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DISABILITY CLAIMANTS WHO CONTEST DENIALS  
AND WIN REVERSALS THROUGH HEARINGS

Ralph Treitel

Division of Disability Studies

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Social Security Administration  
Office of Policy  
Office of Research and Statistics



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Abstract

Disability hearings have been increasing at a high rate. About half result in reversals of the previous administrative decision of denial. In this study, demographic and socioeconomic characteristics were obtained for disability claimants with initial, reconsideration and hearings decisions in 1970 and 1975, and examined in relation to whether the case was allowed or denied at hearing.

Claimants who requested hearings tended to be largely middle-aged white males. Those closest to retirement age who were denied disability benefits requested review less than middle-aged claimants. Persons in Southern Atlanta and Dallas regions contested initial denials more than those in Eastern regions such as New York and Boston. Higher earners requested review more than lower earners and those with little recent work.

There was little variation in outcome by the basic demographic characteristics of sex, race and level of predisability earnings. However, blacks and low earners and those with less recent employment were denied somewhat more at every level of the decision-process including hearings. When claims of persons with little recent work and therefore little chance of establishing insured status, however severely disabled they might be, were

set aside, the reversals in disability hearings were well over 60 percent. Whereas the oldest claimants had much higher award proportions in initial and reconsideration decisions, older claimants in hearings did not have a higher proportion of reversals than did middle-aged claimants.

The presence of an attorney at hearings resulted in a somewhat higher reversal rate for all demographic groups looked at. Attorneys' involvement in hearings has been increasing at a substantial rate. A somewhat greater percent of higher earners, younger workers, and those in the Seattle region had attorneys. However, in general, there was little difference in the proportion who obtained attorneys between different geographical areas or between high and low earners. In terms of outcome, about 70 percent of the highest earners with attorneys won reversal in comparison to less than 50 percent of the lower earners with no attorneys.

Persons persisting in claims through hearings rarely returned to substantial employment. While many of those denied at hearings in 1970 had some form of earnings in the next 5 years, only about 10 percent had substantial earnings of \$3,600 or more 5 years later. Most claimants for benefits appear to remain out of the labor market whatever the decision on their disability insurance claim.

The subsequent proportion of deaths by the end of 1977 among those affirmed or reversed at hearings in 1970 was very similar. This is a crude indication that the long-term severity of those allowed and denied at hearings was much more similar than that of claimants allowed and denied benefits at the initial level.



DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS OF  
DISABILITY CLAIMANTS WHO CONTEST DENIALS AND  
WIN REVERSALS THROUGH HEARINGS \*

The number of hearings requested by social security claimants after being denied benefits has been growing at a substantial rate in recent years. Since 1960 the number of requests for hearings has gone from about 14,000 a year to over 190,000 (table 1). About half of all disability hearings result in reversals (chart 1). The large volume of contested claims and reversals has caused major administrative problems and raised questions about the appropriateness of the adjudication procedures. 1/

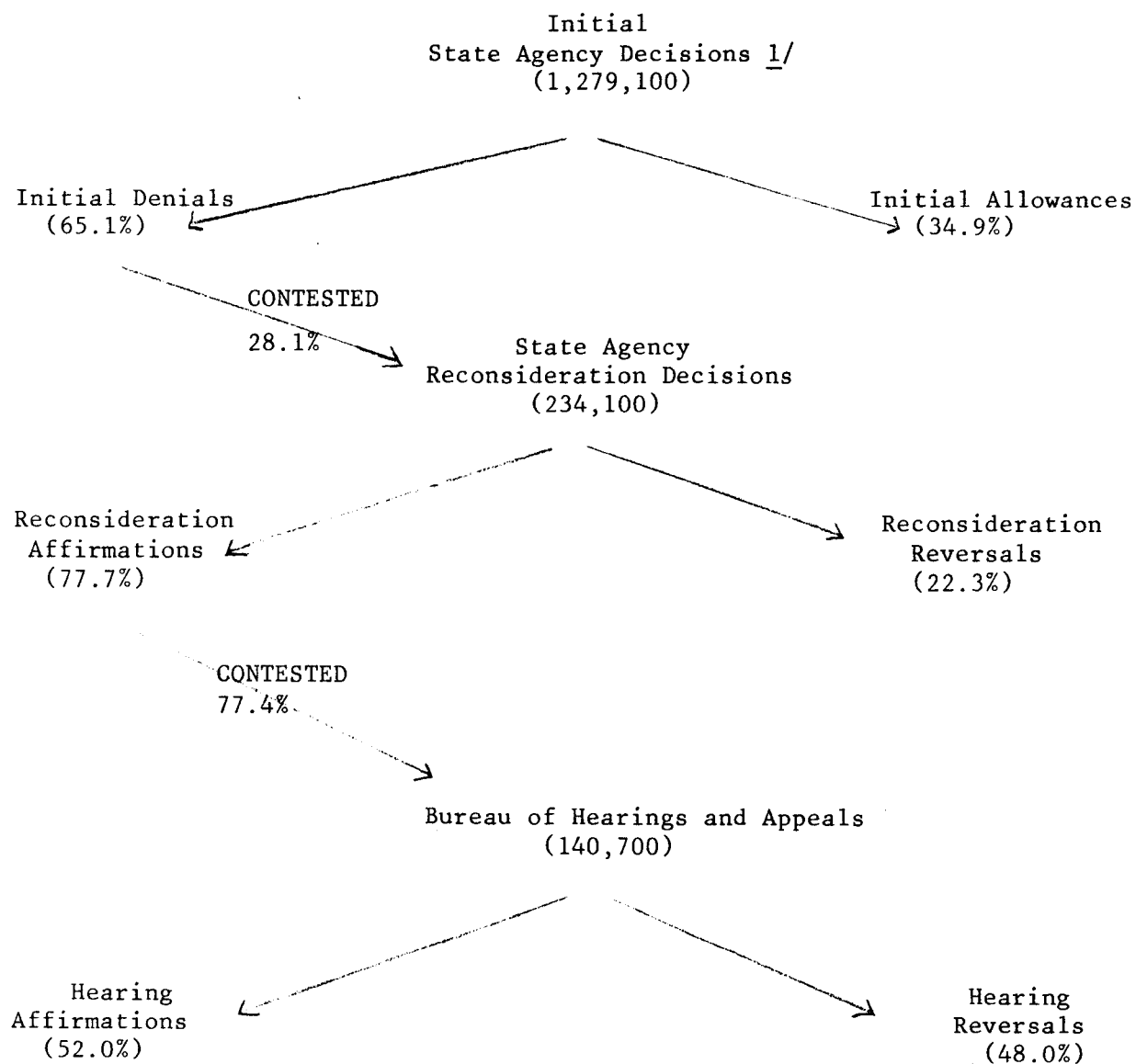
The large majority of contested claims involve disability insurance applications. Since shortly after enactment of the disability benefit program in 1956, most contested claims have concerned disability benefits and only a few percent have involved retirement or health benefits.

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1/ Committee on Ways and Means, U. S. House of Representatives, "Report on the Disability Insurance Program," Committee Staff Paper, July 1974; Robert B. Dixon, Jr., Social Security and Mass Justice, Praeger, New York, 1973; Center for Administrative Justice, Study of the Social Security Administration Hearing System, October 1977. So many appeals are carried into district courts, a recent legislative proposal suggested a separate federal court for social security claims be established. Subcommittee on Social Security, U.S. House Ways and Means Committee, H. R. 8076, "Disability Insurance Amendments of 1977," 95 Congress, 1st session, July 1977.

\*By Ralph Treitel, Division of Disability Studies, Office of Research and Statistics. The data processing was managed by Don Surprenant. The sample design was done by Michael Bostron. Sampling variability was determined by Robert Finch and Bea Matsui.

Chart 1--Contested Disability Claims Fiscal Year 1977\*



\* See table 2 for detailed frequency distribution of decisions in 1977 according to workload reports of cases processed upon which this chart is based. There were approximately 25,000 additional review requests to the Appeals Council and 6,942 review requests to federal district courts decided in 1977 of contested hearing affirmations.



Claims for survivor and retirement benefits are generally based on clear-cut evidence of age, death, and insured status through work in employment subject to social security taxes. Coverage for persons who have worked in competitive employment is nearly universal. Almost all retirement and survivor claims are allowed.

In contrast, about two-thirds of all disability claims are currently denied. About 30 percent of the denied claimants request review (table 2). The disability decision may be expected to be more problematic than retirement decisions about age and death because it depends on an assessment of physical and mental capacity and forecasts about the continuation of medical limitations.

Why the number of contested denials are increasing at such a great rate, and why so many result in reversals at the hearings level--with about one out of two reversed in hearings in recent years--is not clear.

Constriction in employment opportunities, changes in public awareness of the disability insurance program, and increases in benefit levels have been advanced as reasons for recent increases in initial claims. 2/

Legislative liberalizations of the disability program, such as the 1965 modification in the definition of duration to include persons who might be expected to recover after a year, may have led many more with conditions of uncertain duration to file disability claims. In the past decade, a

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2/ Mordechai Lando and Aaron Krute, "Disability Insurance Program Issues and Research," Social Security Bulletin, October 1976.

number of major new federal programs for disabled persons have also been enacted, including the black lung program for miners; survivor benefits for disabled widows and widowers; and supplemental security income benefits including benefits for the indigent blind and disabled as well as aged (table 1). Over one-fourth of all hearings in 1976 were for these new disability programs, particularly supplemental security.

In addition to factors which have led to an increase in initial claims for social security disability programs, there appears to have been substantial growth in the numbers of persons ready to contest denials of disability benefit claims. Thus, while the number of initial disability insurance claims has increased by over 300 percent since 1960, contested denials have increased by over 600 percent at the reconsideration level and by over 900 percent at the hearings level (table 2).

It appears that more people are filing initial disability claims and more are being turned down. The initial allowance proportion decreased over the past 15 years from about 50 percent to about 30 to 40 percent. But as a greater number are denied, more are filing review requests and winning reversals: the proportions allowed disability benefits due to reversals at the reconsideration and hearing levels have increased in the past 15 years from about 10 percent to about 20 percent of all allowances. Thus, a substantial part of this increase in awards is due to the increased number of denial reversals.

Much of the increase in reversals appears due to the high proportion who request hearings after reconsideration denial and win reversal after two previous denials. In 1976 and 1977, over two-thirds of all reconsideration denials appeared to continue contesting the decision

at the hearings level, according to the caseload data in table 2.

It may not be surprising that a large proportion of the denied at reconsideration would file a request for a hearing. Many who request reconsideration review may be intent on obtaining a formal hearing and only participate in the reconsideration process as a necessary step toward obtaining a hearing. Denied persons who ask for review of an unfavorable decision one time at the reconsideration stage may be expected to be more knowledgeable about the possibilities and benefits of requesting further reviews of their claims and may be more persistent than the denied who don't request review.

The reversal proportion at reconsideration in recent years has been dropping, akin to initial allowance rates. However, reversals at the hearings level have continued at a great extent, with nearly 50 percent reversed in 1975-77 of all disability hearing decisions.

### Study Design

This paper presents the social and demographic characteristics of those disability claimants whose cases go to hearing. Particular attention is given to how these characteristics may be related to (1) the individual decision to contest a denial or accept it; (2) the general increase in disability claims and contested applications in recent years; and (3) the high proportion of reversals in hearings.

As disability decisions are based on complex details of medical condition and ability to work, it should be made very clear that the demographic

data in this study may only be expected to suggest gross underlying influences in the claims process and cannot be expected to explain the causes and appropriateness of the individual decision to contest denials or the validity of the administrative decision made on the claim. A systematic readjudication of the decisions or individual case evaluations would be necessary to determine the appropriateness of decisions at each level of review, rather than this statistical description of the characteristics related to actual awards and denials.

The study population consists of all persons who had a contested disability claim decided by an administrative law judge in a hearing decision in fiscal years 1970 and 1975. These claimants had previously had claims for disability insurance benefits denied by State agency examiners, and then their claims were denied again after the requested review of the initial decision by reconsideration reviewers in the State agencies. The source for data on these hearing decisions were reports (503 records) in the Management Information System of the Bureau of Hearings and Appeals.

For comparison with these hearing decisions, supplementary information on disabled workers denied initially and on workers denied at the reconsideration level in 1970 and 1975 was obtained from a sample of determination records (D-cards) of the Bureau of Disability Insurance. For the identified populations of persons with decisions at (a) the initial, (b) reconsideration or (c) hearings levels in 1970 or 1975, demographic and earnings data were obtained from the social security Earnings Summary Record.

Not included among the hearing decisions in this study are decisions to refer the case to another lower level of review ("remand") or to declare no issue requiring hearing ("dismissal") or any disposition other than affirmation or reversal.

