes. DTA continues to ensure that it meets a valid sample each quarter based on the results received.

We appreciate the time and effort your audit team put into this review as well as the opportunities to review working spreadsheets, data analyses and the final financial recalculations prior to issuance of the draft report.

Thank you, again, for the opportunity to respond to the draft report.

Sincerely,



Terry Dougherty
Interim Medicaid Director

Attachments

Attachment A

Standards and Procedures for Random Moment Sampling

**Massachusetts Department of Transitional Assistance
Public Assistance Cost Allocation Plan**

July 1, 1999

Contents

U.S. Department of Health and Human Services, Division of Cost Allocation Letter of Transmittal

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I. Introduction and Regulatory Background

Federal regulations at 45 CFR Subpart E, at § 95.507(a)(2) require state public assistance agencies to submit a cost allocation plan to the U.S. Department of Health and Human Services' Division of Cost Allocation which conforms to the accounting principles and standards prescribed in Office of Management and Budget Circular A-87. The circular, which was comprehensively revised in May, 1995, set forth in its Attachment B at §11 a number of new requirements for the allowability of compensation for personnel services. Broadly defined, compensation for personnel services includes all remuneration, paid currently or accrued, for services rendered during the period of performance under Federal awards, including but not necessarily limited to wages, salaries, and fringe benefits.

The costs of such compensation for the Massachusetts Department of Transitional Assistance are allowable to the extent that they satisfy the specific requirements of OMB Circular A-87, and that the total compensation for individual employees (1) is reasonable for the services rendered and conforms to the established policy of the governmental unit consistently applied to both Federal and non-Federal activities, (2) follows an appointment made in accordance with a governmental unit's laws and rules and meets merit system or other requirements required by Federal law, where applicable, and (3) is determined and supported as provided in OMB Circular A-87, Attachment B, §11.h.

The May, 1995, changes are notable also for the new requirements for documented support of salaries and wages. These standards regarding time distribution are in addition to the standards for payroll documentation. Under the new rules, charges to Federal awards for salaries and wages, whether treated as direct or indirect costs, must be based on payrolls documented in accordance with generally accepted practices of the governmental unit and approved by a responsible official(s) of the governmental unit. No further documentation is required for the salaries and wages of employees who work in a single indirect cost activity. But where employees are expected to work solely on a single Federal award or cost objective, charges for their salaries and wages must be supported by periodic certifications that the employees worked solely on that program for the period covered by the certification. These certifications must be prepared at least semi-annually and be signed by the employee or supervisory official having first hand knowledge of the work performed by the employee.

Where employees work on multiple activities or cost objectives, however, a distribution of their salaries or wages must be supported by personnel activity reports or equivalent documentation which meet certain standards unless a statistical sampling system or other substitute system has been approved by the U.S. Department of Health and Human Services, Division of Cost Allocation, the cognizant Federal agency for the Massachusetts Department of Transitional Assistance. Such documentary support is required where employees work on (1) more than one Federal award, (2) a Federal award and a non-Federal award, (3) an indirect cost activity and a direct cost activity, (4) two or more indirect activities which are allocated using different allocation bases, or (5) an unallowable activity and a direct or indirect cost activity.

One of the challenges faced by the Massachusetts Department of Transitional Assistance is the ongoing determination and documentation of the activities of its staff. Under the revised OMB Circular A-87, personnel activity reports or equivalent documentation must meet four basic standards: they must (1) reflect an after-the-fact distribution of the actual activity of each employee, (2) account for the total activity for which each employee is

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compensated, (3) be prepared at least monthly and must coincide with one or more pay periods, and (4) be signed by the employee.

Massachusetts' officials are aware that budget estimates or other distribution percentages determined before the services are performed do not qualify as support for charges to Federal awards, but may be used for interim accounting purposes provided that (1) the governmental unit's system for establishing the estimates produces reasonable approximations of the activity actually performed, (2) at least quarterly, comparisons of actual costs to budgeted distributions based on the monthly activity reports are made¹, and (3) the budget estimates or other distribution percentages are revised at least quarterly, if necessary, to reflect changed circumstances.

