Department of Veterans Affairs

# Office of Inspector General

## ACCURACY OF DATA USED TO COUNT THE NUMBER OF UNIQUE PATIENTS

***The Veterans Health Administration needs to improve the quality of data used in reporting the total number of unique patients for the Government Performance and Results Act.***

**REPORT NO: 9R5-A19-161**
**DATE: SEPTEMBER 20, 1999**

**Office of Inspector General**
Washington DC 20420

**DEPARTMENT OF VETERANS AFFAIRS**
Office of Inspector General
Washington DC 20420

# Memorandum to the Acting Under Secretary for Health (10)

## Audit of Accuracy of Data Used to Count the Number of Unique Patients

1. At the request of the Assistant Secretary for Planning and Analysis we initiated a multi-stage audit to examine the accuracy of data used for reporting in accordance with the Government Performance and Results Act (GPRA). This is one in a series of audits to evaluate the accuracy of the Department of Veterans Affair's (VA) most critical GPRA performance measures. The purpose of this audit was to evaluate the accuracy of Fiscal Year (FY) 1997 data used for Veterans Health Administration's (VHA's) performance measure: Number of Unique Patients. VA's Annual Accountability Report for FY 1997 defines the number of unique patients as the "Total number of patients, i.e., the count of unduplicated social security numbers (SSNs), using health care services provided by or funded by VA."

2. We evaluated a random statistical sample of 175 unique SSNs obtained from documentation from 102 health care facilities. We reviewed the documentation supplied by the health care facilities to determine if the patients who were counted as unique patients met the definition of a unique patient as described in the Annual Accountability Report. Additionally, we applied Social Security Administration (SSA) criteria to determine whether SSA had issued the unique SSN. Our audit found that data used to report the number of unique patients for GPRA needed to be more accurate. Based on the results of the statistical sample reviewed, we estimated that the approximately 3 million unique patients reported for FY 1997 was overstated by 5.7 percent. The reported number of unique patients was overstated because:

- Inaccurate SSNs were input into the National Patient Care Database.

- Patients with undocumented outpatient appointments and patients scheduled for outpatient appointments who cancelled or who did not keep their appointments (no-shows) were counted as being treated.

Additionally, data used to aggregate the number of unique patients from several automatic data processing systems lacked integrity because pseudo SSNs could be input into the Patient Information Management System--one of the automatic data processing systems.

3. VA has a stated goal in their FY 1997 Annual Accountability Report of increasing the number of unique patients by 20 percent for FY 1997 through FY 2002. This represents an increase of 4 percent per year over this 5-year span. For FY 1997, VA reported that the number of unique patients increased by 3 percent over the number reported in FY 1996. However, given the estimated overstatement of 5.7 percent for FY 1997, VA cannot be assured that it achieved the 3 percent increase. Additionally, since FY 1997 is the base year for the 5-year time span for measuring increases or decreases in the number of unique patients, an overstatement in FY 1997 will distort any increases or decreases reported in GPRA reports for FY 1998 through FY 2002.

4. We recommended that the quality of data used to report the number of unique patients for GPRA be improved by establishing edit checks in automatic data processing systems to identify and correct input errors.

5. The Acting Under Secretary for Health agreed with the recommendations in the report and provided acceptable implementation plans. We will follow up on the implementation plans until they are completed. The Acting Under Secretary for Health questioned the validity of the size of the statistical sample used for our conclusions. The sample size and sampling methodology were developed using established sampling principles. The statistical methodology utilized in this audit was reviewed by the OIG statistician and based upon the principles used, the sample results were determined to be representative of the Unique Patients universe. The Acting Under Secretary for Health also did not agree with our conclusion that VHA was unable to determine if the established goals for yearly increases were achieved. We agree that determining the validity of the reported yearly increase or decrease would require auditing the reported Unique Patients value for more than one fiscal year. However, the Unique Patients value reported for FY 1997 established the baseline used for the succeeding 5 years under GPRA. Since the baseline data for unique patients was erroneous, it was not possible to accurately report succeeding annual increases or decreases. Therefore, we believe our conclusions are valid.

