Trends in the Characteristics of DI and SSI Disability Awardees and Duration of Program Participation

*by Kalman Rupp and Charles G. Scott**

We analyze the effects of trends in the age and diagnostic mix of new disability awardee cohorts from 1975 through 1993 on expected duration on the Disability Insurance (DI) and Supplemental Security Income (SSI) rolls. The 1975-93 shift toward younger awardees is estimated to increase duration by 1.4 years for DI and about 5 years for SSI. Much of the increase in SSI duration is attributable to the recent influx of childhood awardees. For working-age adults, the DI and SSI trends are comparable. We also estimate that about half of the 1975-93 increase in DI duration is explained by the increase in the proportion of younger DI-insured workers. During the 1993-2006 period, the effect of changes in the age mix of DI-insured workers will be reversed. This will moderate, but not eliminate, likely upward pressures on caseloads arising from the anticipated rise in incidence rates and the future effects of past increases in expected duration.

*Mr. Rupp is with the Social Security Administration's (SSA) Office of Research and Statistics, and Mr. Scott is with SSA's Office of Retirement and Survivors Insurance and Supplemental Security Income Policy, Division of Program Management, Research, and Demonstrations. Some of the results of this study were presented at the SSA/ASPE conference, "The Social Security Administration's Disability Programs: Explanations of Recent Growth and Implications for Disability Policy," held in Washington, DC on July 20, 1995. This article provides a more detailed presentation of our research findings. The views and opinions herein are those of the authors, and do not necessarily reflect the official policies or opinions of SSA. The authors share equal responsibility for this article.

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Discussions on factors causing the increases in Social Security disability caseloads usually highlight the rise in the number of awards. Changes in the number of new awardees, however, do not directly translate into caseloads; duration is the essential link. Those who stay on the rolls for a long time contribute disproportionately to caseloads, and therefore to program cost. The best currently available estimates suggest that the lifetime average stay during the preretirement years (prior to age 65) for the Social Security Administration's (SSA's) Disability Insurance (DI) program is 9.7 years and for the Supplemental Security Income (SSI) program is 10.5 years (Rupp and Scott 1995). Actuarial estimates (Wilken 1986) show that such long disability stays on the rolls are associated with substantial lifetime benefit outlays. According to Wilken's study, in 1985, the present value of DI and Medicare benefits was $35,247 for males aged 60, and $118,525 for males aged 30. These dollar values have substantially increased during recent years.

This article provides an overview of the factors affecting duration on the DI and SSI disability rolls based on previous studies and original research by the authors, and analyzes implications for caseload growth, projections, and policies. A better understanding of factors affecting duration on the disability rolls should improve our ability to project future caseloads, to assess the effects of policy alternatives on caseloads, and to identify promising interventions designed to contain caseload growth. Duration on the rolls can be seen both as a function of factors affecting selection into the DI and SSI disability programs, and as the result of factors directly affecting program exits and reentry. Selection into the disability programs is affected by the disability and economic criteria of eligibility. The programs share the same disability selection criteria. The severity of disability criteria exerts two contrasting effects on duration: The relatively high mortality risk reduces expected duration, while low recovery associated with severely disabling conditions increases it.

DI and SSI differ in terms of economic eligibility. DI requires that the person meet an insured status based on recent

work activity. Importantly, while the DI-insured status is a precondition of entry, it does not affect exits from the rolls. In contrast, SSI is means tested, and therefore financial eligibility factors (changes in income and assets) form a potential source of exits and reentry. Some people qualify for both DI benefits and SSI payments. Over the years, the disability and economic eligibility criteria of DI and SSI interact with largely exogenous demographic and economic factors that influence duration.

Programmatic variables also directly affect duration by influencing exits and reentry. Such variables include work-incentive provisions, continuing disability reviews, vocational rehabilitation, various rules concerning suspensions, terminations, and return to the rolls. Some of these variables directly affect program eligibility (for example, Continuous Disability Reviews (CDRs)), while others are expected to affect duration on the rolls through altering behavior (for example, vocational rehabilitation). All of these variables affect the generosity of the benefits, and therefore may have indirect effects through altering application behavior.

Several previous studies analyzed duration on the DI and SSI rolls using data files from SSA's administrative records. Most described the experiences of a single annual cohort of awardees using a fixed (for example, 2- or 4- year) follow-up window (for example, Treitel 1979; Bye, Riley, and Lubitz 1987; Scott 1989; Bye et al. 1991). Hennessey and Dykacz (1992, 1993) compared two annual cohorts on the basis of a 4-year follow-up window. With the single exception of Scott (1989), who focused on SSI disability stays, the above studies analyzed duration on the DI rolls among DI awardees, some of whom may have had unobserved concurrent SSI disability benefit receipt experience. Two studies (Hennessey and Dykacz 1989, Rupp and Scott 1995) utilized a much longer follow-up observation period (9 years and 10 years, respectively), and used statistical methods to adjust for the lack of complete data on the completion of first DI spells (right censoring), and on first spell and total duration (including multiple spells) data for the SSI disability program. These are the only two previous studies that presented mean duration statistics that are adjusted for censoring bias.[1] Hennessey and Dykacz (1989) based their estimates on the experience of a single (1972) annual cohort of DI awardees, while Rupp and Scott (1995) utilized a data file containing multiple annual cohorts of SSI disability awardees, and based their estimates of mean duration on the experience of persons first awarded payments during 1974-82. They also conducted comparisons of duration patterns in DI, SSI, and Aid to Families with Dependent Children. Other relevant previous studies looked at terminations (Schmulowitz 1973), analyzed the postrecovery experience of DI beneficiaries (Dykacz and Hennessey 1989), and compared the health and earnings of DI beneficiaries to the experience of rejected disability applicants (Bound 1989). Treitel (1979) analyzed the outcomes of appeals by initial DI denials and presented 6-year follow-up data on death rates among rejected applicants. Only one previous study focused on the implications of trends in the composition of disability awardees on duration (Chirikos and Rupp 1992, Chirikos 1993) based on aggregate data on awardees and a secondary analysis of microdata on duration, but was limited to DI.

This article adds to this body of literature by summarizing what is known about the factors affecting duration in both the DI and SSI disability programs, based on the best currently available evidence, and providing an original analysis of the relationship between trends in awardee characteristics and expected duration. The study of duration on the rolls deals with a long time-horizon, both at the level of individuals and in terms of calendar time. At the individual level, a person may enter SSI as an infant—this implies a potential exposure of up to 65 years of disability program participation. For example, an infant who entered the SSI disability rolls in 1995 has a potential exposure to disability program participation until 2060. In the aggregate, we focus on duration among persons who first entered the DI and SSI rolls between 1975-93. We spell out the implications of changes in the size and mix of new awardees during this period of time on expected duration on the rolls and on future caseloads. We also look at the effects of demographics on expected duration among these individuals and, prospectively, the effect of anticipated demographic changes on the expected duration of those who are projected to enter the DI and SSI rolls between 1994-2006. We also address the effect of future demographics both on the incidence of new awards and on duration. Our empirical estimates focus on the effects of measurable changes in factors such as the aging of the baby boom generation and the diagnostic mix of awardees. We do not directly address the role of other factors, such as changes in program rules, and possible future changes in program eligibility requirements and return-to-work initiatives. Nevertheless, we do provide a discussion of the past and possible future roles of such factors.

In the first section, we briefly discuss data and methods. In the following sections, we discuss subgroup patterns in duration, trends in the characteristics of new awardees, expected duration, the effect of past trends in expected duration on future caseloads, the effect of demographics on duration and future caseloads, and the role of policy interventions and programmatic changes on duration and caseloads.

Data and Methodology

In this section, we focus on the main features of our data and methodology. The Appendix contains a more detailed description of the data sources, time frames for the various files, and methods. All of the analyses in this article are based on SSA administrative records, which provide information on payment eligibility for both programs on a monthly basis. The DI and the SSI data are complementary. The DI data include persons awarded DI benefits only, as well as persons who were awarded both DI and SSI benefits (concurrents). The SSI data are limited to persons who were awarded SSI benefits only. As our previous work has shown, most concurrent beneficiaries lose SSI payment eligibility after the 5-month DI waiting period (Rupp and Scott 1995).

The starting point of our analysis is the description of mean duration patterns for new awardees. DI duration estimates are available for 39 cells identified by age and diagnostic categories. For SSI, we calculated duration estimates for 150 cells defined by age, gender, and diagnosis from our microdata file. The source of the disaggregated DI duration estimates is Hennessey and Dykacz (1989). The disaggregated SSI duration estimates were derived by the authors from microdata for the present study using a methodology we presented in an earlier article (Rupp and Scott 1995). Both the DI and SSI duration estimates correct for the right-censoring of the observations.

The next step in our analysis was the derivation of expected duration estimates for each annual cohort of new DI and SSI awardees for the 1975-93 period. For each annual cohort, we calculated the proportion of new awardees for the 39 DI and 150 SSI subgroups previously described. These proportions were used to weight the disaggregated duration estimates to derive the expected duration for each annual cohort of new awardees. Thus, trends in expected duration in our analysis reflect exclusively changes in the cohort mix of awardees. To demonstrate the anticipated total effect of these trends in awardee mix on future caseloads, we estimated the number of total benefit years associated with each annual cohort of new DI and SSI entrants simply by multiplying expected duration with the number of new awardees for the given cohort.

We performed a similar analysis designed to estimate the effect of changes in the mix of the DI-insured population for the 1975-2006 cohorts of new awardees by utilizing additional information on this population by single years of age provided by the Office of the Actuary. We also analyzed data on the population satisfying the financial eligibility criteria of the SSI program, based on estimates derived from the Survey of Income and Program Participation (SIPP). Finally, we assessed the likely combined effects of demographic trends on the number of future awards and expected duration.

Throughout the article, we focus on the length of time individuals spend on the disability rolls from first award to reaching retirement age. The estimates reflect the program design in effect during the baseline observation period for the DI and SSI cohorts of new awardees utilized in deriving the disaggregated duration estimates. Major recent changes, such as the Supreme Court's January 20, 1990 *Sullivan* v. *Zebley* decision—affecting childhood SSI eligibility decisions, as well as major contemplated future changes (for example, time-limited benefits) might affect duration patterns in ways not reflected in our data analysis. In our simulations, we focus on the effects of age and diagnosis on expected duration. We do not claim that other variables (such as the policy variables alluded to earlier) do not matter; we simply focus on age and diagnosis as two key predictors of duration.

With these caveats in mind, our methodology provides a reasonable approach for examining the implications of past and likely future changes in age and diagnostic mix on duration and future caseloads if no dramatic changes in program design that are highly correlated with our predictors occur in the future. Our analysis reflects the interaction of past and current program rules with the exogenous demographic and epidemiological changes shaping the age and diagnostic distribution of new awardees. Our analysis provides an important baseline for assessing contemplated future program changes, because policymakers should consider changes that would occur even without the implementation of new policies.