¹ Costs charged to Federal awards to reflect adjustments made as a result of the activity actually performed may be recorded annually if the quarterly comparisons show the differences between budgeted and actual costs are less than 10%. See OMB Circular A-87, Attachment B, -§11.h(5)(e)(ii).

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As noted above, the cost principles provide that substitute systems for allocating salaries and wages to Federal awards may be used in place of activity reports. These systems are subject to approval if required by the cognizant agency and may include, but are not limited to, random moment sampling, case counts, or other quantifiable measures of employee effort. For a variety of reasons, random moment sampling has been proposed by the cognizant Federal reviewers, other state agencies, and professional consultants to be the most workable and least intrusive substitute system for purposes of the Massachusetts Department of Transitional Assistance public assistance cost allocation plan.

Random moment sampling (RMS) or work sampling is a technique for determining scientifically the amount of effort spent by a group of employees on various activities. An RMS study consists of a number of individual observations of employee activities taken at random intervals. Based on these observations, the total effort of a group of employees can be determined with a high degree of confidence, and will approximate the same results from having observed employees 100% of the time. The accuracy of the RMS results is measurable and can be kept within predetermined tolerance limits. Properly implemented, RMS provides a procedure for identifying management, budgeting and accounting data in large complex organizations on an objective basis with a minimum expenditure of funds or disruption of staff activities. It can also be used for setting overall performance standards. RMS is being used in a number of applications in industry and is being used by many public assistance agencies as the basis for distributing the costs of income maintenance and social service workers to specific programs and activities.

There is another reason Massachusetts officials have proposed to introduce an RMS approach into the public assistance cost allocation plan at this time. On September 30, 1998, the U.S. Department of Health and Human Services, Office of Grants and Acquisition Management promulgated an external action transmittal (OGAM Action Transmittal No. OGAM AT 98-2) which compelled state cost allocation plans for the Temporary Assistance for Needy Families program to comply with a "benefits received" policy starting in the state fiscal year beginning on or after October 1, 1998. The "benefits received" policy replaces prior Federal policy which permitted states - in certain circumstances - to designate a "primary program" as the sole benefiting program for the allocation of costs in cases where multiple programs were involved. Properly designed, utilizing an RMS approach will also ensure compliance with the "benefits received" policy.

The Massachusetts Department of Transitional Assistance public assistance cost allocation plan currently makes use of a variety of allocation statistics and bases for the distribution of its operational costs, but one of the principal methods involves a weighted caseload measure as described in Section V, §II.B in pages V-10 to V-13 of the current plan. Although the methodology did not formally designate a "primary program" as the sole benefiting program for the allocation of costs in cases where multiple programs were involved, it has been determined that the procedure is close enough in nature to the "primary program" approach that a change in procedure is warranted, and officials have elected to develop instead an RMS to replace the use of the weighted caseload procedure.

This document contains the detailed standards and procedures for random moment sampling developed by the Department of Transitional Assistance. These standards and procedures were developed between March and June of 1999 and are proposed to the U.S. Department of Health and Human Services, Division of Cost Allocation for use beginning on July 1, 1999. Specifically, these RMS standards and procedures are proposed to amend and replace Section V, §II.B in pages V-10 to V-13 of the current plan, replacing the current weighted caseload allocation measures.

We note that neither the text of OMB Circular A-87 nor the accompanying ASMB C-10 guidelines issued by the U.S. Department of Health and Human Services, Assistant Secretary for Management and Budget in April, 1997, specifically enumerate statistical standards for public assistance cost allocation plan random moment time studies. However, the U.S. Department of Health and Human Services, Office of Procurement, Assistance and Logistics in November, 1981, issued a guide for state and local public assistance agencies and departments, *Procedures for the Preparation and Submission of Cost Allocation Plans*. Appendix C of the issuance provided guidelines on the development and implementation of an RMS system that will identify and distribute the effort of direct workers and related costs to the programs and, where necessary, to program activities.