For the Assistant Inspector General for Auditing

*(Original signed by:)*

MICHAEL SLACHTA, JR.
Deputy Assistant Inspector General for Auditing

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# RESULTS AND RECOMMENDATION

## The Veterans Health Administration Could Improve the Quality of Data Used to Count Unique Patients

Data used to report the number of unique patients[1] needed to be more accurate. We found that a random statistical sample of Fiscal Year (FY) 1997 data of 175 unique patients, contained 5.7 percent (10 unique patients) of overstated workload. This projects to an overstatement of 173,892 unique patients in the FY 1997 count of unique patients. The overstatement involved outpatient treatment included in the National Patient Care Database (NPCD). The number of unique patients reported was overstated because:

- Inaccurate social security numbers (SSNs) were input into the NPCD.
- Patients with undocumented outpatient appointments and patients scheduled for outpatient appointments who cancelled or who did not keep their appointments (no-shows) were counted as having been treated.

Additionally, data used to aggregate the number of unique patients lacked integrity because pseudo SSNs could be input into the Patient Information Management System (PIMS). Pseudo SSNs could be used to inflate the final reported value for unique patients.

Due to these conditions, the Veterans Health Administration (VHA) cannot be certain of the accuracy of the 3 percent increase they reported in the Government Performance and Results Act (GPRA) performance measures total number of unique patients from FY 1996 to FY 1997.

### VHA Personnel Input Inaccurate SSNs Into NPCD

The Veterans Health Information and Technology Architecture (VISTA) registration application allows for the editing of patient demographic information, including social security number. Patient demographic information is transmitted to the Austin Automation Center (AAC) and stored in the NPCD whenever a patient has an outpatient appointment or is admitted to a health care facility. At the end of each month, the AAC transmits the relevant data from the NPCD to the Allocation Resource Center (ARC) where the data are used to determine the total count of unique patients for budgeting and performance measuring. The ARC assembles all patient encounters from all health care facilities nationwide. The unique patient's value is derived from the unduplicated SSNs from these patient encounters.

[1] VA's Annual Accountability Report for FY 1997 defines the number of unique patients as the " Total number of patients, i.e., the count of unduplicated social security numbers, using health care services provided by or funded by VA."

Of our sample of 175 records evidencing unique patients, we found that 5 (2.85 percent)[2], or a projected 86,946 SSNs of the 3,050,740 unique SSNs, involved input errors. Input errors, such as transposing two figures in a SSN, are often transmitted from health care facilities to the AAC and thus erroneously included in the NPCD. Input errors involving SSNs, with inverted digits or inaccurate digits, result in overstating the number of unique patients since inaccurate SSNs are often counted as unique patients. Currently, the AAC does not have an edit check in place to detect these types of input errors.

During the audit, AAC personnel developed an edit check of NPCD data that could potentially identify and correct some input errors before they are transmitted to the ARC. VA health care facilities use a field in their VISTA automated systems called an IEN (Internal Entry Number). The IEN is a designator that identifies each patient as being unique for each facility and is not dependent on the patient's SSN. The IEN contains a complete patient record to include patients' SSNs. A patient's IEN never changes. The edit check has the capability to compare a patient's SSN, as shown on the IEN, to the patient's SSN as shown on subsequent Statistical Analysis System[3] extracts from NPCD, which are transmitted to the ARC. Responsible AAC personnel propose to run the edit check on the NPCD twice a month and correct the patient record accordingly. In our opinion, this edit check would improve the quality of reported data, and we have included the adoption of this edit check as a recommendation.