Information on the basic issues at stake in the hearing was not available from these statistical records. Most hearing decisions may be expected to have centered on the issue of severity of disability for the disabled workers. However, a small number may have been concerned with eligibility due to insured status or onset date. A small proportion of the hearing decisions also included claims for entitlement of disabled dependent adult children. A more detailed account of the study design and data limitations is presented in a technical note at the end of this paper.

Decisions in 1970 and 1975 were arbitrarily selected for comparison on the basis that they were relatively recent years spanning a period during which a large increase in hearings occurred. The number of disability hearings doubled between 1970 and 1975.

A somewhat similar previous study of the differences in demographic characteristics and earnings experience of denied applicants who requested reconsideration after initial denial in 1967 and of those who did not request review indicated that few of the denied, whether contesting the denial or not, ever returned to substantial, competitive work, but those who did contest denials and won reversal seemed more severely disabled than those denied who didn't request review in terms of subsequent mortality experience. 3/

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3/ Ralph Treitel, "Appeal by Denied Disability Claimants," Office of Research and Statistics, Social Security Administration, HEW Publication No. (SSA) 76-11858, August 1976.

### Review Process

If a claimant disagrees with a denial decision, the Social Security Act specifies that the Secretary of Health, Education and Welfare provide the claimant with an opportunity for a hearing (Section 205b, Title II). If denied at the hearing level, the claimant may request review in a United States District Court.

When a claimant disagrees with an initial disability decision and requests review, the case is first reviewed by another disability examiner in the State agency. This review is known as "reconsideration." If the reconsideration reviewer upholds the initial decision, the claimant may request a hearing before an administrative law judge of the Bureau of Hearings and Appeals, an office separate from the Bureau of Disability Insurance which administers the initial adjudication done in State agencies. 4/

In hearings, claimants may appear in person, have counsel, confront witnesses and plead their case. Testimony is taken under oath and recorded verbatim. Hearings are held as close to the claimant's residence and as early after the request as possible. A large backlog of hearings requests has resulted in past delays of many months in the holding of hearings, but there has been a substantial reduction in the backlog since 1975. 5/

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4/ Operational Analysis of the Bureau of Hearings and Appeals, Bureau of Hearings and Appeals, Social Security Administration, June 30, 1976, BHA Pub. No. 032 (6-77); Fred Davis and James Reynolds, "Profile of a Social Security Disability Case," Missouri Law Review, Fall 1977, 541-557.

5/ Subcommittee on Social Security Ways and Means, U.S.H.R., "Delays in Social Security Appeals," Hearings, 94 Cong., September, October 1975; Social Security Administration, The Year in Review, OAA Pub. No. 006 (7-78). From June 1975 to June 1978, the pending cases have dropped from 111,000 to under 80,000, although receipts have exceeded 150,000 a year.

There are no administrative costs to denied claimants in making appeals except for whatever costs they incur on their own behalf in obtaining counsel, securing additional evidence, and attending the hearing.

Attorney's fees are reimbursed through a fixed portion of retroactive benefits payable upon reversal of the disability decision to an award.

The claimant must file a request for review within 2 months of the latest denial decision. Once denied, however, a claimant may file any number of later claims to establish new periods of disability, such as for deterioration of a medical condition resulting in work disability at a later point in time. Should later evidence indicate a severe disability existed or lasted for a year or more at the time of a previous denial, a claim may be reopened without a request for review through administrative reexamination of the claim. Thus, many denied who do not request review but file later claims may be subsequently awarded disability benefits, in addition to those who request review and succeed in having the initial decisions reversed. 6/

There are many stages of appeal and many specific terms for the various levels of review that may be used in connection with contested claims. For the purpose of this analysis we use the general term "review request" for contested claims of unfavorable administrative decisions. When specifically referring to the initial review in the State agencies after the initial denial decision, we use the administrative term "reconsideration." For the subsequent review of adverse reconsideration decisions by an administrative law judge in the Bureau of Hearing and Appeals, we use the administrative

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6/ Treitel, op. cit., p. 20-21.

term "hearings." It is the initial request for review - the request for reconsideration - that distinguishes claimants who contest claims from those who do not.



Demographic Characteristics of Claimants in Hearings

Between 1970 and 1975, the number of hearings involving disability insurance benefits more than doubled. Yet, the demographic characteristics of disability claimants involved in these hearings in both periods were quite similar (table 3, columns 3 and 7). About 40 percent were from Southern areas (Dallas and Atlanta regions), about 25 percent were from the East (Boston, New York, Philadelphia regions), about 18 percent from the Midwest (Chicago and Kansas City regions), and about 15-17 percent from the far West (Denver, San Francisco and Seattle regions). Two-fifths were under age 50 but the majority were older middle aged, from age 50-64. About two-thirds were men, and about one-sixth were black.

Many had limited work and low earnings before the disability hearing, including about one-quarter of those with disability hearings in 1975 having average earnings of \$3,000 or less in the highest three years of earnings in the ten year period prior to the hearing decision.

Essentially, then, the data suggest that the majority of disability hearings involve older middle-aged white males with relatively low earnings in the decade before their hearings. This is similar to the profile suggested in a report of discussions with administrative law judges, who said disability claimants in hearings tended to be economically disadvantaged workers who were poorly educated and had a history often of unskilled, low paying jobs. <sup>7/</sup>

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<sup>7/</sup> Edwin Yourman, "Report on a Study of Social Security Beneficiary Hearings, Appeals and Judicial Review," Subcommittee on Social Security of the House Ways and Means Committee, Recent Studies Relevant to the Disability Hearings and Appeals Crisis, 94 Cong., 1st sess., December 20, 1975, Appendix B, pages 167-168.

While a somewhat greater proportion of the increase in hearings between 1970-1975 occurred in the South and in States in the Boston region, and less took place in the Western area, it appears the large rise in hearings was the result of a general and widespread increase in all areas, perhaps from a widespread increase in knowledge of the review process, rather than an increase among any particular socioeconomic groups or regions.

The proportion of higher earners among those with disability hearings decisions in 1975 rose in comparison to those with hearings in 1970. This may be largely an artifact of changes in wage levels in the periods examined and of changes in the reported amounts taxed for social security. However, in 1975 there appeared to be a decrease as well in the proportion of claimants with little recent work, according to the number of quarters in covered employment.

Less than 25 percent of those with hearings decisions in 1975 had under 24 quarters of coverage (under 6 of 10 years work) in comparison to nearly 30 percent among workers whose cases were decided in 1970. It appears then that claimants in 1975 had a somewhat stronger recent work attachment, as a whole. It may be that with the advent of the federal program for Supplemental Security Income, first payable in 1974, disabled persons with little recent work attachment and no insured status would be eligible for SSI benefits and had less reason to contest disability denials than in the past when their disability application resulted only in a denial. Between 1970 and 1975, there was a substantial increase in the proportion of claimants with an attorney. Exactly why this occurred is unclear,

It suggests there were more attorneys available to take on these kind of cases, and perhaps a greater knowledge among lawyers of the advantages in pursuing disability appeals. The characteristics of those who obtained attorneys is discussed in a subsequent section.

The major source of information on the right to request review and on the advantages of doing so is probably the Social Security Administration through notices that accompany denial decisions and through claimant contacts with district office personnel.

Preliminary data from a recent pretest of a 1978 National Survey of Disability and Work suggest that the key persons telling the denied to file a request for review of a denial may be social security district office personnel.

The pretest sample was a nonrandom group of disabled obtained from administrative records of recent disability decisions recorded in 1977 and a previous 1974 disability survey. In answer to the question, "Did anyone tell you to make the appeal?" there were the following responses:

TABLE T-A.--Advice to request review, pretest of 1978 survey of disabled

Source of advice	Number	Percent distribution
Total denied in pretest.....	228	
Total with request for review after denial.....	69	100.0
Filed review on own.....	18	26.0
Social security district office.....	30	43.4
Doctor or medical person.....	8	11.5
Letter of denial.....	6	8.6
Lawyer.....	3	4.3
Friends or relatives.....	3	4.3
Other.....	1	1.4

A later detailed report from the survey will describe claimant characteristics as well as actual responses on reasons for filing appeals by denied claimants. 8/

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3/ For a recent summary of earlier disability surveys and some limited information on knowledge of programs among disabled, see Evan Schecter and Barry Bye, "Demographic and Economic Correlates of Changes in Disability Status among the Newly disabled", 1972 Survey of Disabled and Nondisabled Adults, HEW Publication No. (SSA) 73-11717, August 1978. For an earlier comparison of characteristics of those allowed and denied, see Philip Frolich, "Denied Disability Insurance Applicants", 1966 Social Security Survey of the Disabled, Report Number 11, Social Security Administration, September 1970.

Demographic Characteristics of Denied at the Initial  
and Reconsideration Stages

The characteristics of claimants involved in disability hearings depend, of course, on the characteristics of those who initially claim they are entitled to disability benefits but are turned down.

According to information from the 1972 Social Security Survey of Disabled Adults, adults in the general population who report they are so severely disabled they cannot work, more often tend to be women, older, poorer, less educated persons, and more from Southern States than are the nondisabled adults of working age. 9/

However, not all of those unable to work are eligible for disability insurance benefits. To be eligible for benefits, claimants must be insured through work in covered employment, generally for 5 out of 10 years before onset date, as well as have medical evidence of a disabling condition or combination of conditions that may be expected to prevent competitive work for a period of at least a year. As a result of the requirement for labor force attachment, a large proportion of disabled who may be eligible for benefits as insured workers are middle-aged men.

Among the insured, according to a study of those who apply for benefits, a greater proportion of older workers and blacks file for benefits than insured younger persons and whites. 10/ Insured women filed for disability benefits in similar proportions to insured men, according to this same study.

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9/ Kathryn H. Allan, "First Findings of the 1972 Survey of the Disabled: General Characteristics," Social Security Bulletin, October 1976.

10/ Mordechai E. Lando, "Demographic Characteristics of Disability Applicants: Relations to Allowances," Social Security Bulletin, May 1976. A recent revision of the regulations on disability adjudication, with first notice in the federal register of March 7, 1978, sets out in detail the effects of older age on disability entitlement (section 404.1506). This may lead to older workers filing disability applications at a greater rate.

Of those who apply for benefits, what groups get turned down more often?

According to the data in this study on awards by demographic characteristics, a higher proportion of initial claims decided in 1975 resulted in allowances among insured claimants who were older; male; white; residing in the East; and who had higher predisability earnings and more recent quarters of work, as shown in table 3, column 4.

Thus, 68 percent of workers age 60 and over in the year of decision were allowed compared to only about 33 percent of those under 40; 53 percent of men were allowed, compared to 45 percent of women; 53 percent of whites to 40 percent of blacks; about 55 percent of those in Boston, Kansas City, and New York regions, compared to only about 45 percent of those in Dallas and Atlanta regions; 62 percent of those with higher average annual predisability earnings of \$6,000 or more, compared to only 40 percent or less for those with under \$3,000 average earnings; and about 60 percent of those with earnings in every quarter of the 10 year period prior to alleged onset disability, compared to under 40 percent of those with less than 6 years of earnings in the 10-year period before onset of disability.

It is not surprising that a greater proportion of older applicants win awards. Older middle age is explicitly considered to be a debilitating factor aggravating the severity and duration of medical disability, according to administrative evaluation guides for State agencies (Disability Insurance State Manual, paragraph 321E).

The greater denial rate of women and blacks and those with little recent work may be due to greater filings because of unemployment. Unemployability is not

intended to be a criterion to be given weight in the disability decision, according to the program regulations (Section 404.1502 (b)). Only complex special studies which rate medical severity could determine whether these findings by sex, race, and employment experience are due to differences in medical severity or to program bias. These findings are quite similar to those in prior applicant studies and surveys which showed a higher proportion of applicants who were women, younger persons, and blacks have been denied in the past. 11/

A substantial proportion of those who are denied--about one in three--ask for reconsideration review. Who are the people who contest the denial? One would expect them to be persons who feel their medical condition persists or deteriorates; less disabled workers whose unemployment and need for income continue; those with greater knowledge of rights to ask for review and the lack of personal costs in review request, and perceived likelihood of getting some administrative remedy; and those with greater contacts with formal institutions, such as hospitals, welfare agencies, other compensation proceedings, legal aid associations; and applicants more ready to use district office contacts. 12/ The demographic characteristics distinguishing those denied who contest the unfavorable decision from those who do not are described here. 13/

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11/ Phil Frolich, "Denied Disability Insurance Applicants: A Comparison with Beneficiaries and Nonapplicants," op. cit.; Ralph Treitel, "Appeal by Denied Disability Claimants," op. cit.

12/ For review of client responses to bureaucracies, see E. Katz and B. Danet, Bureaucracy and the Public, Basic Books, New York, 1973.