Patterns of Duration

How long do awardees stay on the disability rolls? In this section, we describe the effects of key awardee characteristics variables on duration. We will focus on the effects of age, gender, and diagnosis.

- Age is expected to affect duration because of its negative effect on the length of exposure to potential program participation, the positive relationship between age and mortality risk, and the negative relationship between age and the probability of return to work. The first two factors suggest a negative relationship between age at award and duration, while the third factor is expected to affect duration in the opposite direction.
- Gender may affect duration because of the lower mortality risk of females in the general population, although this may be clouded by selectivity in the award process. Also, work-related suspensions may be affected by gender differences, since men and women differ in work histories and work-related incomes.
- Diagnosis fundamentally affects mortality risk, the nature and severity of functional limitations and, work disabilities affecting the opportunity costs of return to work.

In this section, we analyze duration on the disability rolls separately due to the current lack of comprehensive event history data for both programs within a unified framework. In the first half, we will focus on DI awardees, some of whom received SSI benefits for many years, while others, particularly those applying for benefits under both programs, received them for a short period of time. Approximately 75 percent of awardees applying for both DI and SSI benefits complete their first SSI payment eligibility spell for reasons of excess income, presumably largely as a result of the start of DI payments (Rupp and Scott 1995). Thus, the bulk of the disability payment experience of these concurrent awardees consists of duration on the DI rolls. Since concurrent awardees are implicitly reflected in the DI duration data, and because of the predominance of early SSI exits for this group, the second half of this section focuses on nonconcurrent SSI awardees, that is, persons initially eligible for SSI, but not DI payments.

DI Duration

There are three principal reasons for the suspension or termination of DI benefits: (1) medical or work-related recovery, (2) death, and (3) retirement (conversion to the old-

age component of Social Security at age 65). Overall, more than half of the first DI disability spells end with retirement, more than 33 percent are terminated due to death, and only 11 percent leave the rolls because of recovery (table 1).[2] Gender differences are dominated by the lower mortality risk of females. There is a strong negative relationship between age and the probability of recovery.

As age at award increases, the probability of death increases, but the competing outcome of conversion to the retirement program overtakes death as the main reason for termination for the older age groups. Diagnostic differences are also marked, particularly among younger awardees. Changes in program rules, to be discussed in more detail, play an important role in a beneficiary's recovery. In particular, changed work incentives—such as the introduction of the extended period of eligibility, changes in the number of CDRs, and the introduction of the medical improvement standards—might have altered the probability of recovery during the last 2 decades.

The net effect of age on expected duration is negative (table 2). While overall expected length of first spells varies substantially by diagnosis—ranging from a low of 3.4 years for neoplasms to a high of 15.6 years for mental disorders—age differences are also important, especially for mental illness and nervous system disorders, where the expected duration of first spells is around 25 years in the youngest age group.

As expected, diagnostic differences are strongest in the youngest group, and least pronounced among the oldest group, chart 1. The lengths of stay shown in table 2 reflect the first uninterrupted stay on the DI rolls. Accounting for multiple spells is potentially important, because some beneficiaries who leave the rolls may subsequently return. Based on data in Dykacz and Hennessey (1989), Rupp and Scott (1995) estimated that accounting for multiple spells may result in an increase in mean duration in as little as a 0.4 years, from 9.3 years to 9.7 years. Thus, first spell duration data may provide a reasonable first approximation of total duration on the DI rolls. Nevertheless, accounting for multiple DI spells is an important topic for future research, partly because the incidence of multiple stays may vary by age and diagnosis.

SSI Duration

In our analysis of SSI duration patterns, we focus on duration on the SSI disability rolls among nonconcurrent awardees prior to reaching age 65. In contrast to DI, our analysis also covers children who form an important, rapidly increasing, and controversial part of the SSI disability program (Weaver 1995). We will, however, present some information for prime-age SSI awardees separately to enable comparisons with DI awardees. The main difference between the DI and SSI disability programs affecting duration is the fact that DI is conditioned on prior work history, while SSI is means tested. SSI recipients might lose payment eligibility as a result of changes in their family income or assets. It is to be noted, however, that DI beneficiaries are more at a risk of losing payment eligibility for

Table 1.—Reasons for completion of first DI disability spell by gender, age group, and diagnosis, 1972 awardees

[In percents]

Characteristic	Total	Program termination/suspension by reason		
		Recovery	Death	Retirement
Total	100	11	36	53
Gender:				
Females	100	9	29	62
Males	100	12	39	49
Diagnosis:	Aged 18-34 at award			
Total	100	38	30	31
Infective	100	66	29	5
Neoplasms	100	6	89	5
Endocrine	100	6	90	4
Mental disorders	100	30	19	51
Nervous system	99	25	30	44
Circulatory	99	36	39	24
Respiratory	101	2	86	13
Digestive	100	27	68	5
Genitourinary	100	12	84	4
Musculoskeletal	100	59	15	26
Congenital abnormalities	100	30	32	38
Accidents	99	73	10	16
Other	100	17	43	40
	Aged 35-49 at award			
Total	100	18	43	39
Infective	101	44	37	20
Neoplasms	100	3	89	8
Endocrine	100	6	65	29
Mental disorders	99	15	27	57
Nervous system	100	11	30	59
Circulatory	101	13	56	32
Respiratory	100	2	63	35
Digestive	99	11	72	16
Genitourinary	100	13	67	20
Musculoskeletal	100	28	20	52
Congenital abnormalities	100	27	24	49
Accidents	100	51	14	35
Other	100	13	43	44
	Aged 50-61 at award			
Total	100	4	34	62
Infective	100	15	27	58
Neoplasms	101	3	82	16
Endocrine	100	3	32	65
Mental disorders	100	3	26	71
Nervous system	99	2	22	75
Circulatory	100	3	37	60
Respiratory	99	1	39	59
Digestive	100	6	48	46
Genitourinary	100	10	40	50
Musculoskeletal	99	3	16	80
Congenital abnormalities	99	19	13	67
Accidents	100	12	17	71
Other	100	8	25	67

Note: Percentages may not add up to 100 because of rounding.
Source: Hennessey and Dykacz (1989), pp. 12 and 14.

work-related reasons, even after the liberalization of work-incentive provisions during the eighties.

Overall, the SSI means test, which determines excess income, is the most important reason for first suspensions during the first 10-postaward years (table 3). Death and reaching age 65 are clearly much less important reasons for first exits for SSI, than for DI, even accounting for the fact that the eventual first suspension of many of the approximately quarter of awardees who did not exit during the first 10-postaward years will be one of these two categories. The data show marked differences in the reason for first exits by age, diagnosis, and to a lesser extent, by gender, generally in directions consistent with the DI findings.

The SSI duration estimates (table 4) were corrected for the right-censoring of observations (Rupp and Scott 1995). Estimates were made not only for first spells but also for total years expected on the rolls prior to reaching age 65. The mean duration of the first SSI spell is substantially lower for prime-age SSI awardees when compared with DI awardees. Moreover, subgroup differences are less marked in SSI, particularly by age group. Early suspensions due to the failure to continue to qualify for the means test affects SSI awardees largely independently of age and diagnosis.

Accounting for multiple stays changes the overall picture dramatically (chart 2). Overall, the mean SSI stay almost doubles from 6.9 years for first stays to 13.2 years for all spells for nonconcurrent adults and children combined. This brings the mean SSI stay to a level clearly higher than the mean DI duration, even accounting for the lack of precise data on DI total duration. The difference between the two programs appears largely attributable to the inclusion of children in the SSI disability program, although the data do not allow for a precise comparison. We note that the DI first spell and SSI total stay estimates by age group among working-age adults are fairly close. The data also show that accounting for multiple stays in SSI highlights age, and, to a lesser extent, diagnostic differences in duration. Due to the high incidence of return to the rolls, potential exposure to program participation (a direct function of age at award) and to some extent, differential mortality risk by diagnosis and age, become the driving forces of variation in total duration. The role of payment history events (such as exits due to excess income) becomes relatively less important.

Chart 1.—Average duration of first DI spells, by age group

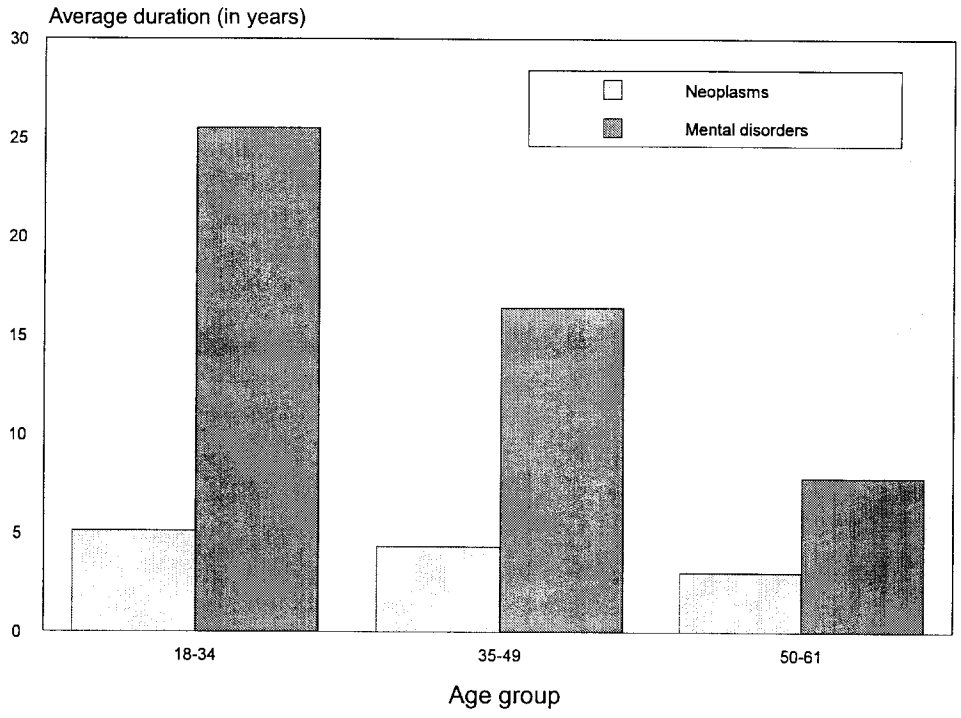


Table 2.—Estimated average length of first DI spells, by age group and diagnosis, 1972 awardees

[In years]

Diagnosis	Total	Age group		
		18-34	35-49	50-61
Total	9.3	18.4	12.5	6.5
Infective	7.6	7.4	8.8	6.7
Neoplasms	3.4	5.1	4.3	3.0
Endocrine	8.3	11.1	11.7	6.9
Mental disorders	15.6	25.5	16.4	7.8
Nervous system	12.5	23.4	16.2	7.4
Circulatory	7.5	16.7	11.6	6.4
Respiratory	7.3	15.9	12.4	6.3
Digestive	7.0	9.0	8.9	5.8
Genitourinary	7.5	9.5	9.6	5.4
Musculoskeletal	10.0	15.4	14.7	7.6
Congenital abnormalities	13.5	21.8	15.0	6.9
Accidents	9.9	11.8	11.2	7.4
Other	12.0	24.2	14.5	7.2

Source: Hennessey and Dykacz (1989), pp. 10 and 12.