Although input errors will probably never be completely detected and corrected, we identified national and local initiatives that could result in reducing the number of input errors in the future. For example, a future enhancement to VISTA software is the Clinical Information Resource Network (CIRN). The CIRN will enable responsible health care facility officials to identify duplicate records, such as records that have the same demographic information but different SSNs. The records merge feature will improve the ability of local health care facilities to identify and correct input errors before the data are submitted to the AAC.

**Undocumented Appointments and Cancelled Appointments or No-Shows Were Sometimes Counted As Unique Patients**

Based on evidence supplied by local health care facilities, we found that 5 (2.85 percent)[4] patients in our sample, or a projected 86,946 SSNs of the 3,050,740 unique SSNs, included outpatient visits that were not adequately documented or outpatient appointments that were either cancelled or not kept. Local health care facilities could not provide sup-

[2] The confidence interval around this estimated proportion ranges from a low of .39 percent to a high of 5.33 percent.
[3] Statistical Analysis System is a computer software system that consists of several products that provide tools for data entry, data management, and data analysis.
[4] The confidence interval around this estimated proportion ranges from a low of .39 percent to a high of 5.33 percent.

porting evidence to indicate that these patients received medical treatment that was either provided by or was paid by VA, as required. Thus, their inclusion in the unique patients' database at the ARC resulted in overstating the reported GPRA unique patients' value for FY 1997. During FY 1997, PIMS system controls did not prevent incomplete outpatient encounters, such as cancellations and no-shows, from being transmitted to the NPCD as valid encounters. . In January 1998, VISTA officials released the Incomplete Encounter Management Module (IEMM) to VA health care facilities nationwide. The IEMM was designed to ensure that all required data elements for the outpatient checkout process were entered into VISTA before an outpatient encounter could be transmitted to the AAC for inclusion in the NPCD. If an outpatient encounter is not checked-out, with all the required data elements included, the encounter cannot be transmitted. Cancellations or no-shows will not have the required data to be checked-out and thus will not be transmitted to the AAC. Additionally, if an outpatient encounter was checked-out in error, the health care facility can now delete the erroneous check out. This procedure generates a deletion message that is transmitted to the AAC for correction of the NPCD. In our opinion, this VISTA enhancement should greatly reduce or even eliminate the erroneous inclusion of cancelled appointments or no-shows in the unique patients' database.

**Eligibility Was Not Determined for Some Patients**

Our sample included 2 (1.14 percent) patients who received VA-funded treatment but whose eligibility for such treatment was not determined. Using statistical sampling techniques, we determined that this occurrence rate was not statistically significant because of its relationship to the confidence interval. However, without statistical precision it is possible that 42,710 SSNs (1.14 percent of 3,050,740) were not those of unique patients. Health care facilities could not provide documentary evidence for one patient showing that he was a veteran and thus eligible for VA-funded treatment. For the second patient, the health care facility in question could not provide proof of eligibility for an episode of collateral[5] treatment. In our opinion, it is essential that VA health care facilities verify eligibility status before providing VA-funded treatment. The health care facilities had established controls to ensure only eligible patients were treated, but they were not able to explain how these patients were provided treatment before their eligibility for care had been determined**.**

[5] Patients who are eligible for collateral treatment include members of the immediate family, the legal guardian, or the individual in whose household a veteran certifies an intention to live. Eligible patients may receive consultation, professional counseling, training and mental health services, including group therapy on an outpatient basis for drug abuse or alcohol abuse in VA health care facilities when such services are essential in connection with and to support the effective treatment and rehabilitation of an eligible veteran.

**Controls Did Not Exist to Detect Mismatches Between Pseudo SSNs and the Corresponding Valid SSN**

To test whether the approximately 3 million SSNs included in our audit universe were actually issued by the Social Security Administration (SSA), we applied criteria that stipulated what constituted a legitimate SSN. SSA provided these criteria which listed the combination of 9-digit SSNs that had been issued to date. Our analysis found 2,922 SSNs that were included in our audit universe that were never issued by SSA. Further testing at one health care facility revealed that all VA health care facilities have the ability to input pseudo SSNs. This capability exists in order to place a record of the patient's visit into PIMS when they were eligible for treatment but for some reason did not have an SSN or could not remember their SSN. There were no edit checks to identify a pseudo SSN at any point in the processing of the data, including at the AAC or the ARC.