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In developing these standards and procedures, these Office of Procurement, Assistance and Logistics guidelines were followed very closely, and much of the format and presentation is identical to that in the guidelines. The practices of several other states with approved RMS methodologies - particularly a few operational features used in New York - were examined during the development of the RMS standards and procedures, and the advice of a professional consultant with experience in the public assistance cost allocation plans and RMS studies in many of those states was also utilized.

We observe that although less than full compliance with the statistical sampling standards noted in OMB Circular A-87, Attachment D, at §11.h(6)(a) may be accepted by the cognizant agency if it concludes that the amounts to be allocated to Federal awards will be minimal, we have proposed no substantial deviations from the Federal guidelines in this submission. The development and implementation of this proposed RMS system in our view permits both Federal and Commonwealth officials to periodically and adequately identify and distribute the effort of direct workers and related costs to the programs and, where necessary, to program activities in full accordance with OMB Circular A-87 and in a manner which no longer makes use of a "primary program" approach.

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II. General Concepts

As described above, random moment sampling (RMS) or work sampling is a technique for determining scientifically the amount of effort spent by a group of employees on various activities. An RMS study consists of a number of individual observations of employee activities taken at random intervals. Based on these observations, the total effort of a group of employees can be determined with a high degree of confidence, and will approximate the same results from having observed employees 100% of the time. The accuracy of the RMS results is measurable and can be kept within predetermined tolerance limits.

RMS methods are based on the law of probability which, in essence, states that there is a high probability that a relatively small number of random observations will exhibit approximately the same characteristics as the overall characteristics of the universe from which the sample was taken. An observation at a random moment is a sample of what is happening at a particular instant of time. The basic requirement in selecting a random sample is that every item in the universe be given an equal or known chance of being included in the sample.

To ensure that this requirement is met, the sample must be truly random and must exclude human judgments and other influences or biases. Once developed, it is imperative to strictly adhere to the sample design. Violations in application of the sample design will introduce a bias that can invalidate the sample. It is also imperative, for the same reason, that the study not be biased by improperly worded questions, poorly conducted interviews, or erroneously compiled statistics.

There are various kinds of sampling plans we have considered, but we propose here a simple stratified sampling plan which is computer-generated against the Massachusetts Department of Transitional Assistance payroll records, an up-to-date calendar of actual working days, and a clock. The total sample size in each quarter will always be at least 2,219, and the observations are scheduled to occur 38 times each day. For a quarter with 62 working days (on average) this will produce 2,356 observations per quarter, a number well in excess of the minimum requirements. On each day, half of the minutes - i.e., 19 observations - are observed in the 9:01am - 12:00 noon period, and half are observed in the 1:01 pm - 4:00 pm period.

All observations are proposed to be conducted via telephone contacts, where a telephone observer queries a selected worker chosen at random. There is a constraint in the procedure such that no individual worker will be selected more than once per week, and to this limited extent the sampling plan is conducted in the manner of "sampling without replacement". However, all minutes in the six hours subject to sampling on each day have a statistically equal chance or probability of selection, and on a weekly basis all workers have an equal probability of selection.

The worker is queried for the activity he or she was performing during the 60 seconds immediately prior to the selected minute of the telephone call. The query consists of a full-time observer inquiring over the telephone about the nature of the activity being performed by the worker, and the particular program or case type involved. This information is then tabulated and subjected to analysis in order to determine the particular program or programs which benefited from the activity. These final results are then used as a distribution measure elsewhere in the public assistance cost allocation plan to allocate the actual costs of the local offices and related cost pools.

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III. Design and Specifications of the Random Moment Sampling System

A. Analysis of Operations

In developing the specifications for the random moment sampling system, we have undertaken an analysis to identify the universe to be sampled, the specific programs within the universe, and other factors (e.g., the use of flex-time) that would influence the design of the system. We have reviewed in detail the personnel, payroll, and accounting systems to be used to identify the data base needed to operate the system, and we have exercised care at this stage to identify all of the variables involved so that the need for subsequent modifications to the system can be minimized.