13/ Longitudinal data presented here show review requests for reconsideration after initial denials. Longitudinal data distinguishing which of the workers with affirmed denials at reconsideration go on to request hearings and which do not are not contained in the records available for this report.

According to the characteristics of those denied who asked for review in 1975-76 after initial denials in 1975, the workers contesting denials tended to be more in the middle ages between 40-60 than younger persons under 40 or older working age adults 60 and over, and near eligibility for retirement benefits (table 5). About 40 percent of those aged 40-60 asked for review, compared to about 30 percent of those under 40 or 60 and over.

A substantially higher proportion of denied tend to contest the denial from the South (about 40 percent from the Atlanta and Dallas regions), than those denied in the East (about 23 percent of those in the Boston and New York regions).

A substantially higher proportion of denied workers asked for reconsideration review among those with higher predisability earnings and with a greater recent work involvement than the denied with lower earnings and less extended work periods in the decade before onset of disability. Thus, over 40 percent requested review among denied with earnings from work in 32 out of the 40 quarters prior to onset of disability, compared to 30 percent or less requesting review among those with under 24 quarters of earnings. Similarly, about 40 percent or more requested review among those with predisability earnings of \$6,000 or more, compared to about 30 percent or less among those with average annual earnings in covered employment of under \$3,000. It appears, then, that those with greater recent work attachment were more likely to request review of denied claims.

What of those who do not request review after denial? This descriptive review of gross demographic characteristics of claimants cannot address the question of whether those who do not contest denials might have just as good reason to request review as those who do ask for review.



However, a General Accounting Office study of a sample of persons denied between 1967 and 1971, who were asked if they would like to refile, found almost no cases of denied persons where disability benefits would have been awarded if they later requested reassessment. <sup>14/</sup> About 4 percent of the denied cases reviewed through their study resulted in later benefit awards, but these were cases assessed as having deterioration in health after the prior decision. Data in a later section of this report on subsequent mortality and earnings can provide indicators of severity as later points in time.

In a pretest of the previously cited 1978 social security survey, which included questions on appeals on disability and work, a nonrandomly selected group of recently denied disability insurance applicants made these responses to the question, "Why didn't you ask to have your case reviewed?"

TABLE T-B.--Reason no review request was made, pretest of 1978 survey of disabled

Reason no review	Number	Percent distribution
Denied.....	234	
Requested review.....	69	
Did not request review.....	148	100.0
No use.....	47	31.3
Did not know of an appeals process.....	16	10.7
Too much trouble.....	18	12.0
Agreed condition not severe or long lasting..	6	4.0
SSA advised not to pursue claim.....	5	3.3
Other reasons than above.....	58	38.7
Other and unknown appeal status.....	17	

<sup>14/</sup> Gregory Ahart, Director, General Accounting Office, report of study of individuals denied Title II social security disability benefits, letter of January 22, 1976, to the Secretary of Health, Education and Welfare. A study of the effect of case facilitators similarly found few persons who were interested in appealing denials when the appeal process was explained. C. Osgood, et al., Institute for Community Studies, Kansas City, Missouri, "Social Security Disability-Rehabilitation Pathways: Case Facilitator Project," March 1975, SSA 71-3409.

These very preliminary data suggest a relatively small proportion of the denied failed to request review because of lack of knowledge or belief that it / might be a difficult process to undergo. Analysis of data from the actual survey will make clear how many denied who failed to appeal believed themselves severely disabled.

In summary, those persons contesting disability denials may be expected to be drawn from an applicant pool composed of a large proportion of men and older middle-aged persons because of eligibility considerations requiring work in extended competitive employment. The denied include a larger proportion of women and blacks and younger workers than those allowed disability benefits. Those who contest initial denials tend to have a tighter labor force attachment in terms of higher predisability earnings and non-recent work periods, and are further from retirement age than the denied who do not contest denials.

#### Factors affecting reversal

A substantial number of denied disability claims are reversed when the unfavorable decision is contested: 30 percent of adult claimants who had worked long enough to be insured at some time and who were denied disability benefits and requested review had their initial denial overturned at the reconsideration level in 1975 (table 3). Over 50 percent of those who contested the decision after reconsideration denial were allowed disabled worker or dependent adult children benefits through hearings by administrative law judges in the Bureau of Hearings and Appeals.

Review decisions are made on the basis of an open record so later evidence on the severity, persistence and deterioration of a medical condition may be added to the previous evidence presented in the reconsideration claim. In one administrative review of the reasons for reversals of disability decisions at the hearings level, about one-half of a sample of hearings awards were judged reversed because of additional evidence obtained on the prior condition, or because of new evidence of later deterioration or persistence of the disabling condition. 15/

Substantial differences between the hearings procedures and earlier adjudication at the initial and reconsideration levels which might affect the decisionmaking include: the claimant's personal appearance before the law judge, in contrast to the paper review at earlier levels; the involvement of the claimant's attorneys and witnesses in hearings; differences in training and guidelines for the administrative law judge and for adjudicators in the State agencies, such as greater required legal training and greater autonomy of the law judge under the appointment through the Administrative Procedure Act and supervision through the Bureau of Hearings and Appeals.

The data in this study do not contain information on the nature of the evidence, the issue in question, or procedures affecting the decision. However, demographic and employment differences between reversed cases and cases affirmed in hearings may indicate whether the decisions seem consistent with expectations on how particular subgroups might fare. Comparisons on

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15/ Bureau of Disability Insurance, "Quarterly Report on Review of ALJ Sample Reversals," May 1976. About 8 percent more were judged reversed because of basic judgmental disagreement between the examiner and previous reviewers; about 9 percent because of the claimant's direct presentation before the examiner; and no reason was determined readily apparent in 25 percent of the cases.

the effects of these demographic and employment factors between various levels of adjudication may also / <sup>indicate</sup> whether the decision making is reasonably consistent. (Comparisons between levels of review must be highly tentative, as obviously hearings and reconsideration and initial decisions are quite interrelated.) The data on hearings reversals show relatively little variation in outcome by demographic and employment factors, but those categories with greater reversals include: white race, residence in Far Western States; higher predisability earnings; and recency of employment (chart 2 and table 3, column 6).

In comparison to initial and reconsideration decisions, the effects on hearings of race, sex, and prior employment status seem similar; while the effects of age and region of residence are different (chart 4, and table 3, columns 4, 5, and 6). In the following section, we review the effect of each demographic variable on hearings individually and then assess the cumulative effect of factors with the greatest impact on the proportion reversed / <sup>to construct</sup> demographic profiles of claimants more likely and less likely to have reversals at hearings.

Age is a major factor distinguishing awards and denials at the initial and reconsideration levels, but not at hearings. At the initial level, persons age 60 and over have about twice the proportion of allowance (60 percent) as those under age 40 (about 30 percent). Administratively, old age is considered a debilitating factor increasing the severity of medical impairments. However, there is little difference in the proportion reversed among younger and older persons in disability hearings. A major reason may be that older

Chart 2.--Demographic factors related to higher disability allowance rates by level of adjudication,  
Fiscal Year 1975\*

	<u>Initial decisions (50 percent allowed)</u>	<u>Reconsideration decisions (34 percent allowed)</u>	<u>Hearing decisions (55 percent allowed)</u>
Age	Older age (63 percent allowed if age 50 or over)	Older age (49 percent allowed if age 60 or over)	Little difference
Sex	Little difference	Little difference	Little difference
Race	White (40 percent allowed if black)	White (27 percent allowed if black)	White (48 percent allowed if black)
SSA Region	New York, Boston, Kansas City (about 55 percent allowed)	New York, Boston, Kansas City (about 40 percent allowed)	Philadelphia, Kansas City, San Francisco, Seattle (about 60 percent allowed)
Predisability earnings	Higher earnings (if \$6,000 or more, 62 percent allowed)	Higher earnings (if \$6,000 or more, 42 percent allowed)	Higher earnings (if \$6,000 or more, 64 percent allowed)
Recent sustained work	More recent work (if 40 out of 40 recent quarters, 67 percent allowed)	More recent work (if 40 out of 40 recent quarters, 45 percent allowed)	More recent work (if 40 out of 40 recent quarters, 45 percent allowed)

\*Differences in allowance proportions according to classifications of demographic variables. For detailed percentage distributions and definitions of classifications on which this chart is based, see table 3.

workers with ambiguous records of severity may tend to request review less after the initial denial is received than younger workers, as the data on characteristics of people who request reconsideration indicated. Denied applicants who are older may be more likely to turn to other avenues of earnings replacement such as early retirement benefits or other income resources rather than contest denials.

There is little difference by sex in outcome of disability decisions apparent at the initial, reconsideration, or hearing level for decisions in 1975. Earlier studies, including both program reports and social security surveys of the population, have reported somewhat greater denials of social security disability claims among women than men. 16/ It is frequently stated that in the general population, a larger proportion of women present themselves as having acute and work-disabling health problems than men. 17/

The data presented in this report by sex in initial and reconsideration decisions of insured workers do not reflect the numbers of women who apply for benefits but who are denied for lack of insured status because of few years in competitive employment. 18/ In the information available for this report, the data suggest that men and women with many prior years of competitive employment who apply for disability benefits tend to have

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16/ Frolich, "Denied Disability Insurance Applicants," op. cit.; Treitel, "Appeal by Denied Disability Claimants," op. cit.

17/ Constance Nathanson, "Sex, Illness and Medical Care," Social Science and Medicine, January 1977, pages 12-26.

18/ Lando, "Demographic Characteristics," op. cit.

similar overall rates of severe disability, according to the outcome of their claims. Clearly, however, men and women applicants exhibit large differences in the types of work they have done and the kinds of impairments they have incurred. 19/

Unlike the data by sex, there were marked differences in allowance proportions by race at the hearings level, as well as at the initial and reconsideration levels, with a greater proportion of blacks denied at each level than whites. As the program records collected for this report contain no information on the severity of disability apart from the administrative award decision, there is no way to determine whether this difference by race reflects differences in the degree and circumstances of disability among / claimants, or differences in adjudicators' decisionmaking.

However, a lower proportion of awards resulted, in general, for claimants who had lower earnings, according to the data by predisability earnings levels, as will be shortly described.

By SSA region, there was a higher proportion of hearing reversals in the Far West. In comparison to the higher reversal proportion in Denver (62 percent), Seattle (62 percent) and San Francisco regions (61 percent), the reversal rates in the Eastern administrative regions of New York (47 percent) and Boston (51 percent) were much lower. While having lower reversal rates at hearings, New York and Boston both had higher reversal rates at reconsideration than other regions. Southern States, where a greater proportion

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19/ Social Security Disability Applicant Statistics, 1970, DHEW Pub. No. (SSA) 75-1191.

of disabled and unemployed reside, had a lower initial allowance rate. While a higher proportion of the denied requested review in the Southern States, as previously discussed, this does not seem followed by any greater reversal proportion at hearings in the South than are shown by hearings allowances in the other regions.

At all levels of adjudication, those claimants with higher predisability earnings has a higher proportion of reversals than the lower earners. More than 6 out of 10 were reversed at hearings of the claimants with the highest predisability earnings (\$6,000 or more in the high 3 years of earnings in the 10 year period preceding the year of the hearing decision) compared to less than 4 out of 10 reversed among the small group with little or no earnings in the decade before hearings. Similarly, at the initial stage, about 6 in 10 were allowed among higher earners with \$6,000 or more in predisability earnings compared to about 4 in 10 or less among those with lower predisability earnings of under \$3,000.

The higher initial award and reversal percentages by claimants with higher earnings may mean that higher earners filing disability claims may have greater medical severity as the basis for recent work stoppage, while lower earners may be filing claims more because of long-term unemployment problems. However, it may also reflect greater access to medical care and medical documentation of disability for higher earners. Only a detailed study evaluating severity of disability could explain the differences in outcome by prior socioeconomic status.

Similar effects to that of predisability earnings are shown by the extent of recent work, as measured by quarters of coverage in the 10 year period ending 2 years before the year of hearing decision. About 60 percent of



denied claimants filing hearing appeals had their claims reversed if they had worked in 8 out of the 10 years, compared with less than 40 percent reversed among those who worked in less than 4 out of the 10 years.