At the health care facility where we reviewed the use of pseudo SSNs, it was the facility's policy to use a pseudo until they had the patient's actual SSN. Upon receipt of a valid SSN, they would edit the patient's record. However, since PIMS permits editing of a record but not a deletion, a single patient could possibly be included under both a pseudo and an actual SSN, resulting in a double count. However, we were not able to match pseudo and actual SSNs by patients because the actual SSN entry could occur in subsequent reporting periods. Thus, we cannot quantify the extent of this overstatement for FY 1997.

Since VHA health care facility personnel have the capability to input pseudo SSNs, they can manipulate the data (intentionally or unintentionally) to show treatment of more unique patients than actually were treated. Although we did not discover anyone intentionally manipulating the system by including pseudo SSNs to increase their health care facility's count of unique patients, there are no internal controls in place to prevent this type of data manipulation from occurring. In our opinion, the quality of data used to report unique patients could be improved if responsible VHA officials performed a test of valid SSNs based on SSA criteria similar to the test we have outlined above. The ARC could perform this test after they determine the number of unique patients for the FY and before reporting the number for budget allocation purposes.

**VHA Was Unable to Determine Whether It Has Achieved It's Established Goal for Yearly Increases in the Total Number of Unique Patients**

VHA has committed itself to increasing the number of unique patients treated to achieve its strategy of shifting from hospital-based care to the delivery of managed patient-centered care. Specifically, VA stated in its FY 1997 Annual Accountability Report that its goal was to increase the number of unique patients by 20 percent for FY 1997 through FY 2002. Over a 5-year span, this represents an increase of 4 percent per year. For FY 1997, VA reported that the number of unique patients increased 3 percent from FY 1996.

However, given the overstatement of unique patients, VA cannot be assured that it achieved a 3 percent increase between FY 1996 and FY 1997, as reported in VA's 1997 Annual Accountability Report.

Additionally, FY 1997 is the base year for the 5-year time span for measuring increases or decreases in the number of unique patients. Consequently, the overstatement in the number of unique patients for FY 1997 will distort any reported increase or decrease for FY 1998 through FY 2002.

## Recommendations

We recommend that the Under Secretary for Health:

a. Establish an edit check at the AAC to identify and correct input errors.

b. Establish an edit check to identify pseudo SSNs and make corrections if necessary.

## Under Secretary for Health Comments

The Acting Under Secretary for Health provided acceptable concurrences to the recommendations and an implementation plan for completing the recommended actions. He provided additional comments that questioned our sample size and the basis for one of our conclusions. Full text comments are in Appendix V on page 14.

## Office of Inspector General Comments

The Acting Under Secretary for Health agreed to take corrective action and provided acceptable implementation plans. However, he questioned the validity of the methodology that supports our projections. Specifically, he questioned the small sample size used to project our findings. The sample size and sampling methodology were developed using established sampling principles, and we believe our sample results are valid and are representative of the Unique Patients universe.

The Acting Under Secretary for Health also disagreed with our conclusion that VHA is unable to determine if the established goals for yearly increases was achieved. We agree that determining the validity of the reported yearly increase or decrease would require auditing the reported Unique Patients value for more that one fiscal year. However, the Unique Patients value reported for FY 1997 established the baseline for the succeeding 5 years under GPRA. This made it very important that the reported value for FY 1997 was accurate. The Acting Under Secretary also stated that if the errors were the same type of errors and were of the same magnitude in prior years, the reported percentage increases in Unique Patients would be accurate. VHA reporting systems are continually being improved to generate better quality data. The Acting Under Secretary mentioned several of

these enhancements in his response. Given this state of improvement in VHA systems, we do not believe that it can be assumed that the magnitude of the errors would be consistent from year to year. Thus, the reported percentage increases would not be accurate. More importantly, the Unique Patients value is also used in determining funds allocations among the VHA hospital networks under the principle that funds should follow the veteran population. An inaccurate count of Unique Patients could result in hospitals being over or under funded in relation to their workload.