As described previously, where employees work on multiple activities or cost objectives, a reasoned distribution of their salaries or wages is made necessary. We observe that this situation will most often arise where employees work on more than one Federal award or a Federal award and a non-Federal award, and for this reason we have looked to that part of the Massachusetts Department of Transitional Assistance where this situation routinely occurs, i.e., among the approximately 1,930 staff of the Field and Eligibility Operations Division.

The specific organizational components involved include the staff of the 38 local offices and five regional Supplemental Security Income (SSI) offices. Today, the local office operations staff number about 1,883 full time equivalent positions and they provide services to over 400,000 people in the Commonwealth of Massachusetts. Approximately 85% of the Department of Transitional Assistance's staff work in one of the 38 local offices providing benefits and services to needy families and individuals.

In conducting our analysis, the specific activities performed by the local office staff could be described, defined, listed and/or grouped in any number of ways, but it was ultimately necessary to reduce the activities to a discrete list that fairly represented the most common ones in which workers are typically engaged. We also identified certain kinds of general administrative, clerical, reading and other activities which are commonly performed in our local offices, and we observed that lunch and breaks regularly occur, and that staff will be granted personal, medical, military and other leave as a matter of course. Similarly, staff will sometimes be attending staff development, orientation and training seminars, and the like. Each discrete activity was assigned a unique numeric activity code. When we completed the analysis in June, 1999, we identified a total of 33 discrete activities², which we organized conceptually into 8 main groups.

We also completed in June an analysis of the specific kinds of programs or case types that our workers serviced (or potentially could service) in the course of conducting these activities. We determined that there were 27 possible kinds of unique programs or program combinations in any given case³. Additionally, we identified for each discrete activity the complete subset of potential program or program combinations which could potentially be encountered when performing that activity, to further narrow the list of available program or program combinations for which that activity was performed. For example, the conduct of employment services activities related to the *Community Service Program* (Activity 61) is done only for TAFDC cases, STAFDC cases and EAEDC cases; whereas the activities related to *Providing Program Information to Clients* (Activity 40) could be done for TAFDC, EAEDC, EA, SSI, STAFDC, Federal Food Stamps, State Food Stamps, or both kinds of Food Stamps cases.

Our final list of worker activities and their allowable program/case types has been incorporated into an 8½" × 11" dual-sided paper observation form. We additionally developed a written set of definitions for each activity and program as a part of the observation form instructions (see Section VII: Observation Form and Instructions).

² The 33rd activity is provided for the occurrence of a non-strike or invalid observation.

³ There are 24 main activities, but a 25th program is also provided for "general administration" and is used in combination only with general administrative activities, and a 26th program is reserved for "all other programs" not previously identified. A final, 27th program is identified for use only when a non-strike or invalid observation occurs.

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B. Identification of Sampling Objectives

The specific objectives of the RMS system are to (1) identify employee effort directly related to specific programs and - where necessary - to specific program activities, and (2) to identify employee effort which is common to more than one program for subsequent distribution to individual programs. The RMS is not designed to obtain information for - and its results will not be used for - any other purpose.

C. Identification of the Universe

According to the U.S. Department of Health and Human Services, Office of Procurement, Assistance and Logistics guide for state and local public assistance agencies and departments, *Procedures for the Preparation and Submission of Cost Allocation Plans* (November 1981), in Appendix C, the population covered by the random moment sampling system should normally consist of all employees who are "directly involved in eligibility determinations, redeterminations, and/or case maintenance". In our June, 1999, analysis we identified approximately 2,441 full-time equivalent staff employed by the Massachusetts Department of Transitional Assistance. Approximately 1,930 of these staff are in the Field and Eligibility Operations Division, which manage the operation of 38 local offices and 5 regional SSI offices, and who exercise oversight of centralized eligibility services in direct support of local office operations.

