

UNITED STATES DEPARTMENT OF EDUCATION  
OFFICE OF SPECIAL EDUCATION AND  
REHABILITATIVE SERVICES  
REHABILITATION SERVICES ADMINISTRATION  
WASHINGTON, DC 20202

INFORMATION MEMORANDUM  
RSA-IM-FY-93-18  
RSM-1250  
DATE: MAY 27, 1993

**TO :** STATE VOCATIONAL REHABILITATION AGENCIES  
(GENERAL)  
STATE VOCATIONAL REHABILITATION AGENCIES (BLIND)  
CLIENT ASSISTANCE PROGRAMS  
REGIONAL REHABILITATION CONTINUING EDUCATION  
PROGRAMS (RRCEPS)  
RSA SENIOR MANAGEMENT TEAM

**SUBJECT :** Changes in Economic Functioning Experienced by Individuals  
Rehabilitated in FY 1990 and Quality of Supporting Data, by State  
VR Agency

### INTRODUCTION

The purpose of this report is to provide information (a) highlighting the economic changes experienced by clients rehabilitated in FY 1990 and (b) assessing the quality of the underlying data. While the presentation of data for a more recent year would have been preferred, the points made in this report about both the nature of client gains and reporting problems remain valid for at least FY 1991 as well.

All information in this report is derived from six of the most important data elements in the Case Service Report (RSA-911) system and is displayed for each State VR agency in alphabetical order. The six data elements are work status, earnings and hours worked at application for VR services; and work status, earnings and hours worked at rehabilitation closure. From these data elements, we have derived seven measurements of employment and economic changes from application to closure achieved by individuals classified by State agencies as having been successfully rehabilitated. The measurements are:

- (1) Percent competitively or self-employed,
- (2) Percent with earnings,
- (3) Mean weekly earnings,
- (4) Mean weekly hours worked,

- (5) Percent working full-time (35 hours a week or more),
- (6) Mean hourly wage rate,
- (7) Percent working at or above the Federal minimum wage rate (\$3.35 per hour through March 31, 1990 and \$3.80 per hour on April 1, 1990 and thereafter).

## **CHANGES IN ECONOMIC FUNCTIONING**

The data in this report depict the economic changes experienced by persons rehabilitated in FY 1990 by comparing their economic status at the time of application for services to their status at rehabilitation closure. These changes are presented for each State agency and the Nation as a whole in Tables 1A, 1B and 1C in the following manner:

Table 1A pertains to the entire cohort of persons rehabilitated in FY 1990, regardless of their employment status at the time of application for services. This represents the overall summary of client changes.

Table 1B pertains to rehabilitated clients who were working at application, i.e., they had earnings at that time. With data from this table, one can determine the degree to which such clients were able to achieve improvements in their employment status.

Table 1C pertains to rehabilitated individuals who were not working at application, i.e., they reported no earnings at that time. While gains in economic functioning for this group may be assumed to have taken place by the time of closure, Table 1C addresses the extent of such an improvement.

### **TABLE 1A. ALL REHABILITATED CLIENTS**

The following paragraphs summarize client changes in earnings and employment at the National level for all persons rehabilitated in FY 1990, regardless of their employment status at the time of application for rehabilitation services:

- (1) Only 18.8% of the rehabilitated clients were competitively or self-employed at application, but 85.0% were so employed at closure.
- (2) The percent of clients with earnings increased from 21.6% at application to 90.5% at closure.
- (3) Weekly earnings rose by an average of \$154.58 per person from \$37.92 to \$192.50 per week.
- (4) Weekly hours worked increased by 26.2 hours per person from 6.0 hours to 32.3 hours. (The discrepancy is caused by the manner of rounding.)

- (5) Clients working full-time rose from 10.9% at application to 66.5% at closure.
- (6) The gain in the average hourly wage rate was \$4.18 per person from \$1.06 to \$5.24.
- (7) Those working at or above the Federal minimum wage rate increased from 14.1% at application to 76.3% at closure.

(The foregoing figures include the effect of persons in non-wage-earning situations at application and at closure.)

#### **TABLE 1B. REHABILITATED CLIENTS WITH EARNINGS AT APPLICATION**

Table 1B pertains solely to clients who had some amount of earnings in the week before application. These individuals encompassed 21.6% of all persons rehabilitated in FY 1990. The National summary of economic changes for this sub-group is as follows:

- (1) The large majority of working clients were competitively or self-employed at application (85.6%). An even higher proportion, 94.2%, were so employed at rehabilitation closure.
- (2) By definition, all members of this sub-group had earnings at application. After rehabilitation services, virtually all of them also had earnings at closure (97.8%). This was a small reduction among persons with disabilities whose numbers included those facing deteriorating medical conditions and imminent job loss.
- (3) The mean earnings in the week before application for those with earnings at that time came to \$175.22. State agencies were able to help these persons increase their earnings by nearly 30% to \$227.43, on the average, in the week before closure. The average gain per person was \$52.21.
- (4) Individuals working at application were averaging 31.3 hours of work per week. By the time of rehabilitation closure, this had increased to 35.3 hours.
- (5) Just over one-half of the wage-earners at application (51.9%) were working full-time. At closure, however, the proportion of full-time workers had risen to nearly three-quarters (73.7%).
- (6) As a group, those working at application were averaging \$5.50 for each hour worked. The wage rate rose to \$6.17 per hour at closure, a gain of 12%.
- (7) Nearly three-quarters (72.9%) were earning at or above the Federal minimum wage rate at application. This proportion increased to 83.9% by the time of rehabilitation closure.