Trends in Awardee Characteristics and Expected Duration

If duration were invariant to awardee characteristics, changes in the composition of successive cohorts of new awardees would not affect average duration on the rolls. However, given the obvious importance of age and diagnosis in affecting duration, it is natural to ask whether changes in the mix of awardees with these characteristics through time resulted in marked changes in the expected duration of successive cohorts of DI awardees. In this section, we address this issue in two steps: (1) the trends in awardee characteristics;

and (2) the effect of changes in the mix of new awardees on expected duration.

Trends in Awardee Cohort Characteristics

There has been a substantial increase in the proportion of young DI awardees during the last 2 decades (table 5). The data also show some marked shifts in the mix of awardees by diagnosis (table 6). The proportion of awardees with a primary diagnosis of mental disorders has increased from around 10 percent to more than 25 percent during the last 15 years, while the proportion of awardees in the circulatory disorders category decreased from about 30 percent in 1975 to less than 15 percent in 1993.

Changes in the age mix of new SSI awardee cohorts were also substantial (table 7). The most dramatic trend is the increasing proportion of children from 12.7 percent of new awardees in 1974 to 40.9 percent in 1993. Changes in the diagnostic mix of new awardees are also substantial, with the proportion with mental retardation and psychiatric conditions increasing dramatically. The data also show a long-term decline of the proportion of females among new nonconcurrent SSI awardees reflecting the increase in the proportion of women in the DI-insured population during this period.

Effects of Awardee Cohort Mix on Trends in Expected Duration

By combining information on the changing mix of awardees by age with disaggregated data on spell length for subgroups identified by age, it is possible to simulate mean spell length over time. Our DI estimates reflect the effect of changes in the age-mix of new awardees on the expected mean length of first spells (table 8). Changes in the age mix of awardees produce a slow upward trend in expected duration from about 9 years in 1960 to about 11 years in 1992; about half of the estimated increase occurred since the early eighties.

To see if the addition of diagnostic detail would change the results of the simulation substantially, we conducted an alternative simulation using information on mean duration of first

Table 3.—Number and percentage distribution of reasons for completion of first SSI disability spell during first 10-postaward years for nonconcurrent adults and children, by age group, diagnosis, and gender, 1974-82

Age group, diagnosis, and gender	All persons	Total percent	Reason for first suspension						
			No exit during 10-postaward years	Excess income	Death	Public institution	Excess resources	Reached age 65	Other
Total	22,747	100.0	23.3	32.7	11.7	4.1	2.9	12.9	12.5
Age:									
0-17	3,922	100.0	35.9	34.9	6.7	3.4	3.5	.0	15.5
18-34	5,566	100.0	33.2	33.7	6.3	8.6	3.0	.0	15.3
35-49	3,911	100.0	32.9	28.5	16.1	4.8	3.0	.0	14.7
50-61	7,411	100.0	10.1	36.3	17.5	1.6	2.8	22.0	9.6
62 or older	1,937	100.0	.0	20.4	6.0	.6	1.2	66.8	5.0
Diagnosis:									
Infectious and parasitic	199	100.0	17.6	33.7	16.1	1.5	4.0	12.6	14.6
Neoplasms	936	100.0	3.5	28.5	53.4	.6	.5	4.4	9.0
Endocrine	738	100.0	16.9	32.7	18.2	.5	2.0	17.3	12.3
Psychiatric	2,793	100.0	25.4	26.6	6.5	14.4	3.1	8.0	16.0
Mental retardation	3,606	100.0	40.2	31.1	3.5	5.7	3.9	2.6	13.0
Central nervous system	2,047	100.0	23.5	42.5	6.7	1.3	3.8	7.6	14.6
Circulatory	2,295	100.0	11.3	34.4	15.3	.6	1.8	25.4	11.1
Respiratory	678	100.0	12.4	32.3	17.7	1.0	2.4	22.4	11.8
Digestive	288	100.0	10.1	28.1	34.0	1.7	.7	11.5	13.9
Genitourinary	164	100.0	12.2	36.6	22.0	1.2	1.8	12.2	14.0
Musculoskeletal	1,743	100.0	14.1	39.4	6.7	.8	3.0	23.9	12.0
Congenital	416	100.0	27.4	42.5	8.9	1.7	4.3	2.4	12.7
Injury	577	100.0	19.2	35.9	9.4	3.1	1.6	12.5	18.4
Other	604	100.0	14.9	36.8	12.6	2.6	3.6	14.4	15.1
Missing	5,663	100.0	26.6	29.8	11.7	3.6	2.8	15.7	9.9
Gender:									
Female	13,226	100.0	23.2	31.9	11.3	2.8	3.1	15.9	11.7
Male	9,521	100.0	23.3	33.8	12.3	5.9	2.6	8.6	13.5

Source: Based on authors' longitudinal study file of 22,747 persons first awarded SSI benefits during 1974-82.

spells by age and diagnosis along with data on the joint distribution of awardees by age and diagnosis for 1975 and 1993. The results of the two simulations were virtually identical, suggesting that using age-specific information for the simulation produces robust results with respect to diagnosis. This is an important finding with respect to projection methodology highlighting the primary importance of the age distribution of new awardees for expected duration. We also compared our results with those of Chirikos (1993), who used a different methodology but arrived at results consistent with ours. This provides further evidence concerning the paramount importance of the age mix of new awardees.

Table 4.—Estimated mean duration of first SSI disability spells and total preretirement-age duration on the SSI disability rolls for nonconcurrent adults and children, by age and diagnosis

[In years]

Diagnosis	Total	Age group				
		0-17	18-34	35-49	50-61	62 or older
	Mean duration of first spells					
Total	6.9	10.7	9.4	7.7	4.2	1.2
Infectious and parasitic	6.0	10.1	9.8	6.8	3.8	1.0
Neoplasms	1.8	3.4	2.6	2.0	1.5	.8
Endocrine	5.2	4.3	6.2	9.0	4.3	1.2
Psychiatric	6.9	9.1	7.3	8.7	4.8	1.2
Mental retardation	11.3	11.9	12.2	9.5	5.8	1.3
Central nervous system	7.2	8.6	8.2	7.4	4.3	1.3
Circulatory	4.1	4.9	8.9	6.4	3.9	1.1
Respiratory	4.4	6.6	5.3	8.0	4.0	1.2
Digestive	3.6	7.1	4.2	5.0	2.8	1.2
Genitourinary	4.2	3.6	4.5	5.9	3.9	1.0
Musculoskeletal	4.7	5.8	7.0	7.4	4.4	1.3
Congenital	8.1	8.7	8.0	8.8	4.8	1.1
Injury	5.8	7.4	7.6	6.8	4.0	1.3
Other	5.0	8.9	6.8	5.3	3.4	1.0
Missing	7.8	13.1	10.4	8.8	4.6	1.3
	Mean duration of total disability stays					
Total	13.2	26.5	19.9	11.6	5.1	1.2
Infectious and parasitic	9.6	32.3	17.2	8.3	4.9	1.2
Neoplasms	3.2	11.2	6.8	2.8	1.7	.8
Endocrine	8.2	25.3	14.2	12.1	5.5	1.2
Psychiatric	14.4	25.8	19.6	13.5	6.0	1.2
Mental retardation	23.3	28.1	23.3	14.8	7.2	1.3
Central nervous system	17.0	26.1	18.8	11.9	5.3	1.3
Circulatory	5.6	17.3	13.7	10.1	4.8	1.1
Respiratory	6.6	26.0	11.3	11.1	4.8	1.2
Digestive	5.7	17.9	14.8	7.2	3.3	1.3
Genitourinary	9.4	15.6	12.9	9.6	5.1	1.1
Musculoskeletal	7.2	23.7	15.7	11.8	5.4	1.3
Congenital	22.1	27.0	20.0	13.3	6.9	1.3
Injury	11.2	23.6	16.1	10.8	5.0	1.3
Other	10.2	25.8	14.9	9.5	4.3	1.0
Missing	13.3	26.7	20.4	12.4	5.4	1.3

Source: Estimates based on authors' longitudinal study file of 22,747 persons first awarded SSI benefits during 1974-82.

Changes in the age mix of new awardees reflect a variety of forces, including changes in demographics (for example, aging of baby boom generation), epidemiological trends in the incidence of various disabling conditions with different age distributions of onset, and changes in SSA regulations (for example, mental impairment regulations). Later in our article, we will provide estimates reflecting the relative contribution of demographics and the net effect of other factors affecting the observed trends in expected DI duration. Armed with both duration and demographic patterns, we were able to produce simulations, which reflect changes in the joint distribution of new awardee cohorts by age, gender, and diagnosis on expected duration on the SSI rolls (table 9). We also conducted simulations using information on changes in the age distribution alone, and on changes in the age/gender mix. These latter, cruder methods, resulted in almost identical estimates to the data presented in table 9 that also consider diagnosis. This robustness suggests that factors associated with the age mix of new awardees dominate the results, consistent with our findings for DI.

Next, we compared our SSI and DI simulations (chart 3). Overall, the shift toward younger awardees increased expected DI duration by 1.4 years (from 9.5 years for the 1975 cohort of awardees to 10.9 years for the 1993 cohort). Expected SSI duration increased much more, by about 5 years (from 10.9 years for the 1975 entry cohort to 17.8 years for the 1993 entry cohort). However, when children are excluded from the analysis, the trends for DI and nonconcurrent SSI adults appear much more similar. This finding demonstrates the critical importance of children in understanding the dynamics of the SSI disability program. While recent attention focused on the explosion in the number of new childhood awards during the late eighties and early nineties, the long expected duration of childhood awardee—under the current program design—further magnifies the importance of children. Future growth in SSI will probably be fundamentally affected by potential policy changes affecting the payment eligibility of childhood awardees currently on the rolls, and the eligibility determination of future potential childhood applicants.

This analysis does not address the possibility that factors other than age, gender, and diagnosis might have also induced changes in duration on the rolls. Such other factors could include either awardee characteristics other than the three variables considered, or factors (such as programmatic variables) directly affecting duration events. Table 10 provides some insight concerning this issue, by providing cohort-based estimates for the proportion of first exits by various reasons for multiple cohorts using 24-, 48-, and 120-month follow-up windows. While these data provide a picture that is limited by the time-horizon considered, we note that this is the first time that information is available on the actual program outcomes for more than two cohorts of disability awardees. In the case of 24-month outcomes, we present outcomes for 19 annual cohorts.