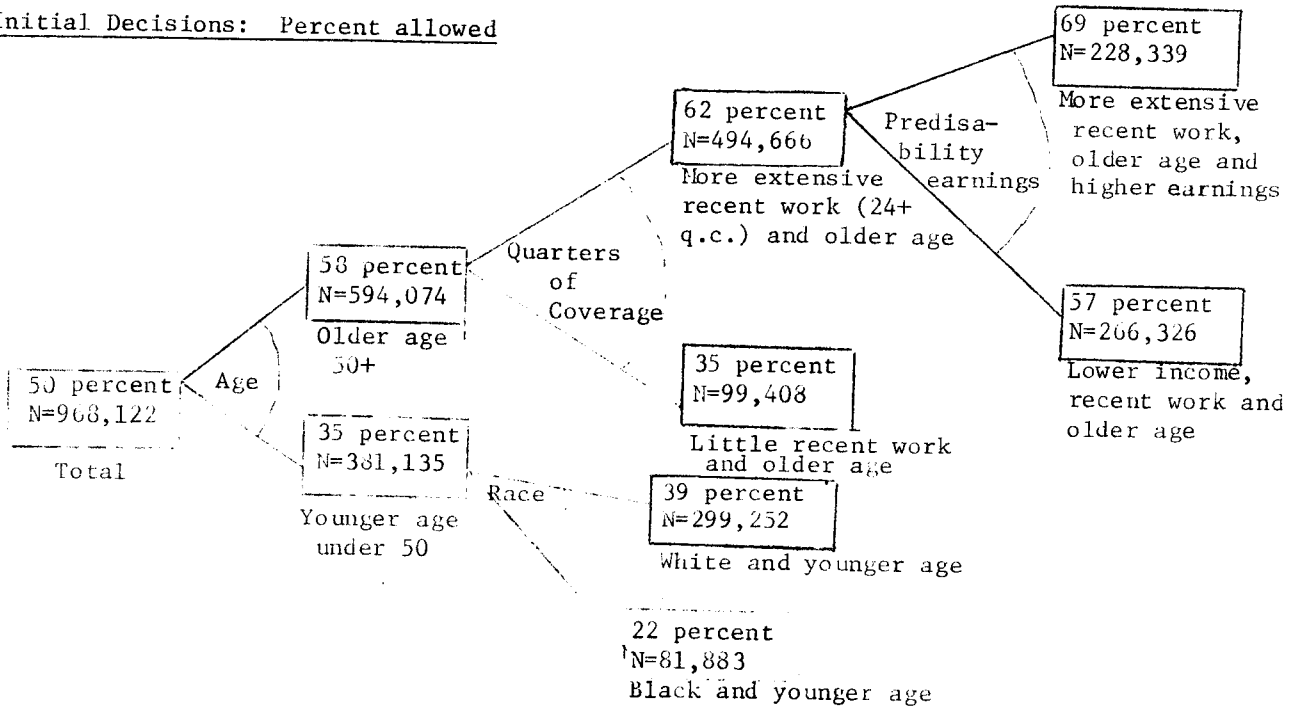
As with level of earnings, this suggests that marginal earners may tend to be denied more than those with recent work stoppage of substantial labor force involvement. Some with few quarters of work in employment subject to social security taxation may be denied repeatedly on the basis of lack of insured status rather than on the basis of current severity of disability. Others, with intermittent periods of work, may find it more difficult to make a case that disability is the reason for their unemployment than would claimants who have evidence of medical treatment immediately following an abrupt stop in recent substantial employment.

Many of those who request hearings, with few recent quarters, seem to be women (nearly 50 percent), younger claimants (over 20 percent under age 40), and have residence in the New York region (about 15 percent), as shown in table 4, columns 3 and 4, where the reversal experience is compared for claimants with less than 24/40 quarters and those with at least 24/40 quarters with earnings. Younger workers with fewer quarters had a higher reversal percent than older workers with fewer recent quarters.

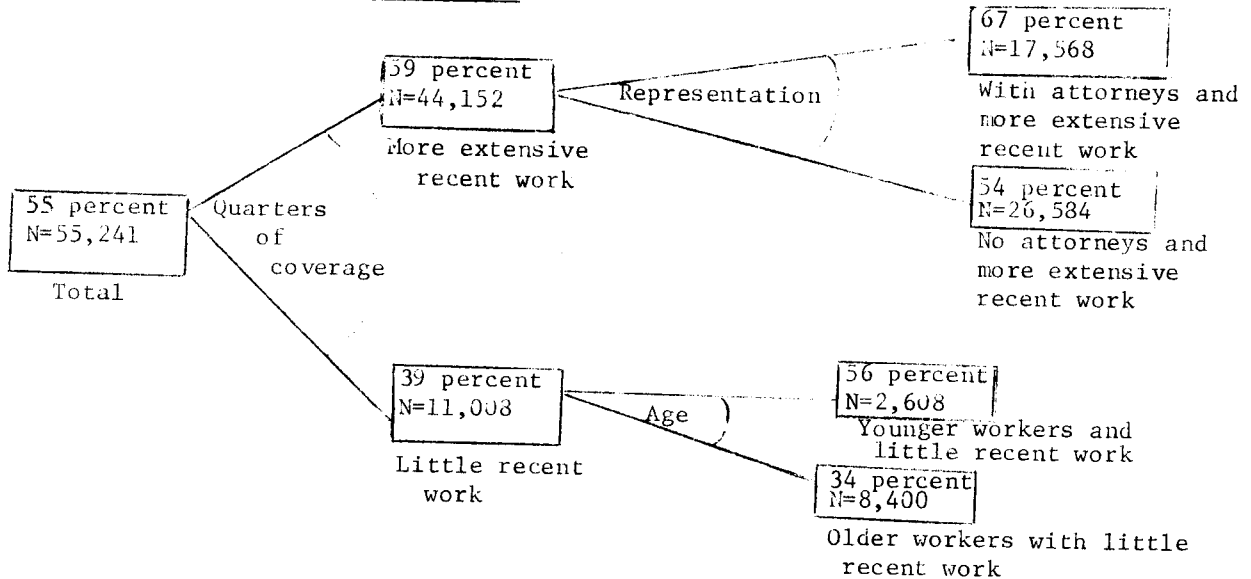
In order to see more clearly what the demographic profiles of claimants most successful and least successful at obtaining awards may have been, an exploratory interaction analysis technique was employed, as summarized on chart 3.

Chart 3.--Outcome of disability decisions according to demographic profiles by level of adjudication, FY 1975

Initial Decisions: Percent allowed



Hearings Decisions: Percent reversed



\*The demographic profiles presented in the chart are based on exploratory interaction analyses described in the technical note. Comparisons of the variables leading to these splits according to the proportion of the between sum of squares to total sum of squares is shown in table C of the technical note. For sampling variability, see table B.

The technique used was the Automatic Interaction Detection program devised by the Institute for Social Research of the University of Michigan. This exploratory technique is essentially a repeated analysis of variance, in which the importance of variables in accounting for the greatest variance the proportion of the between sum of squares (BSS) to total sum of squares (TSS) in the dependent variable (percent allowed) is distinguished. A more detailed explanation of this technique is presented in the technical note. This procedure makes possible the construction of a profile of characteristics most affecting the allowance decision, including interactions of variables among sub-groups that may be masked by simple cross-classifications in the tabular presentations.

In the interaction analyses, the demographic characteristics of age, sex, race, region, prior level of earnings, and extent of recent work according to quarters of coverage are considered as independent variables. These were categorized as presented in table 3. In a sub-sample of the hearings drawn for this analysis, the variable of representation by an attorney was also included as an independent variable. The combined effect of these variables on the dependent variable, percent allowed, was then examined for outcomes at the initial and hearings level.

It should be made clear that this interaction analysis is an exploratory statistical technique that is here employed in the analysis of limited historical and descriptive data. A complex survey or experimental study would be needed to differentiate the factors crucial to the decisions of award or denial, which are based on reviews of detailed personal, medical, and vocational evidence.

According to the analysis of interactions, combinations of the demographic characteristics of age, recent sustained work, level of prior earnings, and race most distinguished those who were initially allowed. Thus, about 70 percent of 228,000 disability claimants were allowed at the initial level among those who were of more advanced age (age 50-64), had more extensive recent work (24 or more quarters of coverage in 40 quarters prior to onset), and had higher predisability earnings (\$4,000 or more in 3 highest years prior to onset). In comparison, only 22 percent of 8,000 disability claimants were allowed if they were among the small group who were both of younger age (under age 50) and whose race, according to their application for a social security account number, listed them as black. Race only appeared to make a difference in cases among younger workers under age 50. There was no substantial effect on outcome between sex and region and the other variables, as shown in table C in the technical note, which presents the basis for the interaction groupings in the chart according to comparisons of the effect of the variables in accounting for the greatest variance (greatest proportion of between sum of squares to total sum of squares).

While / these demographic variables accounted for a relatively small proportion of the total variance in the analysis of the outcome of initial decisions (BSS/TSS = 3.6 percent), the /demographic variables accounted for much less of the total variance in the analysis of the outcomes of hearing decisions (BSS/TSS = 4.7 percent), as shown in chart 3 and table 2 of the technical note.

This is because there is far less variation in outcome by the individual characteristics, particularly age, at hearings than in initial decisions, and little interaction resulting in any substantially different outcomes among particular sub-groups of demographic classifications. Many more details about the issue and organization of the hearing would be needed to provide substantially greater information on what differentiated the reversal and affirmation decisions. Similar to the effect of recency of work stoppage in initial decisions, where extensive recent work (as measured by the number of quarters of coverage in the 10 years prior to the hearing decision) was related to greater awards, it was also true that extensive recent work was the most important variable distinguishing outcome in the analysis of hearing reversals, accounting for 26 percent of the total variance (BSS/TSS), in comparison to 2.2 percent for prior earnings and only about 0.8 percent or less for the other demographic variables of age, sex, race and region.

The hearing population was subdivided into those with more reversals due to more recent quarters (24 or more) and those with fewer recent quarters (under 24). Then all other independent variables were again compared to see if there was any substantial statistical impact on the outcome proportions. Few had any sizeable effect, as shown in table 5 and table D, and summarized in chart 3. Representation by an attorney was far more important than any of the demographic variables of age, race, sex, region and prior earnings level. Thus, of those with many recent quarters and with representation by an attorney, 67 percent were reversed. Without an attorney, only 54 percent were reversed. Neither representation nor any of the

demographic variables had much effect on outcome of the group with few recent quarters of earnings.

Age had more effect than any of the other independent variables on this group with fewer recent quarters of earnings. Rather than a higher reversal rate for older workers as in initial claims, however, among the group with few recent quarters, the small group of claimants under age 40 had a higher reversal proportion (56 percent) than other older workers (34 percent).

### Representation

Between 1970 and 1975, the proportion of disability claimants with attorneys doubled. However, there was surprisingly little difference between those claimants who had attorneys present at the hearing in 1975 and those who did not in terms of gross demographic and earnings characteristics (table 4, columns 5 and 6). One might have expected far greater use of attorneys by higher earners, who might have greater information and access to legal representation, and far greater use by claimants in Eastern, more urbanized areas. But about 40 percent of both high and low earners had attorneys; and claimants in all areas had about the same proportion of attorneys, except that in the Seattle area there were attorneys present in over 50 percent of the disability hearings.

A somewhat greater proportion of younger claimants under age 50 had attorneys than those 60 and over, more whites than blacks, and higher recent earners than those with little or no recent earnings (chart 4 and table 5). However, by and large, there was little apparent variation in the characteristics of persons who engaged attorneys and those who did not.

