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**Methodologies for Defining and Measuring the
Disabled Population and Their Employment
Status in the U.S.: Uses of the March CPS
Supplement Data on the Disabled Population**

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Introduction

In September of 2009, Vocational Econometrics, Inc. requested the Center for Labor Market Studies of Northeastern University to replicate the employment/population ratios of working age adults that are used to derive the Gamboa-Gibson Worklife Expectancy Tables. The Center for Labor Market Studies performed this replication with its own computer code using the public use microdata sample (PUMS) file of the March Supplement of the Current Population Survey (CPS). The methodologies and data sources used to estimate the numbers, characteristics, and employment status of the nation's disabled working-age population are described in this paper.

Vocational Econometrics, Inc. have constructed employment rate tables for disabled and non-disabled populations based on March CPS supplement data. The monthly CPS household survey is conducted by the U.S. Census Bureau for the U.S. Bureau of Labor Statistics. It is the official source of the monthly data on the nation's labor force and its employed and unemployed populations. The annual March CPS survey also contains a supplementary set of questions that collect information on various socio-economic and labor market topics, reasons for not working in the past year, receipt of disability income, Medicare/Medicaid recipient status, supplemental security income recipient status, and other information that can be used to estimate employment rate tables for the disabled population. The March supplement questionnaire collects detailed information on the demographic and socioeconomic characteristics of each household member (age, gender, race-ethnic group, marital status, educational attainment, school enrollment status, household living arrangements), their labor force status at the time of the survey, and their labor market experiences in the prior calendar year, including weeks and hours of employment, their annual earnings from employment, their personal and household income, the sources of their personal and household income, and their poverty/near poverty status.

To generate labor market outcomes for adults ages 16 and older by their disability status, we first defined the disabled population based on the U.S. Census Bureau's official definition and Vocational Econometrics, Inc's definition of the disabled. According to this definition, an individual will be classified as "disabled" if he or she meets any one of the following seven criteria. The information is based on the self-reports of respondents to the March CPS Supplement.

- Person cited that he/she did not work last year due to illness or disability,
- Person cited that he/she received disability compensation through the Veteran's Administration,
- Persons claimed to have a health problem that prevented him or her from working or limited the amount of work that he could do,
- Persons responded that he/she left or retired from a job due to health reasons,
- Person under 65 years of age who responded to have received Medicare benefits,
- Person was not in the labor force due to disability,
- Person under 65 years of age who reported that he/she received Supplemental Security Income (SSI).

Individual respondents who met one or more of the above seven criteria were classified as disabled. The estimates of the size and demographic/socio-economic characteristics of the disabled population in the U.S. are based on the findings of the March CPS Supplements for calendar year 1998 through 2009. The national March CPS Supplement surveys in these 12 years combined contained completed interviews with nearly 814,700 households across the country.

The findings for the sample of respondents on the March CPS Supplement questionnaires were converted to population estimates by multiplying each sample member by their assigned sample weight. The U.S. Census Bureau assigns weights to each respondent to allow the sample results to be converted to independent estimates of the size of the population by age, gender, and race-ethnic group.¹ The availability of these demographic, socio-economic, and employment data for individual respondents allows us to paint a comprehensive, statistical portrait of the disabled population, to cross-tabulate their disability status by their personal characteristics to examine how the incidence of disability problems varies across age and gender/ educational attainment subgroups, and to identify the labor market status of various subgroups of the working-age disabled population at the time of the surveys.

¹ These sample weights also take into account the effects of non-responses to the survey by age, gender, and race-ethnic group.

We define disabled persons as those who met any of the above seven disability criteria by responding 'yes' to one or more of the above questions in the CPS March Supplement. The estimates are restricted to those persons who were between 18 and 89 years old and were not living in group quarters or institutions, such as college dormitories, nursing homes, hospices, jails, prisons. We also defined other two sub-groups of the disabled population: severely disabled and not severely disabled. The severely disabled are those who met one or more of the the following four criteria:

- Persons were not in labor force due to disability,
- Person stated that he/she did not work last year due to illness or disability,
- Person under 65 years of age who reported that he/she obtained Medicare benefits,
- Person under 65 years of age who reported that he/she obtained Supplemental Security Income (SSI) in the prior year.