The data display a remarkable stability of first suspensions. Thus, the data do not provide support for the hypothesis that systematic changes in case severity, at least as measured by observed death rates, might result in major cohort differences in duration. Likewise, since the proportion exiting for reasons related to excess income and excess resources is relatively stable over the entire 1974-92 period, the data provide no support for the hypothesis that long-term changes in the poverty experience of successive cohorts of new awardees might be responsible for systematic cohort differences in duration. Nevertheless, there is more variation in the proportion exiting because of excess income in the short run, suggesting the need for further research. The one exception to the lack of clear-cut cohort effects is that the proportion exiting for "other" reasons has clearly declined from the early eighties, also producing a clear upward trend in the proportion with uninterrupted stays throughout the follow-up observation periods, particularly for recent years.

One possible explanation for this change is that SSA policies dramatically changed in 1990 concerning the suspension of persons failing to respond to an agency request for information. Data from the 1-percent SSI file (Office of Supplemental Security Income 1994, p. 39) show that while in 1989, 12.7 percent of case closures (for the aged, blind, and disabled combined) occurred due to the failure to furnish information; in 1990, the corresponding percent dropped to 1.8 percent, further declining in recent years. Since case closures during a given year are expected to affect multiple cohorts of new awardees and because of the pattern of exits for other reasons are likely to affect entry cohorts less and less as we move back in time, these data are consistent with the gradual decline of first suspensions for the 1981-90 entry cohorts.

Thus, in addition to changes in the age composition of new awardees, we have only found strong evidence concerning the effect of the recent decline in the proportion suspended for "other" reasons on expected duration. This factor appears to provide some additional contribution to the increase in expected duration attributable to changes in age mix during recent years and suggests that our estimates presented in table 8 might provide a somewhat conservative picture of increasing duration. Nevertheless, the role of other factors that affect trends in duration should be examined in the future.

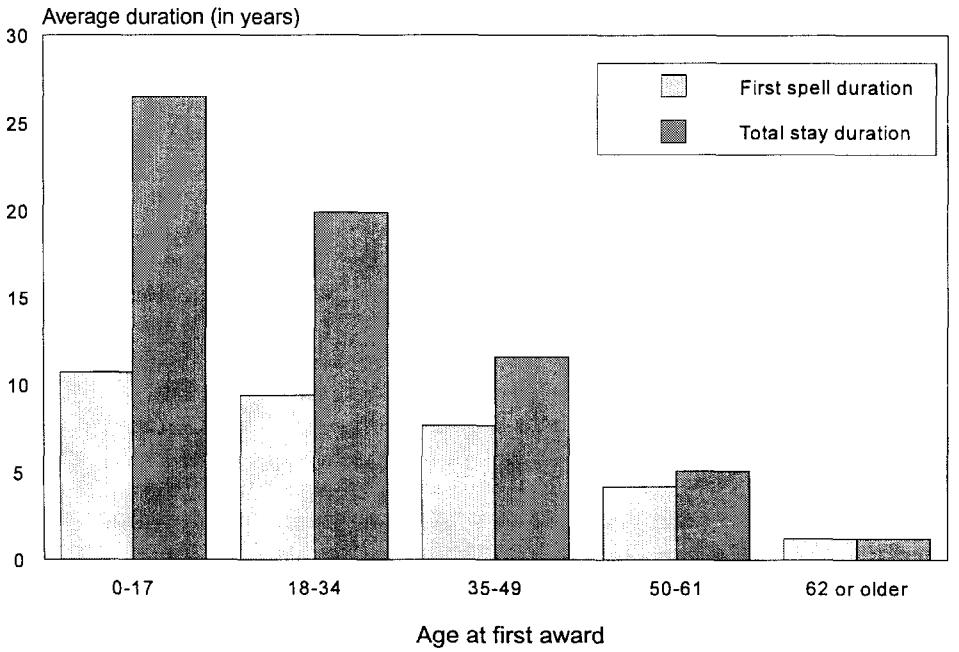
Effects of Past Trends on Future Caseloads

From the previous analysis showing clear upward trends in duration during the last 2 decades, both in DI and SSI, we might surmise that past trends in expected duration provides an upward pressure on future caseloads. The magnitude of these upward pressures on future caseloads can be represented by the effect of increased duration on the total expected benefit years associated with each entry cohort. Total benefit years are simply a product of the number of new awards during a given year and expected duration.

Thus, the implications of expected duration on future caseloads is affected not only by the mix of a new awardee cohort (the focus of our attention in previous sections), but also by cohort size. Table 11 presents the estimated number of DI awards and simulated benefit years for the 1960-93 period. Our estimates of simulated benefit years is the product of the first column (awardees) in table 11 and the simulated mean DI duration estimates presented in table 8. The number of awards varied substantially over the years. The previous 1977 peak of 472,000 was followed by the 1982 low of 255,000, with DI awards peaking with 584,000 most recently in 1992. The substantial cohort differences in simulated DI benefit years (chart 4) largely reflect these changes in the size of entry cohorts.

SSI disability awards show even more dramatic changes from the 1974 estimate of 423,000 new awardees to the 1981 low of 158,000 to be followed by a dramatic increase to the 1992 high of 549,000. These numbers run counter to the popular perception of stable growth in the SSI disability program until recent years, which appears to have been based on the relatively uninterrupted increase in caseloads. Program aging masked the volatility of the SSI program. If anything, the award series show a greater degree of volatility in SSI than in DI. Our previous findings

Chart 2.—Average duration of first SSI disability spell and total preretirement-age duration, by age group at first award



concerning the more dramatic increase in SSI expected duration during recent years reinforces our impression of high degree of volatility and potential for explosive growth in the SSI program. Indeed, we estimate that simulated benefit years declined from the more than 5.2 million estimate for 1974 to less than half (2.3 million) in 1982 (table 12), while the recent explosion of both awards and expected duration multiplied to produce the expected 9.4 million benefit years estimate for 1993 (chart 5).

The relationship between the dynamics of awards, expected duration (mean length) and benefit years for DI and SSI since 1975 can be seen in chart 6. The DI and SSI charts both show a steady increase in expected duration between 1975 and 1993. However, the number of awards has shown very dramatic shifts in both DI and SSI, and DI only, reflecting the dramatic policy shifts of recent decades and other factors. Trends in benefit years reflect both of these factors. The benefit year trends closely reflect the award trends up until recent years. However, the benefit year series tends to move above the awards line, reflecting the steady upward inching of the expected duration trend. During the last couple of years, the gap increased, especially for SSI, reflecting the magnified effect of childhood awards on eventual caseloads.

The relative importance of the number of awards and expected duration affecting eventual caseloads (total benefit years) depends on the time period chosen for comparison. During the last decade, the increased expected duration of successive cohorts of new awardees has magnified the implied effects of the rapid rise in the number of new awards on eventual caseloads. While the number of DI awards for persons aged 62 or under has increased from about 250,000 in 1982 to about 580,000 in 1993, expected duration also increased by about 1 year (approximately 10 percent). Together, the influx of awardees and the increase in stay length substantially affect caseloads. Expected benefit years rose from 2.5 million for the 1982 entry cohort to about 6.3 million for the 1993 cohort. The 1982-93 increase in benefit years was primarily the result of increased awards; the increase in expected duration had a relatively small contribution to the overall change. However, if we take a longer view by looking at changes between 1975 and 1992—the previous and most recent peak in DI awards—duration becomes the key factor; an increase in expected duration from 9.5 to 11 years is a major contributor to the increase in simulated benefit years. The time frame chosen for comparison plays a similar role in SSI, although the overall importance of increased duration is clearly significant whether the base year chosen is 1975 or 1982. Overall, past trends in the estimated benefit years associated with DI and SSI entry cohorts is expected to exert strong upward pressures on future caseloads in DI, and an especially dramatic surge in SSI.

Table 5.—Percentage distribution of DI awardees, by age group

Year	Total	Under 35	35-49	50-61
1960	100.0	5.7	28.1	66.2
1965	100.0	6.4	26.5	67.2
1970	100.0	11.7	24.7	63.6
1975	100.0	13.5	23.9	62.6
1976	100.0	13.5	24.0	62.6
1977	100.0	13.9	24.0	62.1
1978	100.0	14.2	24.1	61.7
1979	100.0	14.6	23.0	62.4
1980	100.0	15.2	23.2	61.6
1981	100.0	15.7	23.4	60.9
1982	100.0	15.8	23.8	60.4
1983	100.0	17.8	25.0	57.2
1984	100.0	17.8	26.4	55.8
1985	100.0	17.1	27.0	55.9
1986	100.0	19.7	29.1	51.2
1987	100.0	18.5	29.3	52.2
1988	100.0	17.8	29.5	52.7
1989	100.0	18.1	31.7	50.2
1990	100.0	20.0	31.3	48.7
1991	100.0	19.5	33.5	47.0
1992	100.0	19.9	34.8	45.3
1993	100.0	19.3	34.7	46.1

Source: Interpolations based on the *Annual Statistical Supplement, 1994* to the *Social Security Bulletin.*

The Effect of Demographics on Trends in Duration and Caseloads

This section addresses the next logical questions. What can be said about the expected duration of future cohorts of new entrants? Can we assume that the past trends toward

Table 6.—Percentage distribution of DI awardees by diagnostic category, selected years

Diagnosis	1975	1981	1985	1990	1993
Total	100.0	100.0	100.0	100.0	100.0
Infective	1.3	.8	.9	4.7	5.9
Neoplasms	10.1	16.3	15.9	14.1	12.6
Endocrine	3.9	4.3	4.9	3.5	4.9
Mental disorders	11.4	10.5	19.8	22.5	26.1
Nervous system	6.7	8.3	8.3	8.1	7.2
Circulatory	29.9	24.9	21.0	15.7	14.0
Respiratory	6.7	6.2	5.9	4.7	4.3
Digestive	3.0	2.1	1.6	1.6	1.6
Genitourinary	1.0	1.8	1.0	2.2	2.1
Musculoskeletal	18.7	17.0	14.2	15.9	14.8
Congenital abnormalities	1.1	.9	.8	.1	.1
Accidents	5.5	6.0	4.8	4.8	3.7
Other	.8	.9	.9	2.2	2.7

Note: 1985 data have been adjusted by authors to account for missing diagnostic information. The sum of percentages may not equal 100 because of independent rounding.

Source: *Annual Statistical Supplement* to the *Social Security Bulletin*, selected years.