# OBJECTIVES, SCOPE AND METHODOLOGY

## Objectives

The purpose of the audit was to assess the accuracy of the data used to measure one of VHA's performance measures: Number of Unique Patients. This is one in a series of audits, initiated at the request of the Assistant Secretary for Planning and Analysis, to assess the accuracy of data used to measure and report VA's performance.

## Scope and Methodology

Our audit of Number of Unique Patients was a limited evaluation of select data. Our work did not include an examination and assessment of VA computer system controls or an analysis of the data accumulation process. The principle data subject to review consisted of FY 1997 data (unique SSNs) accumulated by the ARC. The total number of unique SSNs that was reported in the ARC database was 3,050,834. For our audit, we were able to account for 3,050,740 unique SSNs and that value was used as our audit universe. We deemed the difference of 94 SSNs to be immaterial. Additionally, there were two adjustments (increases) made to the reported value for unique patients totaling 91,231 SSNs that were not included in our review. These adjustments were not reviewed because they were considered immaterial when compared to the total number of SSNs reported in the ARC database.

To determine whether the data processed by the ARC were accurate, we evaluated a random statistical sample of 175 unique SSNs for FY 1997. Our examination consisted of obtaining supporting evidence from 102 local health care facilities and following up on discrepancies. Since unique patient data is derived from five different sources, evidence used to support the patient encounter and unique SSN included a variety of documents. We reviewed the evidence supplied by the health care facilities to determine if the patient was eligible for VA medical treatment and, if the patient used health care services that were either provided by or funded by VA during FY 1997. Additionally, to assess whether the SSNs contained in the ARC unique patients' database were valid, we applied SSA criteria that stipulated what constituted a legitimate, issued SSN.

The audit was conducted between September 1998 and April 1999 in accordance with generally accepted government auditing standards.

# BACKGROUND

The GPRA requires Federal agencies to set goals, measure performance against those goals, and report on their accomplishments. The law is part of a statutory framework for improving management of the Federal government.

As one of its goals, VHA has committed itself to increasing the number of unique patients treated. The goal of increasing the number of unique patients is one of the strategies VA is using to shift from a basic system of hospital-based care to the delivery of managed patient-centered care. Two performance strategies support the growth in unique patients—implementation of primary care and the growth of ambulatory care, both of which permit treatment of more patients.

Specifically, VA's strategy in the delivery of health care services calls for increasing the number of patients using the veterans health care system by 20 percent for FY 1997 to FY 2002. Over a 5-year time span, this represents an average 4 percent growth per year. For FY 1997, VA reported an increase of 3 percent in the total number of unique patients treated from the previous year.

**Data Sources Used to Aggregate the Number of Unique Patients**

The reported number of unique patients was aggregated by determining the total number of patient encounters for the FY and then determining the number of unduplicated SSNs from those encounters. Patient encounters at all VA health care facilities for FY 1997, and duplicated SSNs, totaled 23,347,760 and were derived from the following sources:

**Data Sources and Number of Duplicated SSNs**

| Data Sources | Number of Duplicated SSNs |
|---|---|
| Inpatient Data | 1,381,161 |
| Outpatient Data | 19,087,534 |
| Pharmacy Data | 2,455,342 |
| Home Dialysis Data | 672 |
| Fee Basis Data | 423,051 |

Since the SSNs shown above are not unique, ARC personnel have created a computer routine to eliminate duplicate SSNs. The routine also chooses the appropriate classification and health care facility for each patient. After eliminating duplicates there were 3,050,834 unique SSNs for FY 1997.