Chart 4.--Characteristics associated with legal representatives\*

	<u>Greater use of attorney</u>	<u>Lesser use of attorney</u>
Age	Younger (if under age 50, 42.5 percent had attorneys)	Older (if age 60 and over, 32.8 percent had attorneys)
Race	White (40.0 percent)	Black (34.8 percent)
Income	Higher earnings (43.0 percent if \$6,000 and over)	Less recent earnings (36 percent or less if under \$3,000)
Region	Seattle (52.4 percent)	Kansas City (33.3 percent)

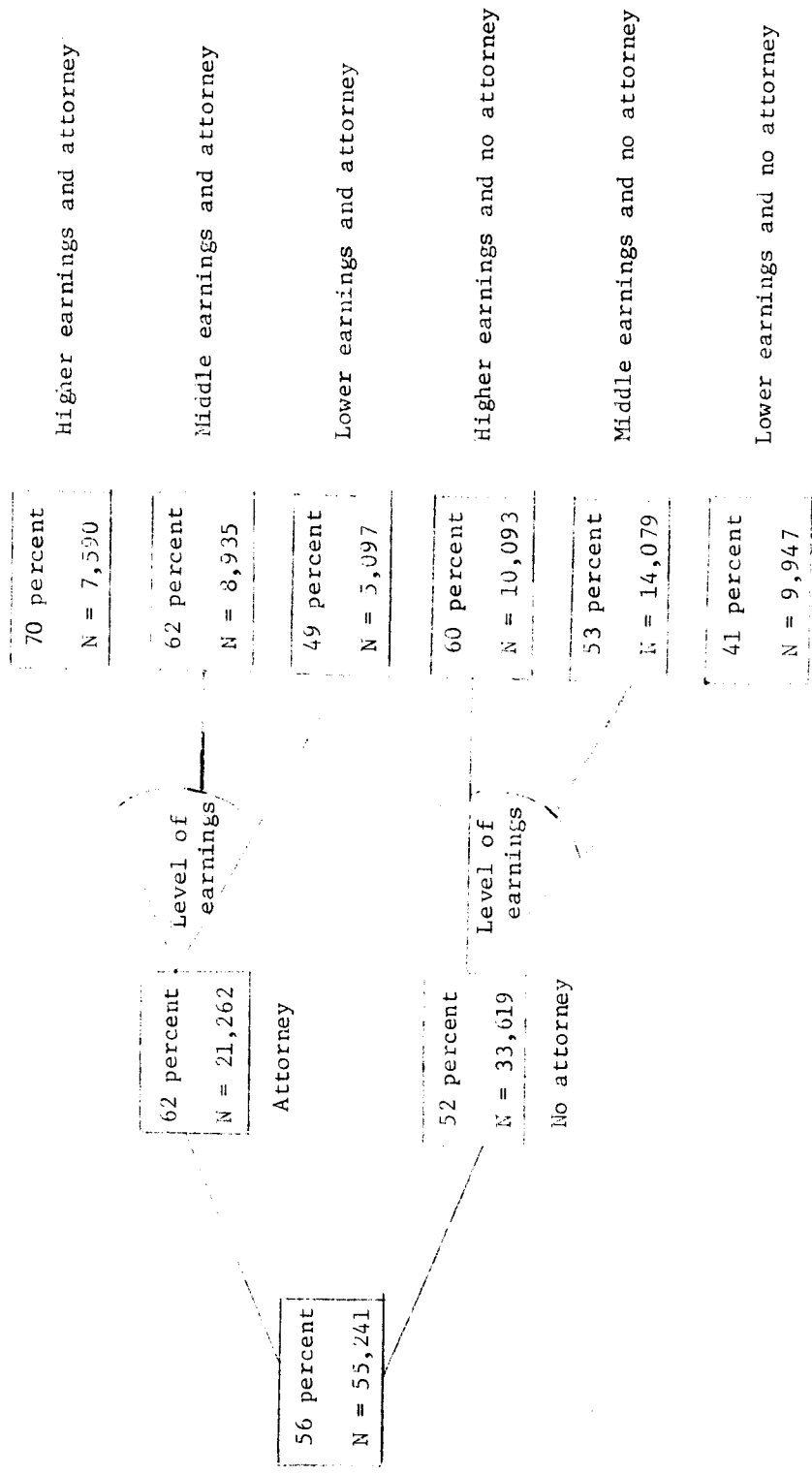
\*Variable definitions and base of percents are shown in table 5. Percent reflects proportion with attorneys. The data is based on 100 percent of the study population so that there is no sampling variability.

An important factor in obtaining reversals appears to be the assistance of an attorney. In 1970, over 60 percent of claimants with attorneys present at the hearing won reversals compared to less than 50 percent of those without attorneys (table 3). In 1975, when a far greater proportion of claimants in hearings had attorneys, there was a similar difference in outcomes favoring people who had attorneys.

The administrative data files do not contain evaluative information indicating in any fashion whether the higher reversal proportion for claimants with attorneys is due to special effort by the attorneys; to special reaction to the presence of attorneys by the decision-makers; or to special health characteristics or actions of claimants who obtain attorneys.

The data show that the use of attorneys seemed to result in greater reversals for all demographic groups, no matter what their age, sex, race, income, or region (table 5). However, the reversal proportion for those with highest

Chart 5.--Hearing reversals in FY 1975, by attorney's presence and level of predisability earnings



Source: Based on data and classifications presented in table 5. Higher earnings are average annual predisability earnings of \$6,000 or more in highest 3 years in decade before disability; middle earnings are \$3,000-\$5,999; and low earnings are under \$3,000. Data based on total study population: no sampling variability.



predisability earnings (\$6,000 or more) who had attorneys was 70 percent in comparison to about 40 percent reversed among those claimants with least earnings and no attorney (chart 5). In addition to the claimant's use of an attorney and witnesses, the administrative law judge may request professional assistance by calling in vocational and medical consultants. This was done in about 40 percent of the hearings. The greater reversal rate of attorneys occurred whether only the attorney was present or whether these other participants requested by BHA were also present (table 6).

#### Subsequent Earnings history

About one in three of disability claimants with unfavorable decisions at hearings in 1970 had later earnings in the following five years (table 7). However, only about one in ten had average annual earnings of \$3,000 or more in employment subject to social security taxes in this following five year period. Thus, the large majority after unfavorable decisions in hearings never returned to substantial employment.

By 1975, only one in five with unfavorable decisions in 1970 had earnings. Only one in ten had such substantial earnings that they amounted to \$3,600 or more (table 8).

The earnings experience of those denied initially in 1970 is quite similar to those denied after hearings. About 24 percent had no earnings in 1970-1975 among initial denied and about 22 percent had no earnings among those denied at hearings. A little over 20 percent had substantial earnings of \$3,600 or more in this period among both initial denied and those denied at hearings.

Women and those with low predisability earnings had less subsequent earnings after the hearing than did other claimants. Greater prior employment attachment would be expected to be a major influence in the extent of later return to substantial employment.

As would be expected, a much smaller proportion of older workers (age 50 and over) had earnings than the younger claimants (under age 50) after unfavorable disability hearings decisions. As the data for 1975 earnings show, only 5 percent of those who were age 50 or over in 1970 had earnings of \$3,600 or more during 1975, compared to over 15 percent of claimants under age 50 in 1970 who were denied at hearings.

#### Mortality

The extent of later deaths through 1976 was obtained from social security benefit records. These include claims for lump-sum death benefits (of up to \$255) for the surviving spouse or persons who pay for burial, including funeral directors; and claims by dependent survivors such as for children under age 18 or for disabled widows or widowers.

The use of this source of data on death must be viewed with caution, especially in connection with comparisons of later death between these claimants allowed benefits and those denied. The information on deaths of those awarded benefits may be expected to be more complete. Checks would generally be returned by survivors. Funeral home directors tend to file claims for lump-sums in almost every case of a deceased person where a relative is not filing for such a benefit. For most denied, especially those who had worked in covered employment

sufficiently to be insured, one would expect nearly complete reports of death through the social security benefit records. However, no indication of death would be recorded for those who died with no insured status through lack of sufficient work in covered employment, or for those whose social security identification was unknown.

By the end of 1976 approximately 15 percent had died among those with disability hearings in fiscal year 1970, in comparison to nearly 30 percent who had died among claimants with initial disability decisions in 1970 as shown in table 9. Thus, in terms of later mortality, the sub-group with hearings appeared to have had less severe conditions than all who had asked for disability decisions initially.

However, the difference in proportion dead in 1976 by level of review appears largely due to the fact that the initial claims include many more older middle-aged workers than those in hearings and that the initial claims may be expected to include many more clear-cut cases of persons with seriously progressive conditions.

Thus, among younger workers under age 50 in fiscal year 1970, the proportion dead by 1976 is not so different from those with hearings (11 percent) as those with initial decisions (16 percent). There is little difference in the percent that died by 1976 among all those with reconsiderations decisions or the sub-groups who were previously denied and requested hearings.

In terms of later mortality, the decisions to allow or deny a claim appeared to discriminate severity of subsequent disability to a great extent at

the initial level and even at the reconsideration level. Thus, 37 percent were dead by 1976 among those initially allowed, compared to only 12 percent of those denied; at the reconsideration level, about 25 percent were dead among those reversed, compared to 12 percent dead among those denied again on review.

However, at the hearings level, persons with claims reversed on affirmed appeared to have more similar subsequent death experience. Again, more persons reversed and allowed benefits were dead (18 percent) than those denied a third time (13 percent). However, clearly, either the disability decisions at hearings were far more ambiguous in terms of subsequent severe disability than all those in initial claims, or the outcome decision was less effective in discriminating severe disability, according to this crude measure of severity by subsequent mortality.

Men had about double the proportion with later deaths than had women among almost every category of claims by adjudicative level. Thus, about 18 percent of the group of male claimants at hearings were dead by 1976 in comparison to about 9 percent of female claimants. Thus, it appears that among disability claimants, as for the total population, men have earlier deaths than women. 20/

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20/ Death rates have been declining for both men and women allowed disability benefits. This has led to a question of whether it reflects a decline in deaths among the general population or is due to reduced severity among workers allowed benefits in recent years. Francisco Bayo, Stephen Goss, and Samuel Weissman, "Experience of Disabled-Worker Benefits Under OASDI, 1972-1976," Actuarial Study No. 75, June 1978, HEW Pub. No. (SSA) 78-11575, pg. 6.

In summary, the records of later earnings or reports of death showed little differences between those reversed or denied in disability hearings. Few returned to work. The proportions dead after several years were quite similar.

TABLE 1.--Number and percent of requests for hearings by type of claim, fiscal years 1960-1977

Type of claimant	1960	1965	1970	1975	1976	1977
<u>Number</u>						
Total.....	13,778	23,323	42,573	154,962	157,688	193,657
Disabled worker <sup>2/</sup> .....	9,832	20,217	34,901	74,780	77,812	(95,796)
Disabled widow <sup>3/</sup> .....	--	--	2,224	3,721	4,577	( NA )
Black lung <sup>4/</sup> .....	--	--	--	19,515	5,024	1,455
Retired and survivors.....	3,946	3,106	3,124	2,528	2,984	4,870
Health insurance.....	--	--	2,324	1,518	1,214	1,563
Supplemental security only.....	--	--	--	28,677	31,626	41,723
Concurrent supplemental security and disability.....	--	--	--	24,223	34,451	48,198
<u>Percent</u> <sup>1/</sup>						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Disabled worker <sup>2/</sup> .....	71.4	86.7	82.0	48.2	49.3	(49.5)
Disabled widow <sup>3/</sup> .....	--	--	5.2	2.4	2.9	( NA )
Black lung <sup>4/</sup> .....	--	--	--	12.5	3.2	.8
Retired and survivors.....	28.6	13.3	7.3	1.6	1.9	2.5
Health insurance.....	--	--	5.5	.9	.8	.8
Supplemental security only.....	--	--	--	18.5	20.1	21.5
Concurrent supplemental security and disability.....	--	--	--	15.6	21.8	17.8

<sup>1/</sup> Percent distributions are affected by different enactment dates of new programs: Disability benefits were enacted in 1956; health insurance in 1965; disabled widow and widowers benefit in 1967; black lung in 1969; and supplemental security in 1972.

<sup>2/</sup> Includes some disabled claims by dependent adults disabled since childhood. In 1977, the total includes disabled widows.

<sup>3/</sup> Includes some widowers. Not distinguished from total worker decisions in 1977.

<sup>4/</sup> Includes miners and widows of miners. Effective June 1973, new black lung claims were decided by the Department of Labor.

Source: Operational Analysis of the Bureau of Hearings and Appeals.

TABLE 2--Disability decisions by level of review and outcome, fiscal years 1960-77

Level of review	1960	1965	1970	1975	1976	1977
<u>Number 1/</u>						
Initial.....	373,500	524,700	765,800	1,341,600	1,272,300	1,279,100
Reconsideration.....	35,700	61,500	97,700	237,400	238,900	234,100
Hearings <u>4/</u> .....	15,000	20,100	33,700	75,500	113,200	140,700
<u>Percent increase since 1960</u>						
Initial.....	100.0	140.4	205.0	359.1	340.6	342.4
Reconsideration.....	100.0	172.2	273.6	664.9	669.1	655.7
Hearing.....	100.0	134.0	224.7	503.3	754.7	938.0
<u>Percent allowed</u>						
Initial <u>2/</u> .....	53.4	47.5	43.8	40.3	39.2	34.9
Reconsideration <u>2/</u> .....	44.5	31.2	33.0	33.4	29.0	22.3
Hearings <u>3/</u> .....	14.0	29.9	43.6	49.3	45.8	48.0
<u>Percent request review</u>						
Percent of reconsideration to initial denials.....	20.5	22.3	22.6	29.6	30.9	28.1
Percent of hearings to reconsideration denials	75.8	47.5	51.4	47.8	66.8	77.4
<u>Percent allowed due to review <u>5/</u></u>						
Percent of allowances due to reversals at reconsideration	7.3	6.9	8.4	12.0	11.2	9.2
Percent of allowances due to reversals at hearings <u>2/</u>	1.0	2.2	3.8	5.7	8.4	11.9

1/ Included are mainly claims for disabled worker benefits. There are also a small number of decisions of disabled dependents, including disabled widows, widowers, and dependent adults disabled since childhood. Also included are claims for persons denied for lack of insured status, as well as those whose hearing centered on severity of disability insurance benefits. Not shown here are appeals of hearing affirmations to the appeals council and federal courts. There were about 25,000 appeals of hearing decisions in the appeals council and 6,942 district court decisions in 1977. In 1977 there were about 56,000 widow decisions and 43,000 dependent adults among the 1,279,000 initial decisions. Fiscal year 1977 ended in September, prior years ended in June.