Table 7.—Number and percentage distribution of new SSI awardees by age group, diagnosis, and gender, 1974-93

Age group, diagnosis, and gender	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Total number	4,234	3,669	2,951	2,666	2,250	1,950	1,960	1,582	1,608	1,987
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Age group:										
0-17	12.7	13.9	15.1	19.0	17.8	21.4	19.5	22.6	23.0	21.8
18-34	22.8	24.5	25.2	26.4	26.6	25.3	27.3	28.0	27.1	27.3
35-49	19.5	18.9	19.6	17.5	18.6	18.6	16.8	14.9	17.7	16.9
50-61	34.9	33.7	32.5	30.0	29.6	28.4	30.5	29.0	27.2	29.4
62 or older	10.1	8.9	7.6	7.1	7.4	6.3	5.9	5.6	5.1	4.6
Diagnosis:										
Infectious and parasitic	2.0	1.6	1.6	1.0	1.1	1.3	.9	.6	.7	1.3
Neoplasms	1.4	3.5	3.2	3.8	4.8	4.9	5.7	6.1	5.4	5.7
Endocrine	3.8	3.7	4.7	3.5	4.1	4.2	4.1	4.3	4.8	5.0
Psychiatric	17.4	19.0	18.7	19.3	18.1	16.3	18.9	13.8	18.3	20.5
Mental retardation	16.1	20.3	21.5	22.5	20.6	21.8	20.3	22.2	22.3	19.1
Central nervous system	13.1	10.6	10.1	11.1	12.0	13.8	14.2	14.8	13.1	13.9
Circulatory	13.5	13.8	14.5	13.0	12.6	11.5	12.2	11.3	9.3	9.7
Respiratory	3.7	4.0	3.6	3.7	4.2	3.0	3.3	4.3	5.1	4.8
Digestive	1.6	1.6	1.5	1.7	1.6	2.0	1.4	1.6	1.2	1.1
Genitourinary	1.0	.9	1.0	1.3	1.0	1.1	.8	1.0	.7	1.4
Musculoskeletal	11.3	11.4	10.9	10.5	10.2	10.4	8.6	9.5	8.9	8.1
Congenital	1.3	2.2	2.0	2.1	2.4	2.4	3.1	3.6	3.2	2.6
Injury	4.1	3.2	3.4	3.2	4.4	3.9	3.6	3.8	3.8	3.4
Other	9.8	4.3	3.3	3.4	3.0	3.5	2.9	3.1	3.2	3.6
Gender:										
Female	56.8	59.0	57.6	57.6	58.9	57.1	58.0	54.5	53.0	57.8
Male	43.2	41.0	42.4	42.4	41.1	42.9	42.0	45.5	47.0	42.2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Total number	2,223	2,613	2,622	2,501	2,535	3,274	3,917	4,729	5,494	5,254
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Age group:										
0-17	20.8	18.9	17.8	18.5	18.6	29.3	26.9	29.8	35.3	40.9
18-34	28.1	28.1	27.5	25.6	24.7	21.4	21.2	20.4	20.0	18.9
35-49	18.2	21.0	22.1	22.8	25.2	21.7	23.2	23.3	22.2	19.0
50-61	27.4	27.2	27.5	28.2	27.0	23.8	24.4	22.8	18.8	17.9
62 or older	5.6	4.7	5.1	4.9	4.5	3.8	4.2	3.6	3.7	3.4
Diagnosis:										
Infectious and parasitic	1.2	.7	.5	1.3	3.2	2.3	2.9	3.0	4.0	3.1
Neoplasms	5.2	4.8	4.0	4.6	4.8	3.9	3.6	3.2	3.2	2.8
Endocrine	4.4	4.7	6.0	6.3	4.4	6.7	7.5	7.8	8.3	8.6
Psychiatric	24.5	28.4	28.1	24.2	24.5	24.1	25.7	28.2	27.7	31.3
Mental retardation	20.3	23.1	20.4	18.7	18.4	22.4	19.2	19.8	23.2	23.0
Central nervous system	11.8	9.3	9.6	10.9	9.3	9.6	7.9	7.8	6.9	6.5
Circulatory	9.8	8.8	9.5	10.2	8.8	7.7	7.9	7.1	5.6	5.3
Respiratory	4.2	3.9	3.7	4.1	4.0	3.2	3.7	3.7	3.3	2.7
Digestive	1.6	1.3	1.6	1.3	1.5	1.3	1.0	.9	.9	1.0
Genitourinary	1.3	.9	1.2	1.4	1.5	1.4	1.7	.9	1.0	1.0
Musculoskeletal	7.7	7.3	8.9	10.1	11.3	9.5	11.2	9.8	8.3	7.6
Congenital	2.8	1.9	1.3	1.5	1.2	2.1	1.4	1.9	1.2	1.4
Injury	2.6	2.6	2.9	2.9	4.0	3.3	3.5	2.8	2.6	2.1
Other	2.7	2.5	2.1	2.6	3.1	2.6	2.6	3.1	3.7	3.6
Gender:										
Female	54.5	57.0	55.5	55.6	53.2	50.4	51.9	49.8	48.3	47.5
Male	45.5	43.0	44.5	44.4	46.8	49.6	48.1	50.2	51.7	52.5

younger entrants and increasing expected duration will continue in the future? Or perhaps, should we expect the reversal of these trends and shorter duration for future entrants? What are the expected effects of such future trends in duration on caseloads? The analysis in this section spells out the implications of some relatively tangible factors, notably demographic trends. Because of the great importance of age in affecting both DI and SSI participation, future demographics is important in assessing program growth.

In this section, we first consider the effect of age on both incidence and duration in the DI and SSI programs. Since demographics can affect both incidence and duration, the effect of future demographic trends on duration should be analyzed in this broader context. After all, caseload effects, as measured by benefit years, are a product of incidence and duration. Moreover, the two factors tend to work in the opposite direction: As age increases, incidence rates tend to rise, while expected duration tends to decline.

Table 13 shows the relationship between age, DI incidence rates, and duration in a cross-sectional framework. As expected, the two factors (incidence and expected duration) work in the opposite direction: As age increases, the incidence of disabling conditions serious enough to warrant the award of DI disability benefits increases, while expected duration decreases. The product of these two factors represent the net effect on caseloads: Expected DI benefit years increase as we move toward the older cohorts of new entrants, because the positive effect of age on incidence rates is stronger than the negative effect on duration.

We do not have actuarial projections for the population financially eligible for SSI. Nevertheless, the population satisfying the SSI means test is conceptually akin to the notion of the DI-insured population. While the SSI financial eligibility criteria are much more complex than the concept of the DI-insured status, a microsimulation model developed by analysts at the Social Security Administration (Wixon and Vaughan 1989, Vaughan and Wixon 1989), based on the rich income and asset information available from the Survey of Income and Program Participation, provides an opportunity for some analysis. Table 14 provides an estimate of the size and age distribution of the population economically eligible for SSI. The estimates—provided by Denton Vaughan to the authors, based on the 1984 SIPP—suggests that approximately 25.7 million persons aged 18-64 were financially potentially eligible for SSI disability benefits in 1984. These estimates include (but do not identify) persons concurrently satisfying the economic eligibility criteria of both programs, as well as working-age persons eligible for SSI only. Our analysis shows that overall, the

Table 8.—Simulated expected mean length of first DI spells, selected years

Year of award	Simulated mean length
1960	8.9
1965	8.8
1970	9.4
1975	9.5
1976	9.5
1977	9.6
1978	9.6
1979	9.6
1980	9.7
1981	9.8
1982	9.8
1983	10.1
1984	10.2
1985	10.2
1986	10.6
1987	10.5
1988	10.4
1989	10.6
1990	10.8
1991	10.8
1992	11.0
1993	10.9

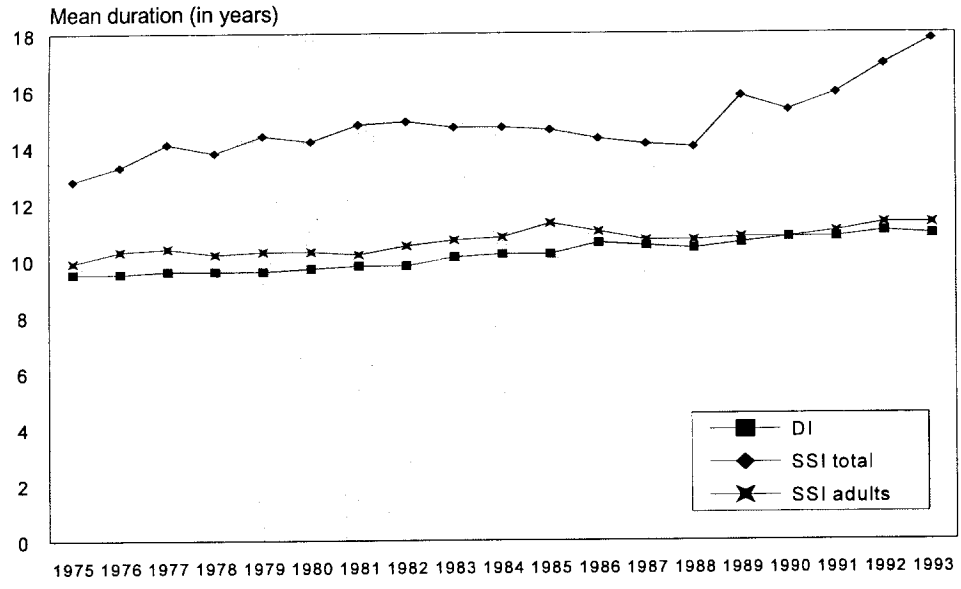
Table 9.—Simulated expected total preretirement-age duration on the SSI disability rolls among children and nonconcurrent adults, 1974-93

[In years]

Year of award	Simulated mean total duration	
	Total (Children + adults)	Adults only
1974	12.3	9.8
1975	12.8	9.9
1976	13.3	10.3
1977	14.1	10.4
1978	13.8	10.2
1979	14.4	10.3
1980	14.2	10.3
1981	14.8	10.2
1982	14.9	10.5
1983	14.7	10.7
1984	14.7	10.8
1985	14.6	11.3
1986	14.3	11.0
1987	14.1	10.7
1988	14.0	10.7
1989	15.8	10.8
1990	15.3	10.8
1991	15.9	11.0
1992	16.9	11.3
1993	17.8	11.3

Note: Simulations based on joint distribution of annual awardees by age, gender, diagnosis, and authors' estimates of total stay for subgroups.

Chart 3.—Simulated average duration of first DI spell and total duration on SSI rolls: 1975-93 nonconcurrent awardee cohorts



relationship between age, incidence, and expected duration of benefits is similar in the two programs. Nevertheless, there are some notable differences. First of all, the SSI incidence rate is higher than the DI incidence rate. The comparison is affected by the exclusion of concurrents from our SSI incidence rate numerator and by the fact that the SSI incidence rates reflect the 1984 experience, while the DI incidence rates presented in table 13 reflect 1993 data. However, considering both of these factors would strengthen, rather than weaken the contrast.

An important issue for future research is the reason for the higher SSI incidence rate. There are at least three competing hypotheses that might contribute to this finding. First, the average health and disability status of the financially eligible SSI population might be relatively low. Second, SSI benefits are more attractive relative to alternative sources of income for the SSI financially eligible population than the DI benefits are relative to the wages of DI-insured workers. Third, because of differences in human capital and the lack of work experience, financially eligible SSI applicants might have an easier time of qualifying under SSA's vocational criteria than might be the case with the average DI applicant. One factor that might work in the opposite direction is that a substantial portion of the financially eligible SSI population may meet the means test only marginally, and therefore face only relatively low levels of expected SSI payments, which reduce the economic incentive to apply. However, because of the importance of Medicaid for many SSI applicants, when both cash and noncash benefits are considered, the net incentives to apply for SSI may be very strong even for financially eligible persons qualifying only for a small amount of cash benefits.