## **TABLE 1C. REHABILITATED CLIENTS WITH NO EARNINGS AT APPLICATION**

Table 1C is confined to rehabilitated individuals who had no earnings in the week before application, a group accounting for the large majority of all persons rehabilitated in FY 1990 (78.4%). With no economic activity to report on at application, only the statistical measurements at closure are relevant for these people.

- (1) Over eighty percent of the non-wage-earners at application (82.4%) were competitively or self-employed at rehabilitation closure. (A tiny proportion (0.1%) shows up on Table 1C as having been so employed at application. These would essentially be self-employed persons without earned income in the week before application.)
- (2) The overwhelming majority had earned income in the week before closure (88.5%).
- (3) Their mean weekly earnings at closure came to \$182.81.
- (4) The group averaged 31.5 hours of work per week at closure.
- (5) Nearly two-thirds (64.6%) were able to work full-time.
- (6) Their hourly wage rates averaged \$4.99 at closure.
- (7) Almost three-quarters (74.4%) had earnings at closure that equalled or exceeded the Federal minimum wage rate.

The data presented in Tables 1A, 1B, and 1C are summary in nature and do not describe what happened to individual clients as they made their way through the rehabilitation process. The summary data are intended to provide only a general overview of client experience. They can, however, form the basis for more detailed analyses of changes in economic functioning of clients with various types of disabilities and personal characteristics.

### **AGENCY-TO-AGENCY DIFFERENCES**

Agency-to-agency differences, not analyzed in this report, are caused by many factors. They include serving clients with different mixes of personal characteristics and disabilities, local and Statewide economic conditions outside the control of State agencies, variations in access to and availability of resources, and, even, differing operational philosophies.

The outcomes displayed in Tables 1A, 1B and 1C of this report should be of interest to agencies wishing to compare themselves to other agencies of similar size or geographic location or with

other characteristics in common. In addition, agencies should examine the tabulated figures to determine whether they fairly reflect the economic changes of their clients. Reporting errors can, of course, distort the outcomes presented in the tables.

It should be noted, finally, that these tables are only a synopsis of much greater detail available on the economic status of clients in each State agency at application and at closure. This detail contains the full distributions of reported data for each of the six data elements featured in this report.

## **TABLE 2. DATA QUALITY**

As valuable and informative as these data are, however, they do not fully meet our expectations for data quality. Table 2 was created to make it easy to determine which agencies most contributed to reporting deficiencies for each of the six data elements used in the report.

The lines labelled "col%" on Table 2 show the percentage of an agency's rehabilitations for which a particular data element was not reported, or not correctly reported. Ten different agencies had error rates in excess of 10% for at least one of the data elements in this report.

The lines labelled "row%" show the percentage of cases not reported for a data element at the National level that were accounted for by each agency. (It is remarkable to observe how so few agencies accounted for the bulk of incorrect reporting. Two agencies, for example, accounted for over 60% of the absent data for hours worked at application and at closure; another two agencies for nearly one-half of the problem cases for work status at closure; two agencies for over one-third of the cases not reporting work status at application; and a single agency for more than 40% of the missing values for earnings at closure.)

In general, the four data elements on work status at application and closure and earnings at application and closure were well reported as seen from the National perspective. The rates of non-reporting for the work status items were only 0.1% (one in a thousand) while the rate for earnings at closure was 0.2% (one in 500) and that for earnings at application was 0.5% (one in 200). As seen in Table 2, the rates of non-reporting for certain State agencies were overly high for these data elements.

Most distressing, however, were the high non-reporting rates, at the National level, for the data elements on hours worked; these were 8.4% and 7.4% at application and at closure, respectively. This means that information on hours worked was not reported, or not correctly reported, for approximately one rehabilitated client in every 12 at application and one in every 13.5 at closure. These rates are large enough to have possibly skewed National measurements that are based on hours worked.

For Table 2 the term "not reported" means that any of the following conditions applied:

- (1) No information was reported by a State agency for any of its rehabilitated closures. (This was applicable only to the two data elements on hours worked.)
- (2) The item was left blank or was reported with a non-legitimate code for a selected numbers of cases.
- (3) Apparently good information was reported for a few cases, but was insufficient to establish a distribution that could be considered representative of the missing values. The "good" information, then, was removed and classified as "not reported". (This occurred with one agency for hours worked at closure.)
- (4) Seemingly legitimate codes were removed if they were simply unreasonable in the light of other information. A common example was the use of a code 01 to indicate that data on hours worked was not available for a client. This improper designation led to improbably high hourly wage rates. When such coding occurred for a client earning, for example, \$150 per week, it appeared that the client was earning \$150 per hour.