The sources of SSNs listed above do not include all possible patient encounters. To account for those SSNs not captured by the data sources listed above, responsible VHA officials adjust the count of unduplicated SSNs by making two adjustments to the re-

ported value. The unique patients count was increased by 40,315 SSNs for Civilian Health and Medical Program of the Uniformed Services patients, and was increased by 50,916 SSNs for Readjustment Counseling patients. After adjustments, VA's FY 1997 Annual Accountability Report reported 3,142,065 unique patients.

# DETAILS OF AUDIT

Our audit found that data used to report the number of unique patients for GPRA performance measures needed to be more accurate. To determine the accuracy of the number of unique patients reported, we reviewed a statistical sample of 175 unique patients. We found that the approximately 3 million unique patients reported for FY 1997 was overstated by 5.7 percent (173,892 unique patients). The overstatement involved outpatient treatments included in the NPCD. Additionally, we found that data used to aggregate the number of unique patients lacked integrity because pseudo SSNs could be input into PIMS.

## VHA Personnel Input Inaccurate SSNs Into the NPCD

Typical examples of inaccurate SSNs are discussed below:

- A patient's last four digits of his SSN were input incorrectly. The patient's SSN ended with 5662 but was input as 5622. This input error resulted in reporting an outpatient visit for FY 1997 for another patient who had not received any VA-funded treatment during that time frame. This input error resulted in an erroneous entry being included in NPCD and in the ARC unique patients' database for FY 1997.

- A patient's last four digits of his SSN were input incorrectly. The patient's actual SSN ended with 4993 but was input as 4933. The SSN that was input incorrectly belonged to an actual patient being treated at that same health care facility. This input error resulted in an erroneous entry being included in NPCD and in the ARC unique patients' database for FY 1997.

- An outpatient appointment was credited to the wrong patient. Two patients at the same health care facility had similar names and the last four digits of their SSNs were similar. The patient that had the outpatient visit credited to him did not have an outpatient visit in FY 1997. Consequently, this error resulted in an erroneous entry being included in NPCD and the ARC unique patients' database for FY 1997.

**Undocumented Appointments and Cancelled Appointments or No-Shows Were Sometimes Counted As Unique Patients**

Typical examples are discussed below:

- Responsible health care facility officials could not find any documentation to support a particular entry in the ARC unique patients' database. Although an outpatient visit was shown in VISTA, there were no medical records to show that this patient received medical treatment for FY 1997. This outpatient treatment was erroneously included in the NPCD and in the ARC unique patients' database for FY 1997.

- VISTA records inaccurately show a patient as having kept her scheduled appointment on October 7, 1996 and the record was annotated as "no treatment provided." Instead, the record should have shown "schedule future appointment". The patient was subsequently scheduled for an appointment on October 11, 1996, which she did not keep. The patient was never treated during FY 1997. However, the October 7th appointment was erroneously included in the NPCD and in the ARC unique patients' database for FY 1997.

**Eligibility Was Not Determined for Some Patients Provided Treatment**

Typical examples are discussed below:

- A patient had an outpatient encounter on May 7, 1997. At the time of the appointment, responsible health care facility officials failed to verify the patient's veteran status. To this date, the patient has not provided any documentation to prove his active duty military service. Although there was no proof available to indicate that this patient was eligible to receive VA-funded treatment, he was erroneously included in NPCD and in the ARC unique patients' database.

- A patient was treated on October 22, 1996 and was administered a flu vaccine. However, health care facility officials could not provide proof of eligibility for this patient to receive this collateral treatment. The facility has no evidence showing the relationship of this patient to a qualifying veteran, as required for anyone receiving collateral outpatient treatment. This collateral outpatient treatment was erroneously included in NPCD and in the ARC unique patients' database.

## APPENDIX III

**Pseudo SSNs Can Cause Erroneous Unique Patient Counts**

This example involved a test patient. In order to test the VISTA system, the health care facility created a fictitious patient called ZzTest. The fictitious patient was given the SSN 444-33-5555. ZzTest was shown as having numerous outpatient visits. This test patient was erroneously included in the NPCD and in the ARC unique patients' database for FY 1997.