The vast majority of the Field and Eligibility Operations staff - approximately 1,883, or 85% of the Department of Transitional Assistance staff - are assigned responsibilities in the 38 local offices to provide services and benefits. It has been determined that some staff are dedicated to activities which benefit only one program - e.g., the approximately 258 non-public assistance Food Stamps workers - but the vast majority of the staff work on a variety of activities in support of a variety of programs, literally from minute to minute. As explicitly permitted by the Appendix C guidelines at p. 55, the costs of these non-public assistance Food Stamps workers staff are directly assigned to the Food Stamps program, and this procedure is further described elsewhere in the public assistance cost allocation plan.

Commonwealth officials maintain a general ledger accounting system which assigns specific units and offices a discrete four-digit division code (see **Appendix A**), and the personnel system maintains a MicroBase function code which further identifies employees by program and classification (see **Appendix B**). Employees who are directly involved in eligibility determinations, redeterminations, and/or case maintenance can accordingly be properly and systematically identified for inclusion in the universe of workers to be sampled. The universe of workers is therefore defined to include all staff who meet *each* of the following three criteria:

1. All staff who are assigned to work in units and local offices with a four-digit division code of 3110 - 3387, 3403 - 3440, 3502 - 3587, 3607 - 3686, and 3703 - 3786, *and*
2. who are assigned a MicroBase Function Program Code with the first letter of A - E or G - Y, *and*
3. who are assigned a MicroBase Function Classification Code with the second digit of 2, 6 or 7.

Under this definition, the universe (1) categorically *includes* all field services local offices and SSI regional offices units, (2) categorically *excludes* dedicated non-public assistance Food Stamps workers, as well as systems, quality control and local office quality control, general office administration, and data entry staff, and (3) categorically *excludes* administration and managerial, specialist and consultant (EDP coordination), supervisory, and clerical staff. Given this definition, the total number of workers in the universe has initially been determined to be approximately 985 full-time equivalent staff (see **Appendix C**).

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Our analysis of local office operations has disclosed that some of the 38 local offices and 5 regional SSI sites open as early as 7:00 am and some close as late as 6:30 pm (see **Appendix D**), but all are operating in the range between 8:45am and 5:00pm. To ensure that all employees have the same probability of being included in the sample, we have proposed the sampling of the local offices' universal "core hours" of operation for the period from 9:01am to 12:00 noon, and 1:01pm to 4:00 pm (see **Appendix E**).

While it is possible to include additional hours outside of this range, for efficiency of observation and staffing concerns we propose these hours represent the best times in which virtually all workers can be successfully contacted and an adequate observation can be conducted⁴. With regard to hours subject to observation, Commonwealth officials propose there is little evidence that activities which occur in the hours outside of this range are substantially different than those within the range⁵. Additionally, some time is needed each day for the observer's lunch and breaks, to handle return calls, for incidental administrative activity and meetings, reserve time for unforeseen events, and for daily tabulation of results.

Some of the staff proposed to be included in the universe have flexi-time work schedule arrangements, such that some in offices with extended hours may start and leave early, while others may start and leave late. Additionally, we are aware that some may work truncated work weeks, such as four day weeks or split shifts. In some cases an additional flexi-time adjustment to the sample size is warranted, but we propose this is not the case in Massachusetts as virtually all workers would still be subject to observation during the "core hours" of the sample.

Accordingly, the universe would be calculated as the total number of workers multiplied by the total number of minutes in the observation period, and again multiplied by an average count of working days per quarter. Given our current count of 985 staff, an observation period of 360 minutes (i.e., 6 hours × 60 minutes), and an average of 62 working days per quarter, the universe would total 21,985,200 minutes of worker effort potentially subject to observation:

$$985 \times 360 \times 62 = \underline{21,985,200}$$

D. Sampling Unit

We propose a discrete sampling unit to be defined as one minute of worker effort, or 60 seconds in duration of a single activity being performed by a selected worker.