2/ The number of disabled widow and widowers and dependent adults disabled since childhood are partially estimated for 1975-77.

3/ From 1975 the hearing allowances include an unknown number of concurrent SSI and DI claims where the reversal was only for the SSI benefit. Those not reversed include both affirmations of the prior decision (47,000 in 1976) and dismissals (13,900 in 1976). The 1977 data includes 95,400 DI decisions of which 46,300 were reversed, and 45,400 concurrent decisions of which 21,100 were reversed. Dismissed were 10,900 DI decisions and 5,500 concurrent DI-SSI decisions.

4/ Includes some cessation decisions of persons entitled to benefits and appealing decisions to end benefits because of recovery. See table 3, "Appeal by Denied Disability Claimants," Staff Paper No. 23, Office of Research and Statistics, Social Security Administration, 1976.

5/ Base is composed of sum of allowances due to initial reconsideration and hearings decisions.

TABLE 3--Outcome of decision by level of adjudication and by demographic characteristics, fiscal year 1975, and outcome of hearing decisions, fiscal year 1970

Demographic and earnings characteristics	1975 decisions by level of review						1970 hearings decisions	
	Percent distribution			Percent allowed of total			Percent distribution	Percent allowed of total
	Initial	Reconsideration	Hearing	Initial	Reconsideration	Hearing		
Total number....	968,122	213,301	55,241	50.0	34.0	55.7	26,825	50.1
Total percent....	100.0	100.0	100.0	--	--	--	100.0	--
<u>Age 2/</u>								
Under 40 .....	20.6	20.8	15.2	32.9	27.8	58.0	12.5	52.9
40-49 .....	18.0	23.3	25.9	38.3	26.2	55.8	26.9	49.6
50-59 .....	34.3	39.0	43.1	52.6	35.4	54.5	42.7	49.2
60 and over .....	27.1	17.0	15.7	67.6	48.8	56.6	18.0	50.9
<u>Sex</u>								
Male .....	65.0	63.2	63.5	52.6	36.0	56.8	67.9	50.6
Female .....	34.8	36.6	36.3	45.2	30.5	53.7	32.0	49.1
<u>Race</u>								
White .....	79.0	78.5	80.7	52.6	35.8	57.5	82.6	51.6
Black .....	18.7	19.7	17.4	39.5	27.1	47.5	15.7	43.4
Other .....	1.5	1.1	1.3	46.8	28.6	50.6	1.3	37.5
Unknown .....	.8	.7	.5	45.7	34.4	55.1	.3	41.3
<u>SSA Region 5/</u>								
Boston .....	4.8	4.0	3.4	55.1	38.4	51.5	2.9	45.6
New York .....	14.9	10.7	11.1	54.8	39.2	47.3	11.8	43.6
Philadelphia .....	11.0	12.1	12.0	47.3	28.3	59.4	12.3	53.5
Atlanta .....	18.4	21.4	25.4	46.7	30.0	55.3	23.8	49.1
Chicago .....	19.1	18.5	15.2	51.5	35.5	55.7	14.8	54.7
Dallas .....	10.0	11.8	14.1	44.4	35.7	55.1	13.0	48.5
Kansas City .....	4.1	3.7	3.5	56.2	40.3	58.3	3.3	49.0
Denver .....	2.1	2.0	1.3	49.8	34.8	62.4	2.1	42.7
San Francisco .....	12.5	12.9	10.7	49.4	33.9	60.5	12.0	52.6
Seattle .....	3.1	2.9	3.1	51.8	35.9	62.2	3.5	51.3
<u>Representation</u>								
Attorney .....	--	--	39.1	--	--	61.9	21.7	61.5
No attorney .....	--	--	60.4	--	--	51.7	78.3	47.0
<u>Average predisability earnings 3/</u>								
None .....	2.6	2.6	2.1	38.1	22.6	28.6	3.4	28.9
\$1 - \$999 .....	5.5	4.3	3.7	34.4	27.9	36.8	7.2	32.3
\$1,000-\$2,999 .....	20.6	22.5	20.6	40.2	27.2	47.4	32.2	45.1
\$3,000-\$5,999 .....	36.4	40.2	41.7	46.8	33.2	56.4	55.2	56.1
\$6,000 and over .....	35.0	30.3	32.0	62.4	41.9	64.1	1.9	67.8
<u>Predisability Quarters of Coverage 4/</u>								
None .....	2.3	2.5	2.0	37.5	22.9	29.1	3.1	28.8
1-15 .....	10.5	9.4	7.4	32.0	26.5	37.0	10.7	31.5
16-23 .....	12.5	14.1	14.2	36.3	25.5	47.0	15.2	42.6
24-31 .....	17.7	18.8	19.9	43.1	28.3	54.3	19.6	51.0
32-39 .....	31.1	33.0	34.7	52.5	36.5	60.0	31.3	55.7
40 .....	25.8	22.2	21.8	66.9	44.8	64.6	20.1	59.4

1/ Persons with disability decision in year. Initial and reconsideration decisions based on State agency decisions for disabled worker claims. Hearing decisions include decisions on workers and some dependent disabled adults claiming disability since before age 18; and excludes remands, dismissals, disabled widow or widower claims.

2/ In year of decision.

3/ Average earnings based on highest 3 years of earnings in 10 year period ending 2 years before year of alleged onset of disability. If onset date unavailable, year of application used. No onset date available for hearings decision unless there was an initial or reconsideration decision in same year, so generally, period for hearings is 10 years ending 2 years before hearing application date. Limits of earnings reported depend on taxable minimums for social security, including \$4,800 in 1959, \$6,600 in 1966, \$9,000 in 1972, and \$10,800 in 1973-1974. If workers had only 1 or 2 years of earnings, the total is divided by 3.

4/ Quarters of earnings with \$50 or more in employment covered by social security taxes. The 10 year period is the same as the 10 year period for the average earnings classification.

5/ The social security administrative regions are based on these groupings: the Boston region includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; the New York region includes New York, New Jersey, Puerto Rico, Virgin Islands; Philadelphia region includes Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia; Atlanta region includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee; Chicago region includes Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin; Dallas region includes Arkansas, Louisiana, New Mexico, Oklahoma, Texas; Kansas City region includes Iowa, Kansas, Missouri, Nebraska; Denver region includes Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming; the San Francisco region includes Arizona, California, Guam, Hawaii, Nevada; the Seattle region includes Alaska, Idaho, Oregon, and Washington. The standard errors for regional outcomes are shown in table C of the technical note.



Table 4.--Requests for reconsideration of initial disabled worker denials in 1975 by demographic and earnings characteristics

Demographic and earnings characteristics	Percent distribution			Percent requesting reconsideration of total denied
	Total denied 1/	Requested reconsideration 2/	No reconsideration	
Number.....	483,579	173,235	310,344	35.8
Total percent.....	100.0	100.0	100.0	--
<u>Age in 1975</u>				
Under 40 .....	27.6	23.5	29.9	30.5
40 - 49.....	22.3	24.5	21.0	39.5
50 - 59.....	32.6	37.9	29.6	37.9
60 - 64.....	17.5	14.0	19.5	28.6
<u>Sex</u>				
Men.....	61.5	64.0	60.2	37.3
Women.....	38.2	35.8	39.5	33.6
<u>Race</u>				
White.....	74.9	77.0	73.7	36.8
Black.....	22.6	20.8	23.6	33.0
Other.....	1.6	1.5	1.7	33.0
Unknown.....	.9	.7	1.0	29.3
<u>SSA Region 5/</u>				
Boston.....	4.3	3.5	4.8	28.7
New York.....	13.5	10.5	15.3	27.2
Philadelphia.....	11.6	11.1	11.8	34.4
Atlanta.....	19.6	23.3	17.5	42.6
Chicago.....	18.5	18.8	18.4	36.3
Dallas.....	11.1	12.2	10.5	39.4
Kansas City.....	3.6	3.5	3.7	34.7
Denver.....	2.1	1.9	2.2	32.0
San Francisco.....	12.6	12.5	12.7	35.4
Seattle.....	3.0	3.0	3.0	35.6

Table 4--Requests for reconsideration of initial disabled worker denials in 1975 by demographic and earnings characteristics--Continued

Demographic and earnings characteristics	Percent distribution			Percent requesting reconsideration of total denied
	Total denied <u>1/</u>	Requested reconsideration <u>2/</u>	No reconsideration	
<u>Predisability quarters of coverage <u>3/</u></u>				
None.....	2.9	1.4	3.9	16.9
1 - 15.....	14.3	9.2	17.2	23.0
16 - 23.....	16.0	13.6	17.3	30.5
24 - 31.....	20.1	19.9	20.3	35.4
32 - 39.....	29.5	33.0	27.1	41.1
40 .....	17.1	22.1	14.3	46.2
<u>Average predisability earnings <u>4/</u></u>				
None in prior 10 years.....	3.2	1.5	4.1	16.9
1 - 999.....	7.2	4.0	8.9	20.1
1000 - 2999.....	24.6	21.5	26.3	31.3
3000 - 5999.....	38.7	40.5	37.7	37.4
6000 and over.....	26.3	32.5	22.9	44.3

1/ Initial State agency denial decisions in 1975

2/ Reconsideration decisions in 1975 or 1976

3/ Based on earnings of \$50 or more in covered employment in 10 year period ending 2 years before year of onset of disability or, if not available, from year of application.

4/ Average earnings in 3 highest years in 10 year period described in footnote 3.

5/ See table 3 for groupings of States by regions. See table C in technical note for standard errors of regional outcomes.

Table 5 --Outcome of disability hearing by recent work attachment, representation at hearing and demographic and employment characteristics, fiscal year 1975 decisions

Demographic and employment characteristics	Recency of work experience 1/				Representation 2/		Percent with attorney of total decisions		
	More recent work (24 of 40 quarters or more)	Less recent work (less than 24 of 40 quarters)	More recent work (24 of 40 quarters or more)	Less recent work (less than 24 of 40 quarters)	Percent distribution				
					Attorney	No attorney			
Number.....	42,026	13,215	60.2	41.4	21,622	33,609	61.9	51.7	39.1
Percent down.....	100.0	100.0	--	--	100.0	100.0	--	--	--
<b>Age 3/</b>									
Under 40.....	13.1	21.6	60.7	52.9	16.8	14.1	63.0	54.3	43.3
40 - 49.....	27.2	22.0	59.3	42.0	27.9	24.7	61.1	51.9	42.1
50 - 59.....	44.3	39.5	59.3	37.3	42.2	43.8	62.1	49.7	38.3
60 - 64.....	15.4	16.9	63.9	35.4	13.2	17.4	61.5	54.2	32.8
<b>Sex</b>									
Male.....	67.2	51.8	60.6	41.3	65.8	62.0	62.8	52.7	40.6
Female.....	32.7	47.9	59.3	41.5	33.9	37.9	60.2	49.9	36.6
<b>Race</b>									
White.....	81.6	78.1	62.1	42.7	82.6	79.5	63.5	53.6	40.0
Black.....	16.9	19.2	51.1	37.3	15.5	18.7	54.5	44.0	34.8
Other.....	1.2	1.7	54.0	43.0	1.4	1.3	54.8	47.7	40.6
Unknown.....	.4	1.0	62.3	46.6	.5	.5	60.2	51.5	41.4
<b>SSA Region 5/</b>									
Boston.....	3.4	3.4	57.8	31.3	3.2	3.5	58.7	47.3	36.7
New York.....	10.0	14.6	53.8	33.6	10.5	11.5	55.0	42.7	36.9
Philadelphia.....	12.6	10.0	63.1	44.0	11.3	12.4	66.7	55.2	37.0
Atlanta.....	26.3	22.4	58.8	42.4	26.3	24.8	62.2	50.7	40.5
Chicago.....	15.2	15.5	60.3	39.6	14.9	15.4	60.5	62.0	38.3
Dallas.....	14.2	14.0	59.1	42.3	14.2	14.1	59.8	52.0	39.3
Kansas City.....	3.5	3.4	62.2	45.4	2.9	3.8	63.0	55.9	33.3
Denver.....	1.3	1.4	66.7	49.5	1.4	1.3	69.3	57.4	42.1
San Francisco.....	10.5	11.3	65.3	46.3	11.0	10.5	66.2	56.6	40.1
Seattle.....	3.0	3.6	66.8	50.0	4.2	2.5	64.9	59.3	52.4
<b>Predisability Income 4/</b>									
None.....	0	9.1	0	28.7	1.8	2.4	33.8	26.1	33.2
\$1 - 999.....	.7	13.3	49.3	34.7	3.1	4.0	41.7	34.4	33.0
1,000 - 2,999.....	13.4	43.6	53.1	41.7	18.7	21.8	52.7	44.5	35.5
3,000 - 5,999.....	45.0	30.8	58.1	48.2	41.3	41.9	62.3	52.6	38.8
6,000 - and over.....	40.9	3.2	64.2	57.9	35.1	30.0	69.5	60.0	43.0

1/ Based on earnings of \$50 or more in covered quarters of social security coverage in 10 year period ending 2 years before year of onset date available from initial and reconsideration decisions in same year, or, if not, from year of hearing application.