Table 14 shows that the relationship between age and expected benefit years is somewhat different for SSI when compared with DI. In particular, the increase between the two younger age groups gets reversed as age increases. The implication of this finding for the projection of the future effects of demographics on caseloads is that the aging of the baby boom generation might have a smaller net effect on SSI caseloads when compared with DI. However, because of the complex relationships between age, poverty status, family structures, disabilities, other factors affecting the size of the SSI financially eligible population, and incidence rates, much more work needs to be done before firm conclusions can be reached about trends in future awards, duration, and caseloads in the SSI disability program.

While we did not attempt to project future changes in age-specific incidence rates, we have used actuarial projections of the age distribution to assess the likely future effects of the aging of the baby boom generation on expected future mean duration (table 15). Our analysis shows that this factor alone is likely to result in an almost 1-year decline in expected duration of first spells between 1993 and 2006. While this appears as good news, the same demographic forces also seem to imply future increases in incidence rates. This latter, unfavorable trend is expected to dominate the future caseload effects, albeit the estimated favorable trends in expected duration create a moderating influence on this upward pressure. An important caveat here is that we did not address the scheduled increase in the regular retirement age, which will gradually increase to age 67 beginning in 2000; this important topic deserves separate attention.

We replicated the methodology to assess the past role of demographic factors in affecting expected duration in order to contrast future and past effects of demographic factors and to produce and better understand the role of demographics in explaining our previous results. We conducted an analysis of the effect of changes in the age mix of the DI-insured population on duration for the 1975-93 entry cohorts. Changes in the age mix of the DI-insured population between 1975 and 1993 reflect largely, though not exclusively, the aging of the baby boom generation, and therefore are indicative of demographic shifts in the U.S. population. To estimate the effect of changes in the age mix of the DI-insured population, we analyzed the effect of year-to-year changes in the age mix on duration, assuming unchanged incidence rates between successive years, and using age-specific duration estimates. In our simulation, we updated the incidence rate assumptions annually.

Actuarial data show that the proportion of younger DI-insured workers peaked during the early eighties, while the proportion of older insured workers declined until fairly re-

Table 10.—Number and percentage distribution of first exits at 24, 48, and 120 months after first award among children and nonconcurrent SSI awardees, by estimated reason for exit, 1974-92 awardee cohorts

First suspension status at end of interval	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Total number	4,234	3,669	2,951	2,666	2,250	1,950	1,960	1,582	1,608	1,987
Exit status at month 24										
Total percent	100	100	100	100	100	100	100	100	100	100
No exit	63.7	61.1	59.7	60.2	59.5	60.1	61.6	60.5	58.1	61.1
Excess income	16.9	18.6	19.6	19.7	20.1	20.7	19.4	20.5	23.7	21.1
Death	4.6	4.4	4.0	4.4	5.8	5.6	5.7	5.8	5.6	4.2
Public institution	1.6	2.2	2.3	2.4	2.5	2.1	2.2	1.5	2.5	2.9
Excess resources	1.0	1.1	.9	.6	1.4	1.4	1.4	1.6	1.4	2.4
Other	12.1	12.7	13.5	12.7	10.8	10.2	9.6	10.2	8.8	8.2
Exit status at month 48										
Total percent	100	100	100	100	100	100	100	100	100	100
No exit	46.2	45.5	44.1	43.7	44.3	43.9	45.8	47.5	46.3	48.0
Excess income	23.9	24.0	24.9	25.9	25.0	26.6	25.6	25.7	27.7	26.9
Death	6.4	6.5	6.1	6.8	8.0	8.5	8.4	7.1	7.5	5.9
Public institution	2.5	3.0	3.0	3.6	3.5	3.2	3.1	2.5	3.1	3.9
Excess resources	1.6	1.5	1.5	1.0	2.2	2.3	2.8	2.5	2.0	3.2
Other	19.5	19.5	20.4	19.0	17.0	15.6	14.3	14.7	13.4	12.1
Exit status at month 120										
Total percent	100	100	100	100	100	100	100	100	100	100
No exit	22.6	22.8	23.1	21.3	23.4	23.6	25.1	25.3	24.5	26.3
Excess income	31.7	30.6	32.0	33.3	32.4	34.4	33.7	33.6	35.2	34.5
Death	10.2	9.9	9.7	10.5	11.3	11.3	11.6	11.6	11.3	10.5
Public institution	3.4	4.1	3.8	4.7	4.4	4.5	4.1	3.7	4.2	4.9
Excess resources	2.4	2.6	2.3	2.4	3.1	3.3	3.8	3.7	2.9	4.0
Other	29.7	30.1	29.1	27.9	25.4	23.0	21.7	22.2	22.0	19.8

	1984	1985	1986	1987	1988	1989	1990	1991	1992
Total number	2,223	2,613	2,622	2,501	2,535	3,274	3,917	4,729	5,494
Exit status at month 24									
Total percent	100	100	100	100	100	100	100	100	100
No exit	62.3	65.0	64.2	65.4	64.7	67.8	69.2	70.5	72.1
Excess income	22.1	19.3	19.8	19.6	20.8	17.9	18.5	17.4	16.1
Death	4.8	4.0	4.9	5.6	5.1	4.4	4.0	4.0	3.9
Public institution	1.8	2.6	2.2	2.2	1.5	1.7	1.6	2.0	1.9
Excess resources	1.2	1.7	1.4	1.0	.6	1.1	1.3	1.1	.7
Other	7.8	7.4	7.6	6.1	7.3	7.0	5.5	5.0	5.4
Exit status at month 48									
Total percent	100	100	100	100	100	100	100	. . .	. . .
No exit	48.2	50.7	51.5	51.9	51.7	55.0	57.2	. . .	. . .
Excess income	27.7	25.2	24.6	24.8	26.1	22.4	23.3	. . .	. . .
Death	7.0	5.9	7.4	8.2	7.5	7.4	6.3	. . .	. . .
Public institution	3.3	3.7	3.1	3.3	2.5	2.4	2.3	. . .	. . .
Excess resources	1.8	2.1	1.9	1.6	1.4	2.2	1.8	. . .	. . .
Other	12.0	12.4	11.4	10.2	10.9	10.7	9.1	. . .	. . .
Exit status at month 120									
Total percent	100	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
No exit	27.1	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Excess income	35.5	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Death	10.4	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Public institution	4.5	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Excess resources	2.3	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Other	20.1	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .

Note: (. . .) denotes data not available.

cently. Much of the overall decline in the average age of DI-insured workers between 1975 and 1993 is attributable to an increase in the proportion of middle-aged insured workers at the expense of older insured workers.

Our analysis shows that a substantial portion of the increase in the mean duration of first DI spells we attributed to changes in the age mix of DI awardees can be explained by demographics, but other factors contributed almost as much. We estimate that about half (0.8 years) of the 1975-93 increase in expected duration (1.4 years) is attributable to changes in the mix of the DI-insured population. The remaining time (0.6 years) is attributable to other factors contributing to the lowering of the age at entry among new awardees. For example, if the incidence of awards for conditions with a relatively early onset (for example, mental retardation and psychiatric conditions) disproportionately increases, average age at award may decline, even if no demographic factors are at play.

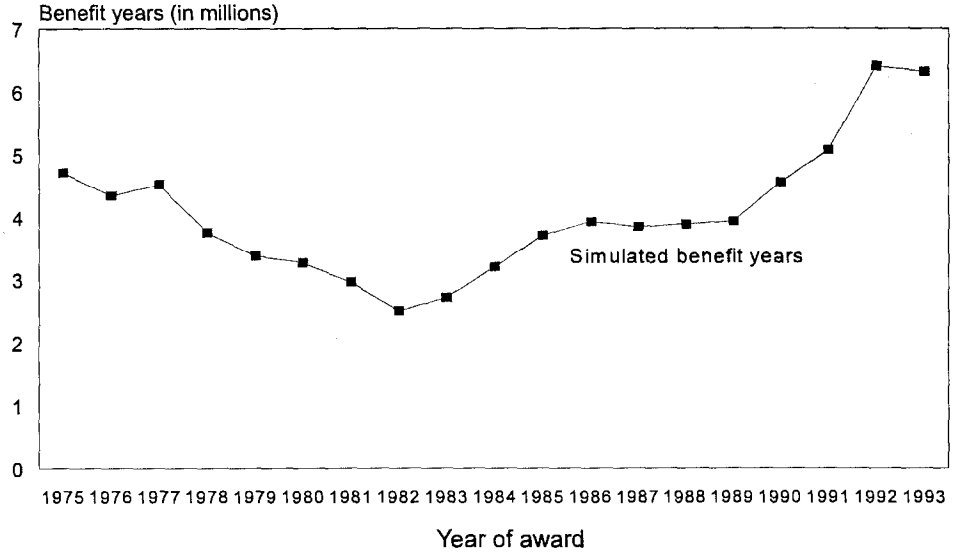
Thus, the effects of demographics on DI duration among new awardees is expected to be the opposite during the future (1994-2006) than it has been during the 1975-93 period. This expected reversal, together with the upward pressure of the aging of the baby boom generation on incidence rates need to be considered in assessing future trends in caseloads.

Whether, and to what extent, these DI findings can be generalized for SSI awaits future research. Nevertheless, the relationship between age composition, incidence rates, duration, and benefit years appears to be fundamentally similar in the two programs (table 16). In both cases, the positive relationship between aging and incidence rates outweighs the negative relationship between age and expected duration, albeit the positive effect on expected benefit years seems to be somewhat stronger for DI. More research is needed to assess the likely effects of program interaction and other factors on future trends in the population financially eligible for SSI.

Table 11.—Number of DI awardees and simulated total benefit years, by year of award

Year of award	Total awardees under age 62	Simulated benefit years
1960	158,497	1,405,721
1965	219,236	1,939,064
1970	288,813	2,708,524
1975	494,662	4,720,422
1976	455,037	4,341,190
1977	471,708	4,526,983
1978	388,888	3,747,513
1979	349,781	3,363,795
1980	335,901	3,258,407
1981	302,231	2,952,807
1982	254,921	2,500,992
1983	267,851	2,709,214
1984	313,259	3,194,568
1985	364,325	3,700,105
1986	370,500	3,922,681
1987	366,865	3,838,548
1988	373,483	3,878,463
1989	372,024	3,925,845
1990	423,777	4,558,993
1991	468,238	5,071,412
1992	583,507	6,394,946
1993	580,038	6,306,206

Chart 4.—Simulated total DI benefit years, by awardee cohort



The Role of Policy Interventions and Programmatic Decisions

In this section, we focus on programmatic factors directly affecting duration, including suspensions and terminations for medical and income-related reasons, work-incentive provisions, and vocational rehabilitation. Continuous Disability Reviews form the primary vehicle for removing persons from the DI and SSI disability rolls for medical reasons.