# SAMPLING PLAN AND RESULTS

## Audit Universe

We evaluated the accuracy of data used to derive the total Number of Unique Patients reported in VA's Annual Accountability Report for FY 1997. The sample universe consisted of 3,050,740 unduplicated SSNs.

## Sample Size

Using a 95 percent confidence level and 5 percent precision, we evaluated a national sample of 175 SSNs.

## Sample Design

Using a random sampling technique, we selected a sample of unduplicated SSNs and requested selected health care facilities to support their validity. The sample consisted of records from the following four patient care categories:

- Inpatient
- Outpatient
- Pharmacy
- Fee Basis

## Attributes

An attribute sample of records was selected and evaluated. We reviewed evidence supplied by 102 health care facilities to determine the following:

- The patient was eligible for VA medical treatment.
- The patient used health care services that were either provided by or funded by VA during FY 1997.

## Sample Results

Based on the sample results, we estimate at 95 percent confidence, 173,892 of the 3,050,740 unique patients reported in GPRA reports were not unique patients.

| | |
|---|---|
| Population Size | 3,050,740 |
| Sample Size | 175 |
| Number questioned | 10 |

## MEMORANDUM FROM THE ACTING UNDER SECRETARY FOR HEALTH

Department of
Veterans Affairs

# Memorandum

Date: AUG 23 1999
From: Acting Under Secretary for Health (10/105E)
Subj: Draft Report, *Audit of the Accuracy of Data Used to Count the Number* of Unique Patients
To: Assistant Inspector General for Auditing (52)

1. Appropriate VHA program officials have reviewed this report and there is general concurrence in your findings and recommendations. Our action plan in response to the recommendations is attached. We question, however, the validity of the methodology that supports your projections, considering the very small sample size that was used. Future studies of this type would benefit if a larger sample size were used for improved precision. We also disagree that your study methodology credibly supports the conclusion that VHA is unable to determine if the established goals for yearly increases in numbers of unique patients is achieved. For example, there is no indication that the input errors that you identify are either a new problem or on the increase. If the relative error in the baseline does not change, the percentage of increase in unique patient counts that we reported would still be valid and measurable. Our own data provide ample evidence that goals have actually been exceeded.

2. Nevertheless, we share your fundamental concerns that identified systems/processing problems could potentially result in inaccurate national database reporting. We are committed to minimizing these weaknesses, and, as you report, have already taken significant steps to implement system checks that are designed to improve data quality and reduce the risk of duplication or inaccuracy of patient identification numbers. Based on VHA comments at the exit conference about our re-verification of data, we appreciate your willingness to lower your original draft report projections and to incorporate additional statements of clarification.

3. The edit checks referred to in your report have either been implemented or are in the process of being implemented. A primary VHA initiative in addressing input errors involves a major enhancement to the Veterans Health Information Systems and Technology Architecture (VistA) system. The Clinical Information Resource Network/Patient Demographics (CIRN/PD) module, which is currently being implemented throughout the system, offers major improvement benefits. It provides the necessary tools to identify potential patient duplicates and requires each facility to correct the errors before processing can be completed. In addition, the module provides the software that is needed for VistA to interface with the Master Patient Index (MPI), which has the ability to uniquely identify patients by use of an Integration Control Number (ICN). By linking the VistA systems with a single master copy of the MPI, data entry errors for Social Security Numbers (SSN) and patient duplications between facilities are expected to be virtually eliminated. An additional VistA enhancement provides for the editing of patient demographic information (including

## MEMORANDUM FROM THE ACTING UNDER SECRETARY FOR HEALTH



the SSN) in registration applications. The creation of a pseudo SSN is allowed if the patient cannot immediately provide his/her SSN. Once the factual number is obtained, the processing clerk can correct the number in the database. An edit check is run on the application to make sure that no duplicate SSNs are recorded in the VistA database. The CIRN/PD has already been released to field facilities, and staff are currently being trained in its use. Thirteen facilities are currently implementing the module. It is anticipated that systemwide implementation of CIRN/PD and the MPI will be launched in December 1999.