#### **DATA QUALITY-GENERAL CONSIDERATIONS**

Clearly, the National summary of client gains may well have been different had all agencies reported fully and correctly as required, particularly with regard to hours worked. The failure of some State agencies to report this information compromises data validity and can lead to the presentation of misleading trends at the National level. Further, it was not possible to calculate four of the seven measurements presented in this report for the eight agencies failing to submit data on hours worked. Thus, agency-to-agency comparisons are more limited and less useful than should have been the case. It might be noted that State agencies were initially asked to incorporate the items on hours worked into the RSA-911 system in 1986.

The more problematic the data, the longer it takes to make corrections to "clean up" the data. This, in turn, delays the release of timely and useful information. The repetitive cycle of tape re-submittals and error corrections gives RSA staff insufficient time to analyze and disseminate RSA-911 data of recent vintage. The "clean up" cycle is a major reason why the current report displays data for FY 1990 and not FY 1991 or, even, FY 1992. RSA will, therefore, be more insistent than ever that RSA-911 reporting be complete, correct and timely.

Agencies that can improve upon the reporting of the data elements included in this report for FY 1990 are asked to resubmit RSA-911 data for that year. This is especially true of agencies accounting for high percentages of the non-reporting cases at the National level seen on the "row%" lines of Table 2. All such agencies can readily see how their poor reporting has adversely impacted on National summaries. We do not consider FY 1990 "closed" until all corrections that can be made have been made.

## **CROSSCHECKS TO IMPROVE DATA CONSISTENCY**

A final attachment is enclosed in the interest of improving data quality. This attachment contains 17 sets of crosschecks which RSA applies in determining the consistency of one RSA-911 data element to another. These crosschecks are comparisons for logic and reasonableness and form the basis for how mis-reported or inconsistent data are edited. Agencies should apply these or similar crosschecks to their RSA-911 data to help reduce the number of errors involving inconsistent or contradictory data. Since these crosschecks are not all-inclusive, agencies are encouraged to devise yet other comparisons as part of a broader data quality monitoring system.

## **CLOSING REMARKS**

It is RSA's intention to produce a series of short reports displaying data on topics of interest derived from the RSA-911 system (e.g., types of services provided, cost of case services, major disabling conditions, demographic information, etc.) on an agency-to-agency basis. In addition to demonstrating the strength, vitality and diversity of the State-Federal program, the reports, like this one, will highlight data deficiencies and problems.

Any comments on this report would be appreciated as would suggestions on future topics based on RSA-911 data.

Acting Commissioner  
Rehabilitation Services Administration

## **TECHNICAL NOTES**

1. The percents and means in Tables 1A, 1B and 1C of this report are based on the number of rehabilitations for which the data elements were (a) successfully reported or (b) modified by computer edit to establish element-to-element consistency. The mean hourly wage rate, for example, is based only on those cases for which the items on both weekly earnings and weekly hours were reported correctly or were made to conform by computer edit. (Discrepancies between earnings and hours worked were resolved in favor of earnings.)
2. The percents and means in Tables 1A, 1B, and 1C reflect the effect of clients who were in non-wage earning situations--homemakers and unpaid family workers--at rehabilitation closure. Table 1A also reflects their effect at application as well as the impact of other persons who did not have any earnings.
3. The lines marked "Difference in %'s" on Tables 1A, 1B, and 1C are derived by subtracting the calculated percent for a data element at application from the calculated percent at closure. These differences, then, are simply percentage point differentials. They are more appropriate in the context of this report than are percent change calculations that run into the hundreds of percents. From Table 1A, for example, there is a 68.9 percentage point increase, nationally, in the proportion of clients with earnings from application to closure (from 21.6% to 90.5%). This gain could also have been displayed as an increase of 317%, a figure whose meaning is more difficult to conceptualize and which has limitations of its own. It is arguable, for example, whether a 60 point gain from 20% to 80%, a 300% increase, is really superior to a 60 point gain from 30% to 90%, only a 200% increase. Clearly, the percent gain method is biased in favor of low percents at application. Finally, the use of the percentage point difference is the only way to present changes in Table 1C where all the starting percents are at zero.
4. The term "not reported" used in this report excludes instances where RSA computer edits were able to insert or change values for data elements based on information reported for other items. For example, there would be an obvious inconsistency for a client reported as having worked 35 hours, but whose earnings were recorded as 000. In this case, the 35 hours would be replaced by 00 hours and the item on hours would be considered as being reported. Naturally, we prefer not to have to make such choices and expect agencies to institute comparison checks to detect and correct these inconsistencies before RSA-911 data are sent to us.