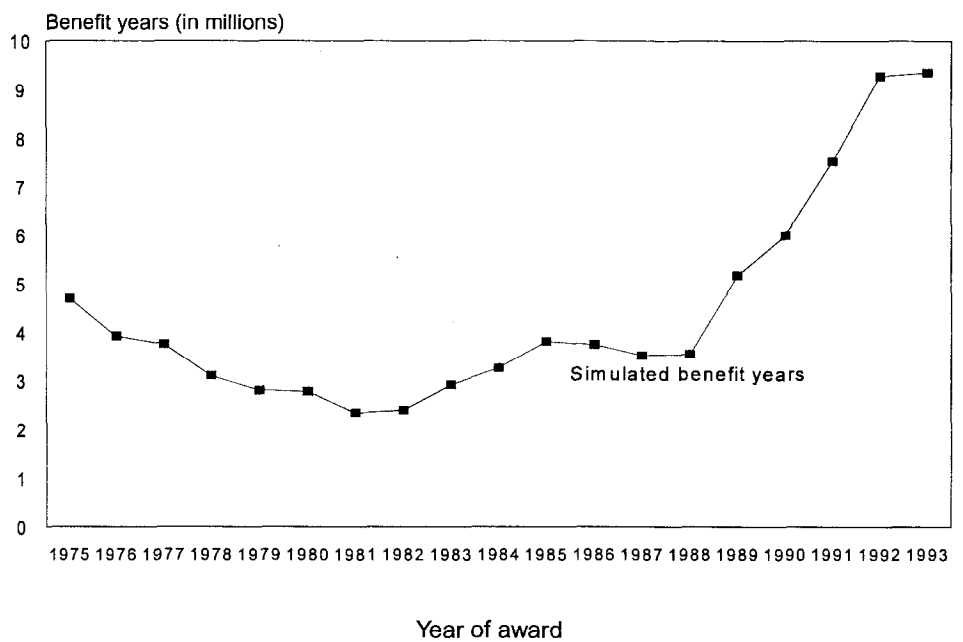
The number of CDRs performed greatly varied over the years subject to swings in political decisionmaking and SSA staffing constraints. During the early Reagan years, CDRs were perceived as important tools in containing the growth of the disability rolls. Following a political backlash and numerous court decisions, a moratorium was issued on CDRs during the mid-1980's, followed by the introduction of the medical improvement standards making the removal of persons from the disability rolls for medical reasons more difficult. At the 1983 peak, 436,000 DI cases were reviewed, comprising 13.5 percent of the caseload (U.S. House of Representatives 1993, p. 64). More than 40 percent (182,000 cases) were removed from the rolls. In contrast, during 1995 only 0.1 percent of the DI caseload was reviewed, and only 15 percent of these (475

Table 12.—Number of SSI preretirement-age awards and simulated total benefit years, by year of first award, 1974-93

Year	Number of awardees	Simulated benefit years (total)
1974	423,400	5,207,820
1975	366,900	4,696,320
1976	295,100	3,924,830
1977	266,600	3,759,060
1978	225,000	3,105,000
1979	195,000	2,808,000
1980	196,000	2,783,200
1981	158,200	2,341,360
1982	160,800	2,395,920
1983	198,700	2,920,890
1984	222,300	3,267,810
1985	261,300	3,814,980
1986	262,200	3,749,460
1987	250,100	3,526,410
1988	253,500	3,549,000
1989	327,400	5,172,920
1990	391,700	5,993,010
1991	472,900	7,519,110
1992	549,400	9,284,860
1993	525,400	9,352,120

Note: Number of awardees estimated from SSI 1-percent sample file. Simulations based on joint distribution of annual awardees by age, gender, diagnosis, and authors' estimates of total preretirement-age SSI disability stays for subgroups.

Chart 5.—Simulated total preretirement-age SSI benefit years, by year of first award



cases) were removed from the rolls. Subsequently, the number of CDRs performed increased somewhat, but never reached a level even close to the 1981-84 experience. The experience with CDRs in the SSI program also showed great variations, with a minimum level of activity during the last couple of years. More recently, time-limited benefits have been introduced for persons with a primary diagnosis of alcoholism or substance abuse, and the number of CDRs to be conducted by SSA is scheduled to increase in the future.

CDRs clearly affect duration on the rolls, and may affect subsequent applications similarly to the effect of denial rates, as was demonstrated by Parsons' work (1991). In this pioneering study, based on economic theory, Parsons hypothesized that high denial rates discourage subsequent disability applications as a result of their negative effect on the expected net benefits of DI application. His empirical analysis—based on data from the late seventies—provided results consistent with this hypothesis. CDRs may have negative effects not only on duration among those on the rolls, but also on subsequent DI applications for similar reasons.

Relying on CDRs as a primary strategy of containing caseload growth may be problematic both because of the legal and political problems embedded in the approach, and for substantive reasons. Many persons on the disability rolls face serious medical problems; identifying those whose medical condition sufficiently improve and is likely to improve in the future is inherently difficult. Moreover, time spent on the disability rolls results in the depreciation of work skills, and is expected to result in difficulties in returning to the labor force, especially without assistance. A study conducted by the General Accounting Office found that more than half of DI beneficiaries terminated during 1981-84 returned to the rolls, and of those who did not, nearly half were not working (U.S. House of Representatives 1993, p. 70).

Administrative changes related to the SSI means test could affect duration. As we discussed previously, recent changes in handling the failure to respond to an Agency request for information had a negative effect on suspensions, and hence a positive effect on length of stay. In general, procedures designed to tighten the monitoring of SSI means test eligibility are expected to reduce duration, while loosening of procedures and/or reduction in the amount of resources devoted to monitor SSI income or asset eligibility are expected to increase duration.

In light of the difficulties of relying on the stick-only approach of CDRs, the interest in the carrots of work incentives is understandable. Both SSI (section 1619 program provisions) and DI (trial-work period and extended period of eligibility)

have gone through substantial liberalizations. Little is currently known about the effects of these changes on duration. The cohort-based comparison of DI exit rates during the seventies and eighties (Hennessey and Dykacz 1993) suggests that the liberalization of DI work incentives during the early eighties actually increased length of stay. Similarly, with the introduction of section 1619 provisions, suspensions directly resulting from work activities were eliminated, and our analysis suggests no secular increase in income-related suspensions either. Thus, it appears that previous reforms of work-incentive provisions might have increased duration in both programs. In addition, as Hoynes and Moffit (1994) argue, such changes in work-incentive provisions may induce additional applications thereby further adding to caseload size.

Vocational rehabilitation (VR) is another positive strategy to reduce duration on the disability rolls. The number of disability beneficiaries served by the State VR system has been historically small, and has decreased further since SSA's placement-oriented reimbursement of VR agencies was introduced. Moreover, little is known about the effectiveness of these interventions because of the difficulty in establishing a useful control group. The interest in vocational rehabilitation demonstrations is rooted in the perceived failure of work incentives to move sizable numbers of beneficiaries to productive employment in an efficient manner. Six-year experimental follow-up results from the Transitional Employment Training Demonstration (TETD) (Decker and Thornton 1994) indicate that the employment services raised the average employment and earnings levels of the mentally retarded SSI recipients who were offered transitional employment services, and that the increases persisted relatively undiminished during the 6-year period. However, the modest reduction in SSI payments offset only a fraction of the cost of transitional employment services. Moreover, only a small subset of eligible SSI recipients volunteered for the demonstration. A more recent SSA demonstration initiative, Project NetWork, targets a much broader group, including all DI beneficiaries and SSI recipients in the demonstration areas and uses a case-management approach to return to work (Rupp, Bell, and McManus 1994). The results of this large-scale experimental evaluation are not available yet, but preliminary analyses of demonstration participation suggest that—similar to the TETD—only a fraction of project eligibles volunteered for the demonstration. In view of the increases in the size of the caseload, SSA continues to have an interest in these more direct methods of limiting duration on the rolls as evidenced by SSA's evolving employment strategy, and the ongoing review of the disability program by the National Academy of Social Insurance.

During 1995, there have been several initiatives with the intent of reducing the number of persons on the DI and SSI rolls. Naturally, any change in the mix of SSI recipients, caused by the legislation, may have an affect on duration on the rolls. If we keep in mind the substantial impacts of age and diagnosis on duration, we can get some crude idea of the overall impact of future legislative change. The legislation may focus on several groups of disabled SSI recipients—children, adults with drug and alcohol addiction, and lawfully resident aliens. There are currently nearly 1 million disabled children on the rolls. Over two-thirds of this group have a mental illness. Reductions in the numbers of children, particularly those with psychiatric mental illnesses, will tend to lower the dura-

Table 13.—DI incidence rates, expected duration, and benefit years per 1,000 insured workers, by age group, 1993

Age group	Awards per 1,000 DI-insured workers	Expected first-spell duration (in years)	Expected DI benefit years per 1,000 insured workers
18-34.....	2.1	18.4	39.0
35-49.....	4.5	12.5	55.9
50-61.....	13.1	6.5	85.3

Source: Incidence rates were calculated by the authors, based on data on the number of DI-insured workers (1993) provided by SSA's Office of the Actuary and the number of 1993 awards by age group. Estimated first-spell duration data by age group are based on estimates by Hennessey and Dykacz (1989).

Chart 6.—Trends in DI and SSI awards, expected duration, and benefit years by awardee cohort (1975=100%)

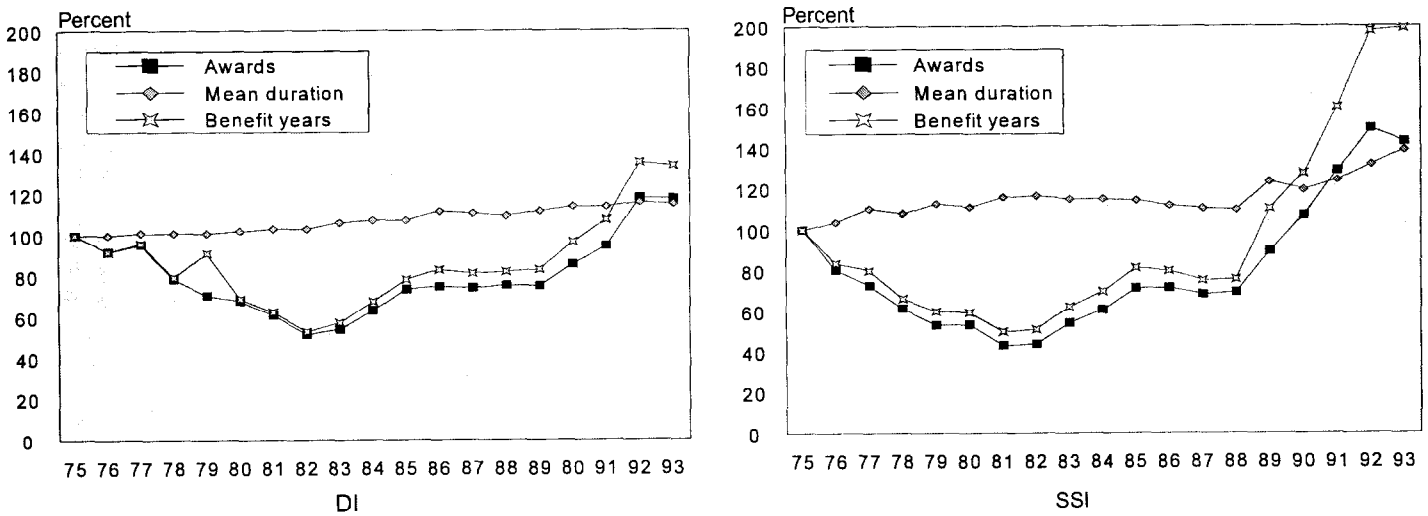


Table 14.—SSI awards per 1,000 persons satisfying the SSI means test, expected total duration, and benefit years per 1,000 financially eligible persons