The "not severely disabled" are those who were NOT severely disabled but met one of the following three criteria:

- Person reported to have a health problem that prevented him/her from working or limited the amount of work that they could do,
- Persons reported that he/she left or retired from a job due to health reasons,
- Person reported that he/she received disability compensation income through the Veteran's Administration.

Table 1:
Definition of Disability Used to Generate Labor Market Outcomes for Disabled Persons
16-89 Years Old in the U.S. During the 1998-2009 Period

Constructed Variable	March CPS Variable Name	Definition
Disabled	pemlr	not in labor force (disabled =6)
	rsnnotw	main reason for not working last year (ill or disabled = 1)
	dis-hp	health problem prevents from working or limits the kind or amount of work (1=yes)
	dis-cs	retired or left job due to health reasons (1 =yes)
	vet-typl	received disability compensation (1 =yes)
	ssi-val	amount received in SSI (> 0)
	Mcare	covered by Medicare (1 =yes)
Severely Disabled	pemlr	not in labor force (disabled =6)
	rsnnotw	main reason for not working last year (ill or disabled = 1)
	ssi-val	amount received in SSI (> 0)
	Mcare	covered by Medicare (1 =yes)
Not Severely Disabled	dis-hp	health problem prevents from working or limits the kind or amount of work (1=yes)
	dis-cs	retired or left job due to health reasons (1 =yes)
	vet-typl	received disability compensation (1 =yes)
	severely disabled	Severely disabled (=0)

Respondents (16 years and older) were also asked to identify their labor force activities at the time of the survey. We defined employed persons as those who were, (a) employed, at work, and (b) employed, with a job but not at work due to a temporary illness, vacation, or weather related reasons.

We estimated the employment status of 16-89 years old by their disability status for all of the disabled, for men and women separately, and for each of the following eleven educational attainment groups. Each person is assigned to the category representing their highest level of educational attainment at the time of the survey:

- Less than high school
- High diploma or equivalent
- Some college, no degree
- Associate's degree
- Bachelor's or higher degree
- Bachelor's degree

- Masters or higher degree
- Master's degree
- Professional or doctorate degree
- Professional school degree
- Doctorate degree

An “employment rate” is calculated for each group by dividing the number of employed by their population size at the time of the survey. These are points in time estimates of their employment rates. The employment rate estimates for the above groups of adults, men, and women were generated for the following eight age groups:

- 16-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75-84
- 85-89

A list of the variables used in the extraction of data from the ACS survey and the sample sizes of the three-year file appear in the following brief appendices. If you have any questions regarding this analysis, please contact the Center for Labor Market Studies at 617-373-2242.

**Appendix A: Listing of March CPS Supplement Public Use Data Variables for Estimating
Employment Rates of 16-89 Year Olds By Their Disability Status**

Variable	Variable Definition
MARSUPWT	March Supplement weight
P-STAT	Civilian status
A-AGE	Person's age
A-SEX	Gender
A-HGA	Educational attainment
PEMLR	Employment status recode
RSNNOTW	The main reason not working in the previous year
VET-TYP1	Veteran's disability compensation
DIS-HP	Health problem or disability prevents work or limits the kind or amount of work that can be performed
DIS-CS	Retired or left a job for health reasons
MCARE	Covered by Medicare
SSI-VAL	Amount received in Supplemental Security Income during the last year

**Appendix B: Combined Sample Size of 16-89 Year Old Persons in 1998 through 2009
March CPS Supplements' Public Use Files By Disability Status**

Group	Person Sample Size*
All Persons (16-89)	1,626,777
Disabled	195,035

Note: * Includes only civilian, non-institutionalized persons.