E. Sampling Standards and Procedures

1. Sampling Technique

There are various kinds of sampling plans we have considered, but we propose here a simple stratified sampling plan which is computer-generated against the Massachusetts Department of Transitional Assistance payroll records, an up-to-date calendar of actual working days, and a clock. The total sample size in each quarter - as discussed later - will always be at least 2,219, and the observations are scheduled to occur 38 times each day. For a quarter with 62 working days (on average) this will produce 2,356 observations per quarter. On each day half of the minutes - i.e., 19 observations - are observed in the 9:01am - 12:00 noon period, and half are observed in the 1:01 pm - 4:00 pm period.

⁴ We note that an identical polling procedure with the same restricted range of "core hours" has been employed by New York, and that the procedure has been approved by the U.S. Department of Health and Human Services, Division of Cost Allocation.

⁵ Ibid.

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All observations are proposed to be conducted via telephone contacts, where a telephone observer queries a selected worker chosen at random. There is a constraint in the procedure such that no individual worker will be selected more than once per week, and to this limited extent the sampling plan is conducted in the manner of "sampling without replacement". However, all minutes in the six hours subject to sampling on each day have a statistically equal chance or probability of selection, and on a weekly basis all workers have an equal probability of selection. The worker is queried for the activity he or she was performing during the 60 seconds immediately prior to the selected minute of the telephone call.

The query consists of a full-time observer inquiring over the telephone about the nature of the activity being performed by the worker, and the particular program or case type involved. This information is then tabulated and subjected to analysis in order to determine the particular program or programs which benefited from the activity. These final results are then used as a distribution measure elsewhere in the public assistance cost allocation plan to allocate the actual costs of the local offices and related cost pools.

2. Sample Period

The sample period is defined to be the same quarter used to aggregate the costs that are distributed to the various programs, i.e., the standard calendar quarter.

3. Confidence Level

In developing the specifications for the random moment sampling system, we have designated a confidence level factor of .95, with a corresponding statistical value (t) of 1.96.

4. Precision

In developing the specifications for the random moment sampling system, we have designated the threshold for allowable error (SE) as ranging from $\pm .02$ at the .95 confidence level for each program with a frequency of occurrence of 5% or more of the time, and from $\pm .05$ at the .95 confidence level for each program with less frequent occurrence.

5. Sample Size

A number of factors impact directly upon the size of an acceptable sample, such as the homogeneity of the sampled items and the nature of the universe. According to the *Procedures for the Preparation and Submission of Cost Allocation Plans*, Section VI, Appendix C, *Standards and Procedures for Random Moment Sampling*, at § 3.E.5 (at p. 59), the formula that should be used to determine the sample size is as follows:

$$n = \frac{p(1-p)}{\left(\frac{SE}{t}\right)^2}$$

where n = sample size,

p = maximum anticipated rate of occurrence

of the activities or programs being observed
(i.e., the anticipated distribution of effort),

SE = desired sample precision, and

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$t =$ confidence level factor (i.e., 1.96 for 95%)

For example, given the *Table of Anticipated Rates of Occurrence* we have developed based on our best inferences, the proposed sample size was determined as follows:

$$n = \frac{30(1-30)}{\left(\frac{0.02}{1.96}\right)^2} = 2,017$$

We observe that it is important, as shown in the above example, to compute the sample size based on the maximum rate of occurrence that any one of the programs or activities observed is expected to occur. In our preliminary analysis, we have

determined that the program or program combination most likely to be observed as benefiting from the activities of our workers is the TAFDC/MA/Federal FS case, which we estimate to account for no more than 30% of the program responses in any quarter, and we have proposed this statistic in computing our initial sample size. By computing the sample in this manner, the subsequent need to increase the sample size to meet the required precision limits is significantly reduced. Also, because of the large universe involved in the worker population (i.e., a number well in excess of 100 workers), we observe that a finite sample correction factor is unwarranted if the above formula is used. In addition, because of the use of “core hours” in the sample parameters, no flexi-time sample size adjustment is warranted.