4. During this interim period before full implementation of CIRN/PD/MPI, all facilities are also using the edit check referred to in your report that was designed by the Austin Automation Center (AAC). This check, which involves use of an Internal Entry Number (IEN), identifies each patient individually by facility, and does not depend solely on use of a SSN for identification purposes. Errors are therefore caught before the data are transmitted to the Allocation Resource Center (ARC), where the unique patient counts are compiled. We have already seen improvements in data accuracy since this system was instituted.

5. Thank you for the opportunity to respond to this report. If additional information is required, please contact Paul C. Gibert, Jr., Director, Management Review and Administration (105E), Office of Policy and Planning (105), at 273-8355.

*(Original signed by Thomas L. Garthwaite, M.D.:)*

Thomas L. Garthwaite, M.D.

Attachment

# MEMORANDUM FROM THE ACTING UNDER SECRETARY FOR HEALTH

**Action Plan in Response to OIG/GAO/MI Audits/Program Evaluations/Reviews**

Name of Report: OIG Draft Report: *Audit of the Accuracy of Data Used to Count the Number of Unique Patients*
Report Number: none
Date of Report: none

| Recommendations/ Actions | Status | Completion Date |
|---|---|---|

**Recommendations:**

**We recommend that the Under Secretary for Health:**

**a. Establish an edit check at the AAC to identify and correct input errors.**

Concur

The report describes planned enhancements to the Veterans Health Information Systems and Technology Architecture (VistA) system that are designed to identify and correct input errors before they progress through the system. The Clinical Information Resource Network/Patient Demographics (CIRN/PD) module provides the necessary tools to identify potential patient duplicates. It requires facilities to correct errors before additional steps can be taken. The software permits VistA to utilize the Master Patient Index (MPI) which is capable of uniquely identifying patients through use of an Integration Control Number (ICN). An additional VistA enhancement provides a capability to edit patient demographic information (including Social Security numbers) in the registration applications. Although a pseudo Social Security number can be initially input if the patient cannot immediately provide the information, processing clerks will be able to re-access the data to make corrections. An edit check is also run on the application to assure that no duplicate Social Security numbers are included in the VistA database. The CIRN/PD is currently available in the field, where preliminary training in the use of the system is being conducted. Thirteen sites are currently implementing the module. It is anticipated that the MPI will become operational by the end of December 1999, at which time the systemwide implementation of CIRN/PD will also be initiated.

In the interim, all facilities are also applying the edit check referred to in this report that was designed by the Austin Automation Center (AAC) to utilize an Internal Entry Number (IEN) to identify each patient individually by facility. This system does not depend solely on the use of a Social Security Number for identification. Errors are therefore caught before the

## MEMORANDUM FROM THE ACTING UNDER SECRETARY FOR HEALTH

**Page 2 VHA Action Plan/OIG Draft Report:** ***Audit of the Accuracy of Data Used to Count the Number of Unique Patients***

data are transmitted to the Allocation Resource Center (ARC), where the unique patient counts are compiled. Additional checks are provided through the Health Eligibility Center (HEC) in Atlanta, which matches Social Security Numbers with the Social Security Administration and the Internal Revenue Service. The HEC has been running these checks since FY 1998.

In Process December 1999 and Ongoing

**b. Establish an edit check to identify pseudo SSNs and make corrections if necessary.**

Concur

The actions identified in response to Recommendation a. also encompass issues raised in this recommendation.

# FINAL REPORT DISTRIBUTION

## VA Distribution

Secretary of Veterans Affairs (00)
Acting Under Secretary for Health (105E)
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