2/ Attorney involvement in hearing.

3/ In year of decision.

4/ Average earnings in 3 highest years in 10 year period described in footnote 1/

5/ See footnote 5, table 3 for composition.

TABLE 6.--Attorneys and other consultants in disability hearings by outcome, fiscal year 1970 and 1975.

Participants	1975			1970		
	Number	Percent down	Percent reversed	Number	Percent down	Percent reversed
Total <u>1/</u>	55,603	100.0	55.6	26,843	100.0	50.1
No outside participants..	18,820	33.8	50.2	14,570	54.2	45.5
Attorney present.....	21,265	38.2	61.8	5,539	20.6	62.1
Attorney only.....	14,199	25.5	62.3	3,499	13.0	60.1
All other participants...	15,518	27.9	53.6	6,734	25.0	50.0
Vocational consultants only.....	7,678	13.8	48.7	3,595	13.3	44.3
Medical consultants only.....	796	1.4	61.3	460	1.7	61.0

1/ Includes some claims with multiple decisions in same period. The total number of individuals with hearing decisions was 55,160 in 1975.

TABLE 7.--Subsequent earnings 1971-1975 after denial in fiscal year 1970 by demographic characteristics and level of appeal

Demographic characteristics and level of appeal	Percent distribution by average earnings, 1971-1975 <sup>1/</sup>						
	Number	Total	None	1 - 599	600 - 3599	3600 - 5999	6000 and over
<u>Hearing denials</u>							
Total.....	13,385	100.0	62.5	12.2	15.9	5.1	4.3
<u>Sex</u>							
Men.....	8,998	100.0	59.0	12.7	16.5	5.8	6.0
Women.....	4,385	100.0	69.7	11.2	14.5	3.7	0.9
<u>Age</u>							
Under 50.....	5,316	100.0	50.2	13.9	20.8	7.5	7.6
50 and over.....	8,069	100.0	70.6	11.1	12.6	3.5	2.1
<u>Predisability earnings <sup>2/</sup></u>							
Under \$3,600.....	8,134	100.0	67.1	13.3	15.5	3.0	1.0
\$3,600 and over.....	5,251	100.0	55.4	10.5	16.4	8.3	9.4
<u>Reconsideration denials</u>							
Total.....	54,318	100.0	59.4	12.3	16.9	5.6	5.8
<u>Initial denials</u>							
Total.....	235,195	100.0	50.2	13.4	20.3	7.5	8.6
Total with earnings in every year, 1971-75							
<u>Hearing denials</u>							
Total.....	1,620	100.0	0	1.0	36.4	29.1	33.5
<u>Sex</u>							
Men.....	1,222	100.0	0	.9	30.5	27.2	41.4
Women.....	398	100.0	0	1.5	54.3	35.2	9.0
<u>Age</u>							
Under 50.....	994	100.0	0	.8	33.2	27.7	38.3
50 and over.....	626	100.0	0	1.4	41.4	31.5	25.7
<u>Predisability earnings <sup>3/</sup></u>							
Under \$3,600.....	700	100.0	0	2.1	59.0	28.1	10.7
\$3,600 and over.....	920	100.0	0	.2	19.1	29.9	50.8
<u>Reconsideration denials</u>							
Total.....	7,810	100.0	0	.9	33.8	27.9	37.4
<u>Initial denials</u>							
Total.....	44,596	100.0	0	.6	29.7	26.9	42.8

<sup>1/</sup> Reported through 1976 on earnings record. Many with no earnings had died, as shown in table 9.

<sup>2/</sup> Average earnings in 3 highest years in 10-year period ending 2 years before year of onset of year of application.

TABLE 8.--Subsequent earnings in 1975 after denial in fiscal year 1970 by demographic characteristics and level of appeal.

Demographic Characteristics and level of appeal	Number	Percent distribution by earnings in 1975 <sup>1/</sup>					
		Total	None	1-599	600-3,599	3,600-5,999	6,000 and over
Hearing denials							
Total.....	13,385	100.0	80.6	2.6	7.1	3.7	6.0
<u>Sex</u>							
Men.....	8,998	100.0	79.1	2.8	6.8	3.6	7.7
Women.....	4,385	100.0	83.9	2.2	7.5	3.9	2.5
<u>Age</u>							
Under 50.....	5,316	100.0	70.7	3.7	9.5	5.5	10.6
50 and over.....	8,069	100.0	87.2	1.0	5.5	2.5	3.0
<u>Predisability earnings <sup>2/</sup></u>							
Under \$3,600.....	8,134	100.0	84.5	2.9	6.9	3.4	2.3
\$3,600 and over.....	5,251	100.0	74.6	2.2	7.3	4.2	11.7
Reconsideration denials							
Total.....	54,318	100.0	77.6	2.6	7.7	4.2	7.8
Initial denials							
Total.....	235,318	100.0	72.3	3.2	9.0	4.7	10.7

<sup>1/</sup> Reported through 1976 on earnings record. Many with no earnings had died, as shown in table 9.

<sup>2/</sup> Average earnings in three highest years in 10 year period ending 2 years before year of onset or year of hearing application.

TABLE 9.--Death by 1976 of disability claimants with decisions in Fiscal Year 1970 by level of adjudication, outcome, age and sex

Outcome by sex	Age <u>1/</u>					
	Total		Under 50		Age 50-64	
	Number	Percent died <u>2/</u>	Number	Percent died	Number	Percent died
<u>Total men and women</u> <sup>3/</sup>						
Initial .....	475,756	27.4	166,728	16.4	309,029	33.3
Allowed.....	288,104	37.3	85,151	25.6	202,955	42.3
Denied.....	187,651	12.1	81,577	6.9	106,074	16.1
Reconsideration.....	76,007	17.6	29,933	10.8	46,074	21.9
Reversed.....	33,094	24.5	11,430	15.3	21,663	29.4
Affirmed.....	42,913	12.1	18,502	8.1	24,410	15.3
Hearing.....	26,825	15.2	10,839	10.6	15,986	18.3
Reversed.....	13,440	17.5	5,460	12.1	7,980	21.1
Affirmed.....	13,385	12.9	5,379	9.1	8,006	15.3
<u>Men</u>						
Initial.....	334,075	31.1	123,318	17.6	210,757	38.9
Allowed.....	210,919	40.5	64,269	26.3	146,651	46.7
Denied.....	123,155	14.9	59,049	8.2	64,106	21.1
Reconsideration.....	50,794	20.7	22,098	12.0	28,695	27.5
Reversed.....	23,742	27.3	8,828	15.8	14,914	34.0
Affirmed.....	27,051	15.1	13,270	9.4	13,780	20.5
Hearing.....	18,206	18.1	7,890	12.1	10,316	22.8
Reversed.....	9,208	20.5	4,032	13.4	5,176	26.0
Affirmed.....	8,998	15.7	3,858	10.7	5,140	19.5
<u>Women</u>						
Initial.....	140,491	18.7	42,943	12.9	97,548	21.3
Allowed.....	76,413	28.6	20,655	23.3	55,758	30.6
Denied.....	64,077	6.7	22,288	3.3	41,789	8.7
Reconsideration.....	25,011	11.0	7,715	7.4	17,296	12.7
Reversed.....	9,287	17.5	2,569	13.4	6,718	19.2
Affirmed.....	15,723	7.2	5,145	4.4	10,578	8.5
Hearing.....	8,571	8.9	2,916	6.8	5,655	9.8
Reversed.....	4,207	10.8	1,409	8.6	2,798	12.0
Affirmed.....	4,364	6.9	1,507	5.1	2,857	7.8

1/ Age in 1970.

2/ Death according to survivor benefit claims to social security. These include lump-sum death payments, which are expected to be requested for nearly all who die and have a social security account number by relatives or funeral home directors.

3/ Includes 2400 records with sex not shown.

## TECHNICAL NOTE

### Data Sources

The study population is comprized of applicants for disabled worker insurance benefits whose claims for benefits were decided in fiscal years 1970 and 1975 at the initial, reconsideration, and hearings levels. Not included in the study population are claimants for dependent's disability benefits as disabled widows or widowers; technical denials for lack of insured status; appeals after hearings for appeals council and federal court decisions; and dismissal or remand actions by hearing examiners.

The data source for the population with hearing decisions was the management information record (503) file of the decisions of the Bureau of Hearings and Appeals.

The source for information on initial and reconsideration decisions was a file of records of disability decisions (D-cards) of the Bureau of Disability Insurance.

An extract of decisions in fiscal years 1970 and 1975 were drawn from these files to identify the study population. As shown in table A, records of decisions that were duplicates, contained garbled data, or had bad account numbers, were excluded.

All of the hearings and a sample of the initial and reconsideration records were then matched with the social security earnings summary records, which contain information on demographic characteristics, earnings taxed under the social security program, and notices of death; and with benefit history records.



To obtain comparative information on persons who request review and those who do not, the records of the initial denials in 1975 were matched with D-records of reconsideration decisions in 1975 and 1976. Similar longitudinal data distinguishing those who request hearings after reconsideration denial from those who did not was not available for this report.

The hearings decisions do include a small proportion of dependent claims for disabled adult children and appeals of denials for lack of insured status; the initial and reconsideration decisions are based only on State agency medical decisions on worker claims with insured status at some point in the past.

In order to identify a population of people, rather than cases, only the initial decision at each level was included in the study when people had multiple decisions in the same year.

#### Study Limitations

The data are descriptive of characteristics and case outcome of decisions in the past. The data do not contain evaluative information indicating factors influencing the decisions, nor appropriateness of the decisions based on review of the evidence or appraisal of severity of disability.

Highly complex assessments of severity and of the nature of the specific issues in the decisions would be needed to evaluate the appropriateness of any decision. Complex demonstrations of alternate procedures would be needed to understand what the likely effects would be of changes in the

administration of the program or the appeals system, such as closing initial case files for reviews, or extending current remand procedures, or providing more direct claimant participation in initial levels of the decision process as in the hearing decision.

Since the data on earnings are based on earnings taxed for social security purposes, it may understate the actual upper limits of earnings.

#### Sampling Variability

One hundred percent of the study population of individuals with disability hearing decisions in 1970 and 1975 are used for most of the tabular presentations in this report, and there is no sampling variability. For use of a special interaction analysis, as shown in chart 3, a sub-sample of hearings in 1975 was drawn, including one in every eight records. The sampling variability of this exploratory analysis may be derived from the standard errors shown in table B of this technical note.

For data processing convenience, the far larger study populations of individuals with initial and reconsideration decisions were reduced to random samples stratified by state. The data presented are weighted up to the study population. For estimates of sampling variability on initial and reconsideration decisions, see estimated standard errors in table B.

For interval estimates, the standard error is used to construct an interval with a prescribed confidence that the interval includes the universe value of the average of all possible samples drawn from the same universe. In about 68 percent of the samples from a population, the population value would be included in the interval from one standard error below the sample estimate to one standard error above it--referred to as the 68 percent confidence or one-standard-error interval. In about 95 percent of the samples from a population, the population value would be included in the interval from two standard errors below the sample estimate to two standard errors above it--the 95 percent confidence or two-standard-error interval. The 99 percent confidence interval extends approximately two and one-half standard errors above and below the sample estimate.

The standard error is also useful in testing the significance of the difference between two statistics--that is, the confidence one can have that the sample difference in means, percentages, or estimates is a real difference and not merely due to chance. To test this assumption, standard error of the difference can be calculated from the square root of the sum of the squared standard errors of each sample estimate. If the observed difference is as large as one standard error of the difference, it is statistically significant at the 68 percent confidence level; if as large as two standard errors, it is significant at approximately the 95 percent level; and if as large as two and one-half standard errors it is significant at about the 99 percent level.

Table B gives approximate standard errors for the total number of persons estimated from the sample to have certain characteristics, and approximate standard errors for estimated percentages. Linear interpolation may be used to obtain values not specifically shown. In order to receive standard errors that are applicable to a variety of estimates, a number of assumptions and approximations were required. As a result, the tables of standard errors provide an indication of the order of magnitude rather than the precise standard error for any specific attribute.