Additionally, because we propose to generate the needed list of randomly selected workers from the most recent payroll registers, there is little likelihood that substantial numbers of worker terminations, new hires, transfers, and other similar personnel transactions will be undetected in a way to affect the reliability of the sample and the adequacy of the number of valid observations. We do, however, propose to incorporate a standard oversample factor of 10%, further increasing the sample size (n) to a grand total of 2,219 minutes of observation (i.e., $2,017 \times 1.10$). This adjustment is believed to reasonably accommodate unforeseen situations such as worker transfers and terminations that could potentially affect the precision and sample reliability of the ongoing RMS procedure.

As a practical matter, however, we will always exceed 2,219 samples because our stratified sample ensures a total of 38 observations per day. Since the average quarter will usually have 62 working days, most quarters will have a sample size of 2,356, a number well in excess of the 2,219 required. This oversample effectively constitutes a safeguard for any complications arising from the occurrence of flexi-time schedules. Even in cases where a quarter could conceivably have only 59 working days (e.g., because of snow days, the vagaries of observed holidays, or disasters) the sample size will still be 2,242, again a number well in excess of the required 2,219. This procedure ensures that an absolute minimum of 2,000 valid observations will be recorded in each sample period, the minimum stipulated in Appendix C. For this purpose a “valid observation” is any observation other than a “non-strike”. A “non-strike” will occur whenever a selected employee can not be contacted by the interviewer at the selected moment because the employee no longer works at the office, the employee is on a flexi-time schedule and is not assigned to be working, and similar circumstances⁶.

⁶

If a worker is busy in a client conference or is at a meeting, they are instructed to return calls to a special call-back number to record their activity information for the originally selected moment - these are considered valid observations and are not counted as “non-strikes”.

RANDOM MOMENT TIME STUDY INTRODUCTIONS**NOTE: THIS INFORMATION IS NOT FORWARDED TO TIME STUDY PARTICIPANTS****Introduction**

The Massachusetts Department of Transitional Assistance (DTA) utilizes a Random Moment Time Study (RMTS) to determine the amount of effort that employees spend on various activities related to the determination of cases for programs such as Food Stamps, Medicaid, and TANF. The RMTS consists of a number of individual observations of employee activities selected randomly. Based on these observations, the total effort of a group of employees is determined with a high degree of confidence that approximates the same results as having observed employees for 100% of their time at work. The results of the RMTS are used to allocate costs for certain plan departments in the cost allocation plan, namely those that contain costs for Assistance Unit Managers (AU Managers).

An observation at a random moment provides a sample of what activities are performed at a particular moment of time; every item in the universe of activities is given a fair chance of being included in the sample. A computer program that assigns random moments to employees generates the sample of moments. Workers are notified of their moments by e-mail, and the e-mail provides the log-in information necessary to complete the web-based RMTS. Information contained in the RMTS e-mail, as well as the training material, is limited to specific directions for completing the observation so that the study is not biased improperly (i.e., it is not possible to determine from the observation form which activities are reimbursable, nor are workers told about the reimbursability of each activity).

The time study is currently administered through a joint effort between Public Consulting Group, Inc. (PCG) and DTA.

Sampling Population

The following classifications of employees are subject to the RMTS survey.

- AU Managers

These employees directly provide eligibility and case management to DTA clients. Staff supervisors are not included within the labor classes listed nor are workers who only work on Food Stamps cases (Food Stamps Only workers). DTA and PCG update the staff members who are participating on a monthly basis to account for new staff, terminated staff, and staff on long-term leave. It is important to note the DTA employees who have participated in the RMTS in the past, but whom are no longer in the sample selection (e.g. retired, left position, etc.) are never deleted from the database, but are rather deactivated so that previous quarter data is available.

Sampling Unit

The sampling unit is defined as a single moment between the hours of 9:00 AM and 4:00 PM Monday through Friday. Each workday is separated into the work hours between 9:00 AM to 12:00 PM and 1:00 PM to 4:00 PM and a holiday schedule is updated on the system. These are the working hours for the sampled staff.