Age group	Number of persons financially eligible (in thousands)	New SSI nonconcurrent awards per 1,000 financially eligible persons, 1984	Mean total duration on SSI disability rolls (in years)	Expected SSI disability benefit years of new awardees per 1,000 financially eligible persons
18-34	18,198	3.4	19.9	68
35-49	3,791	10.7	11.6	124
50-61	2,713	22.5	5.1	115
62-64	470	26.4	1.2	32

Note: The estimated number of financially eligible persons was provided to the authors by Denton Vaughan, based on the1984 SIPP using the microsimulation model developed by him and Bernard Wixon (Wixon and Vaughan 1991 and Vaughan and Wixon 1991). The SIPP estimates reflect the estimated number of persons satisfying the SSI income and assets means test, irrespective of eligibility for DI. The number of SSI awards estimated from the authors' 1-percent SSI study file, however, is limited to persons receiving SSI benefits only, at least during the initial year following first award. Total duration estimates reflect all SSI disability spells and are based on age-specific means.

Table 15.—Expected effects of projected changes in the age composition of the DI-insured population on average length of first DI spells

Year	Percent distribution of DI-insured workers by age group				Simulated mean duration of first spell, by year of award
	Total	18-34	35-49	50-61	
1994	100.0	43.7	38.7	17.6	10.8
1995	100.0	42.5	39.6	18.0	10.7
1996	100.0	41.4	40.3	18.3	10.7
1997	100.0	40.4	40.8	18.9	10.6
1998	100.0	39.4	40.9	19.7	10.5
1999	100.0	38.5	41.1	20.4	10.4
2000	100.0	37.8	41.2	21.1	10.3
2001	100.0	37.2	41.1	21.7	10.2
2002	100.0	36.8	40.8	22.4	10.1
2003	100.0	36.4	40.5	23.1	10.1
2004	100.0	36.1	40.1	23.8	10.0
2005	100.0	36.8	39.1	24.1	10.0
2006	100.0	35.6	39.2	25.1	9.9

Note: The distribution of the DI-insured status population was derived from estimates by single years of age provided by SSA's Office of the Actuary. The estimated 1993-2006 changes in mean length reflect the effect of projected changes in the mix of the disability insured status population, and therefore do not account for possible future changes in age-specific incidence rates.

tion for the entire caseload. Effects for the other two groups are less clear at this time. There are currently about 130,000 adult recipients for whom alcoholism or drug addiction are central to the finding of disability. Although their addictions fall within the mental illness category, these individuals are much older than other SSI disabled recipients, and therefore have shorter durations than the average. There are also about 325,000 disabled recipients who are lawfully resident aliens. This group also tends to be much older than average, and likely have shorter durations.

For both DI beneficiaries and SSI recipients, there will be dramatic increases in the number of CDRs conducted by SSA. That number is expected to increase to over 500,000 in fiscal year 1996. Also, welfare reform legislative proposals will further expand the use of CDRs for SSI recipients, particularly children. Such an increase will lead to direct reductions in duration on the rolls for both programs. Recent Agency and legislative initiatives may reduce duration on the rolls substantially.

Conclusion

This article examined the relationship between age, gender, diagnosis, and duration on the DI and SSI disability rolls, and quantified the implications of past trends in awardee characteristics and future caseloads. Also examined are programmatic factors that directly affect duration, and the combined effect of incidence rates and expected duration on age-specific expected benefit years. We also made some inferences about the likely effects of the aging of the baby boom generation on expected duration and caseloads.

The data show that lifetime duration in both the DI and SSI disability programs is long; thus, long duration is an important determinant of caseloads and program cost. Between 1975 and 1993, the shift toward younger entrants resulted in substantial increases in the expected duration of new awardees in both the DI and SSI programs. These past trends in expected duration create an upward pressure on future caseloads, especially in SSI where the recent influx of children is expected to have substantial future effects on caseloads, under the assumption that current program rules will stay in effect for persons already on the rolls in the future.

The aging of the baby boom generation contributed to the 1975-93 increase in the expected average duration of successive cohorts of new DI entrants, but these trends will reverse during the 1993-2006 period as the baby boom generation ages. This will moderate, but not entirely eliminate, the likely upward pressures of aging of the baby boom generation on future caseloads arising from increased incidence rates.

Table 16.—DI and SSI incidence rates, mean duration, and benefit years, by age group

Age group	Incidence rate		Duration		Benefit years	
	DI	SSI	DI	SSI	DI	SSI
18-34	2.1	3.4	18.4	19.9	39.0	68.0
35-49	4.5	10.7	12.5	11.6	55.9	124.0
50-61	13.1	22.5	6.5	5.1	85.3	115.0

Our analysis suggests the usefulness of cohort-based studies on duration for understanding and quantifying the factors affecting future terminations and caseloads. In particular, such a perspective seems useful in disentangling the effects of awardee characteristics, the size of successive awardee cohorts, programmatic variables, and other factors.

Several important issues remain for future research. We need to learn much more about the interaction of the DI and SSI programs as they affect the duration of disability benefits and future caseloads, and particularly about the duration experience of concurrent awardees. Much more work needs to be done, and is feasible to do, concerning trends in SSI financial eligibility, and their effect on duration and caseloads. Considering both duration and the level of benefits is a logical next step in refining the analysis of the effects on program cost. Finally, there is a clear need for creative and rigorous work on the likely consequences of various strategies to contain the growth of the disability rolls through affecting entry and exit.

Notes

[1] "Censoring bias" occurs when the lack of data on complete spells is not appropriately accounted for. In the case of cohort-based duration data, observations for spells longer than the follow-up period are "right-censored," that is, while the beginning of the spell is observed due to the cohort design, the end of the observation period is not known to the researcher. Both studies (Hennessey and Dykacz 1989 and Rupp and Scott 1995) utilize statistical methods to correct for this lack of data.

[2] These estimates are based on data for a 1972 cohort of new DI awardees. The patterns for more recent cohorts of entrants may have changed due to a variety of factors. The analysis of cohort differences in DI patterns is an important topic for future studies.

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Appendix

The main sources of the data used in this analysis are three SSA administrative data systems: (1) the Master Beneficiary Record (MBR), which provides data on DI benefits; (2) the Supplemental Security Record (SSR), which contains SSI benefit history; and (3) the National Disability Services System file, which provides diagnostic information for both DI and SSI claims. Data on the characteristics of annual cohorts of DI awardees were derived from published aggregate data contained in the *Annual Statistical Supplement* to the *Social Security Bulletin* and statistically adjusted to reflect the age categories used in our analysis. Data on DI duration disaggregated by age and diagnosis were obtained from published estimates by Hennessey and Dykacz (1989). Data on both the characteristics of annual cohorts of SSI awardees and SSI duration were derived from a 1-percent sample microdata file obtained for our analysis from the SSR. The file contains microdata for SSI awardees between 1974 and 1994. The structure of the data files and the methods used to correct for right-censoring of first spell and total SSI stay estimates are identical to the approach used in our previous article (Rupp and Scott 1995), although the data files were updated to reflect the most current information on SSI payment eligibility history and the characteristics of first awardee cohorts up to 1993.

In this article, we develop simulated expected first spell length estimates for DI awardees for 1960-93, and simulated total expected SSI duration estimates for 1974-93. Both estimates reflect duration during the preretirement years (prior to reaching age 65). In the DI program, disabled beneficiaries are converted to the retirement side of the OASI program at age 65. Unlike the DI program, SSI disabled recipients, however, continue to remain categorically disabled at age 65. Because persons aged 65 or older may receive SSI benefits without regard to their disabilities, and in order to facilitate comparisons with DI, this article treats the attainment of age 65 as a termination event for both programs.

The fact that some persons receive both DI and SSI benefits caused some problems with the analysis. The DI data did not permit us to isolate these concurrent beneficiaries, and we were forced to include them in all of the DI analyses. We compensated for this by removing the concurrents from the SSI analysis. This worked out pretty well since many concurrent beneficiaries leave the SSI program after their DI benefits begin. Their SSI stays, therefore, are truncated compared with other SSI recipients, but their DI stays are fairly typical for DI beneficiaries. We note that the DI estimates presented in the article are essentially limited to working-age awardees under age 62 at award due to the exclusion of persons aged 62-64 at time of first award from a key source data file (Hennessey and Dykacz 1989). Although DI duration analysis for persons aged 62-64 is complicated by the availability of early retirement benefits under OASDI, the inclusion of this age group in future analyses appears warranted in light of the importance of the experiences of this age group for the assessment of the likely future effects of the scheduled increase in the regular retirement age.

The simulations in this article are based on disaggregated estimates of first spell length and total stay estimates derived from microdata for subgroups identified by age (DI and SSI); age and diagnosis (DI and SSI); and age, gender, and diagnosis (SSI). For DI we utilized information on the mean length of first spells for 39 cells identified by age and diagnostic categories. For SSI we calculated mean first spell and total duration estimates for 150 cells using our microdata file. For each year, the simulated expected duration estimates were derived by weighting the cell means (implicitly assuming that these disaggregated duration estimates did not change through time) by the joint distribution of awardees on the stratifying variables considered for the given year. Using this simple nonparametric method, we arrived at simulated trends of mean stay length that can be interpreted as reflecting the effect of compositional changes in awardee characteristics through time. This method utilizes all of the available information on the joint distribution of the characteristics variables considered, and does not rely on any assumptions about the functional form of the relationship between the variables considered in the model.

In order to analyze comparable information on the DI-insured population, we obtained data by single years of age for the 1975-2006 period from the Office of the Actuary at SSA reflecting past experience and actuarial projections. This information was used to decompose changes in expected duration attributable to changes in the age mix of the disability insured population and other factors affecting awardee mix as well as to project the future effects of the mix of the disability insured population on expected duration. We also obtained data on the size and age composition of the population satisfying the financial eligibility criteria (asset and income means test) of the SSI program from the Division of Economic Research at SSA's Office of Research and Statistics. These data, derived from the Survey of Income and Program Participation, were used to analyze the incidence of SSI awards among those economically eligible for SSI, and to assess the effect of the age composition of the economically eligible SSI population on program caseload.