As the standard errors of the regions were affected by the stratification by state in different ways than the other characteristics, specific standard errors have been calculated for the numbers and percents cited by region for initial and reconsideration decisions in table 3 and 4, and these are shown in table C.

In order to avoid processing duplication in records for persons with several decisions, a hierarchical selection was developed, giving each person one probability of selection, independent of the number or type of decisions made on their case in one year. This means that weighted estimates of the number of people are made by inflating the sample by the reciprocal of the probability

of selection. The hierarchical order which determined the strata in which a person and all of their decisions were placed was (1) hearing decisions, (2) reconsideration decisions, and (3) initial decisions.

The outcome of this sample design is presented in table A, showing total decisions made in the period, the study population of people who had one or more decisions made in the period, and the actual sample drawn, based on State stratification and the hierarchical selection by decisions.

#### The Automatic Interaction Detector (AID) Program

In this multivariate statistical technique, which is essentially a repeated analysis of variance, the objective is to select sequentially the variables most correlated with the dependent variable. <sup>1/</sup> To do this, the classifications of each characteristic are combined into the two subgroups associated with the greatest differences in the dependent variable; then, the single characteristic whose binary groups are associated with the greatest variance is selected as a major explanatory variable. All other characteristics are then associated with each of the two subgroups and these two are further divided into the mutually exclusive subgroups which account for additional variation (appendix table D). These comparisons are continued under a sequential branching procedure that is much like a decision tree.

Branching ceases when various limiting conditions are met. The major limiting condition is that the overall variance must be significantly reduced by the split. In this case, the "between-group sum of squares"

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<sup>1/</sup> John A. Sonquist, Elizabeth L. Baker, and James N. Morgan, Searching for Structure, AID III, (Ann Arbor: Institute for Social Research, University of Michigan), 1973.

of subgroups (k) which are considered for further splits must not be less than 0.5 percent of the original "total sum of squares" of deviations of observations in the entire group (T) about the mean: that is,  $BSS_k > .006 TSS_T$ .

The program has been developed for samples much smaller than those in this study. A subsample of one-eighth of the hearings claimants whose records were used in the tabulations was obtained for the exploratory AID analyses, as shown in table C, with inflation to the total study population of hearings decisions in 1975.

TABLE A.--Derivation of study population from record files.

	<u>FY 1975 file</u>	<u>FY 1970 file</u>
Input: Disability determination records (D cards)	1,494,565	1,102,229
- nonworkers	125,494	153,524
- not initial or recon (hearing reversals)	46,466	24,263
- bad account number	--	3
- not a State agency decision	122,996	183,929
Input: Hearings workload records (503 records)	100,994	39,155
- not DI claim	35,520	7,443
- garbled data records	673	--
- not hearings (appeals or court decision)	3,305	2,345
- not allowance or denial (remand, dismiss, etc.)	5,893	2,521
- duplicate records	3,446	14
Output: Total decisions (after above exclusions)	1,251,719	642,151
Initial	981,065	527,068
Reconsideration	251,394	88,251
Hearings	55,260	26,832
Output: Total study population (excludes multiple decisions)		
Initial	968,122	524,831
Reconsideration	213,301	87,798
Hearings	55,241	26,825

TABLE A.--Derivation of study population from record files--Continued

Output: Sample drawn	<u>FY 1975 file</u>	<u>FY 1970 file</u>
Initial	28,416(2.9 per- cent)	26,507 (5.0 percent)
Reconsideration	15,947(7.5 per- cent)	12,809 (14.5 percent)
Hearings	55,241 (100 per- cent)	26,825 (100 percent)
Sub-sample hearings in AID analysis	6,905(12.4 per- cent)	6,706 (24.9 percent)



TABLE B.--Approximate standard error for estimated numbers and for estimated percentages

Estimated number or base of percentage	Standard error of number	Standard error of selected percentages											
		1 or 99	2 or 98	5 or 95	10 or 90	20 or 80	20 or 70	40 or 60	50				
<u>Initial decisions</u>													
2,500	365	1.46	2.05	3.19	4.39	5.86	6.71	7.17	7.32				
5,000	516	1.03	1.45	2.26	3.11	4.14	4.74	5.07	5.18				
7,500	631	.84	1.18	1.84	2.54	3.38	3.87	4.14	4.23				
10,000	728	.73	1.02	1.60	2.20	2.93	3.35	3.59	3.66				
25,000	1,142	.46	.65	1.01	1.39	1.85	2.12	2.27	2.31				
50,000	1,595	.33	.46	.71	.98	1.31	1.50	1.60	1.64				
75,000	1,927	.27	.37	.58	.80	1.07	1.22	1.31	1.34				
100,000	2,195	.23	.32	.50	.69	.93	1.06	1.13	1.16				
250,000	3,168	.15	.20	.37	.44	.59	.67	.72	.73				
500,000	3,654	.10	.14	.23	.31	.41	.47	.51	.52				

TABLE B.--Approximate standard error for estimated numbers and for estimated percentages --Continued

Estimated number or base of percentage	Standard error of number	Standard error of selected percentages											
		1 or 99	2 or 98	5 or 95	10 or 90	20 or 80	20 or 80	40 or 60	50				
Reconsideration decisions													
2,500	223	.90	1.26	1.96	2.70	3.60	4.13	4.41	4.50				
5,000	396	.63	.89	1.39	1.91	2.55	2.92	3.12	3.18				
7,500	383	.52	.73	1.13	1.56	2.08	2.38	2.55	2.60				
10,000	439	.45	.63	.98	1.35	1.80	2.06	2.21	2.25				
25,000	668	.28	.40	.62	.85	1.14	1.31	1.40	1.42				
50,000	880	.20	.28	.44	.60	.81	.92	.99	1.01				
75,000	992	.16	.23	.36	.49	.66	.75	.81	.82				
100,000	1,036	.14	.20	.31	.43	.57	.65	.70	.71				

TABLE B.--Approximate standard error for estimated numbers and for estimated percentages --Continued.

Estimated number or base of percentage	Standard error of number	Standard error of selected percentages									
		1 or 99	2 or 98	5 or 95	10 or 90	20 or 80	20 or 70	40 or 60	50		
<u>Sub-samples of hearings decisions</u>											
Sub-sample of 1970 hearings decisions (Chart 11)											
2,500	82	.32	.48	.75	1.04	1.38	1.58	1.69	1.73		
5,000	110	.24	.34	.53	.73	.98	1.12	1.20	1.22		
7,500	127	.20	.28	.43	.60	.80	.92	.98	1.00		
10,000	137	.17	.24	.37	.52	.69	.79	.84	.86		
25,000	137	.10	.15	.23	.32	.43	.50	.53	.54		
Sub-sample of 1975 hearings decisions (Chart 6)											
2,500	129	.52	.74	1.15	1.59	2.12	2.42	2.59	2.65		
5,000	178	.37	.52	.81	1.12	1.49	1.71	1.83	1.87		
7,500	212	.30	.43	.67	.92	1.23	1.41	1.50	1.53		
10,000	239	.26	.37	.57	.79	1.05	1.21	1.29	1.32		
25,000	310	.16	.23	.36	.50	.66	.76	.82	.83		
50,000	310	.11	.16	.25	.35	.47	.54	.58	.59		

TABLE C.--Approximate standard errors for estimated percentages of regional outcomes, table 3 and table 4

Region	Table 3					Table 4			
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 1	Column 2	Column 3	Column 4
Boston.....	4.8 ± 0.01	4.0 ± (a)	55.1 ± 1.00	38.0 ± 1.21	4.3 ± 0.09	3.5 ± 0.12	4.8 ± 0.14	28.7 ± 0.80	
New York.....	14.9 ± 0.03	10.7 ± (a)	54.3 ± 1.32	39.4 ± 1.53	13.5 ± 0.39	10.5 ± 0.50	15.3 ± 0.58	27.2 ± 1.05	
Philadelphia...	11.0 ± 0.03	12.1 ± (a)	47.3 ± 1.03	23.9 ± 0.99	11.6 ± 0.22	11.1 ± 0.34	11.8 ± 0.32	34.4 ± 0.87	
Atlanta.....	18.4 ± 0.03	21.4 ± (b)	46.7 ± 0.64	26.7 ± 0.69	19.6 ± 0.20	23.3 ± 0.34	17.5 ± 0.30	42.6 ± 0.56	
Chicago.....	19.1 ± 0.04	18.5 ± (b)	51.5 ± 0.79	32.8 ± 1.01	18.5 ± 0.28	18.8 ± 0.43	18.4 ± 0.41	36.3 ± 0.69	
Dallas.....	10.0 ± 0.03	11.8 ± (a)	44.4 ± 0.94	32.7 ± 1.11	11.1 ± 0.18	12.2 ± 0.29	10.5 ± 0.27	39.4 ± 0.77	
Kansas City....	4.1 ± 0.01	3.7 ± (b)	56.2 ± 1.00	36.2 ± 1.34	3.6 ± 0.08	3.5 ± 0.11	3.7 ± 0.12	34.7 ± 0.84	
Denver.....	2.1 ± 0.01	2.0 ± (b)	49.8 ± 0.91	29.7 ± 1.07	2.1 ± 0.04	1.9 ± 0.05	2.2 ± 0.05	32.0 ± 0.07	
San Francisco..	12.5 ± 0.06	12.9 ± (a)	49.4 ± 1.53	34.5 ± 2.08	12.6 ± 0.39	12.5 ± 0.57	12.7 ± 0.57	35.4 ± 1.22	
Seattle.....	3.1 ± 0.01	2.9 ± (b)	51.8 ± 1.11	31.3 ± 1.19	3.0 ± 0.07	3.0 ± 0.10	3.0 ± 0.10	35.6 ± 0.93	

(a) Less than 0.005

(b) Sampling variability not measurable.

TABLE D.--Percent of total variance in initial allowance decision explained by demographic variables according to interaction analysis

Interaction analysis splits	Number	Percent allowed	Percent of variance (BSS/TSS)					
			Age	Sex	Race	Region	Prior earnings	Prior quarters of coverage
Total.....	968,122	50.0	4.7*	0.1	1.1	0.3	2.8	4.0
<u>Age split</u>								
Age 50 and over.....	594,074	57.6	0.5	0.6	0.2	0.4	1.9	2.5*
<u>Quarters split</u>								
24 or more quarters.	494,665	62.1	0.5	0.2	0.1	0.5	0.7*	0.2
<u>Earnings split</u>								
\$4,000 or more.....	228,339	68.7	0.1	0.0	0.0	0.4	--	0.0
Under \$4,000.....	266,326	56.6	0.5*	0.1	0.0	0.2	0.0	0.0
<u>Under 24 quarters....</u>	99,408	35.0	0.1	0.1	0.0	0.3	0.4	0.4
Under age 50.....	381,135	35.4	0.2	0.1	0.7*	0.2	0.3	0.6
<u>Race split</u>								
White.....	299,252	39.0	0.1	0.2	--	0.2	0.3	0.4
Black.....	81,883	22.2	0.1	0.0	--	0.2	0.1	0.1

\*Variable with largest BSS/TSS of best dichotomous categories if larger than 0.5 percent. This leads to splits into subgroups shown in the rows of this table.

Total sum of squares.....	243,697	100.0
Between sum of squares due to independent variable splits.....	21,205	8.6
Other sources of variation.....	22,492	91.4

TABLE E.--Percent of total variance in hearings reversal decisions explained by demographic variables according to interaction analysis

Interaction analysis splits	Number	Percent reviewed	Age	Sex	Race	Region	Prior earnings	Prior quarters of coverage	Representative
Total.....	55,241	55.7	0.1	0.0	0.8	0.5	2.2	2.6*	1.4
<u>Work recency split</u> 24 or more quarters of coverage.....	44,152	59.4	0.1	0.0	0.6	0.3	0.5	0.4	1.2*
<u>Representation split</u> Attorney.....	17,568	66.9	0.0	0.0	0.2	0.3	0.2	0.2	--
No attorney.....	26,584	54.4	0.2	0.0	0.3	0.1	0.4	0.3	--
<u>Under 24 quarters of coverage</u> .....	11,008	39.1	0.7*	0.0	0.1	0.2	0.1	0.2	0.1
<u>Age split</u> Age under 40.....	2,608	56.4	--	0.0	0.1	0.2	0.0	0.0	0.0
Age 40 and over.....	8,400	33.8	0.1	0.0	0.1	0.2	0.1	0.4	0.1

\*Variable with largest between sum of squares to total sum of squares (BSS/TSS) of best dichotomous categories of larger than 0.5 percent. This leads to splits shown in rows.

Total sum of squares..... 13,630 100.0  
 Between sum of squares explained by splits..... 630 4.7  
 Other sources of variation ..... 13,000 95.3