Sampling Period

The sampling period is a state fiscal quarter and is the same period that is used to aggregate costs in the cost allocation plan.

Confidence and Precision Level

This level is kept at 95% confidence level with +/- 2% precision. This level is consistent with federal regulations for statistical validity.

Sample Size

DTA generates 3,600 moments per quarter. We will generate the appropriate number of moments monthly to ensure that we have 2,000 valid observations and are in compliance with the formula below that was previously used to determine how many valid moments are required each quarter.

The formula used to determine the baseline number of moments is as follows:

$$\left(\frac{P(1-P)}{\frac{SE}{T}} \right)^2$$

Where	N	=	Sample Size
	P	=	Anticipated Rate of Occurrence of the Activities Being Observed
	SE	=	Desired Sample Precision
	T	=	Confidence Level Factor (1.96 for 95%)

With the updated system, we will update the maximum rate of occurrence; but ensure that we obtain a floor of 2,000 moments a quarter.

Sample Calculation

Solving for N (with a maximum rate of occurrence of 20%):

$$N = \frac{.20(1-.20)}{\left(\frac{.02}{1.96} \right)^2} = 1,537$$

As mentioned above, and due to communications from DCA, 2,000 valid samples are currently required, though the formula indicates a lesser number.

Standard Observation Form and Definitions

A standard observation form has been developed which includes program and activity combinations that encompass the universe of activities that the population being surveyed performs. Historically, the survey has been conducted via a phone-based process. DTA shifted to a web-based form beginning July 1, 2007 after a quarter long pilot period. No significant changes were made to the program & activity code combinations, aside from more clearly identifying programs where clients are not receiving Food Stamps.

A brief description of the new web-based process is as follows:

- At the time that the moment occurs (e.g., 10:12 am on 7/8/07), the worker is sent an email indicating that they have been selected to complete an RMTS moment.
- The email contains a user name and password and a link to a secured website.
- The worker selects the link, logs on to the system using the user name and password contained in the email, and the website provides them a list of all of the program and activities available to them. .
- The worker first selects “Yes” or “No” as to whether or not they are working on a case. If they answer in the affirmative, they enter the case ID, followed by the appropriate program (or combination of programs). Finally, they select the appropriate activity that ties to the particular program (or combination of programs) If the worker answers in the negative, they select an activity from a list of General Activity options. In both of these cases, the worker confirm their answers and submit their entry.
- The activities are tabulated electronically.
- Workers are sent 24-hour follow up emails and will have 72-hours from the time of the original moment to complete each moment.
- RMTS Coordinators are copied on the 24-hour reminder emails, but not the original email request. .

Please refer to the attached matrix for program and activity code descriptions.

Below are screen prints from this process:

Compilation of Results

The RMTS results are tabulated on an ongoing basis for inclusion in the cost allocation plan. The results for each activity and program code combination are calculated and included in the cost allocation plan.

Analysis of Results

On a monthly basis, the results of the RMTS are compared to previous months to determine if there are any significant variances in the responses. If a significant variance is discovered, a review is conducted in order to determine the reason for the variance. If the reason for the variance is due to bias or improper technique, it will be determined whether a change to the RMTS form or instructions are needed. Additional training may also be conducted.

Compliance reports can be shared with the RMTS Coordinators within each area office. Currently the system generates 24 hour follow-up emails. Additional follow-ups will be employed as necessary.

Evaluation and Modification of the System

The RMTS system, observation form, and distribution procedures are continuously evaluated to identify necessary modifications in order to improve their efficiency and effectiveness. If modifications are determined necessary, they are made promptly. Quarterly results are compared to prior quarter results are part of the cost allocation plan preparation; any variances over 5% are investigated. This is in addition to the monthly analysis.

Documentation

All aspects of the RMTS process are documented. This documentation includes:

- Assigned moments emailed;
- Data related to tabulations;
- Analysis of sample results; and
- Final computation of results that are used in the cost allocation plan.