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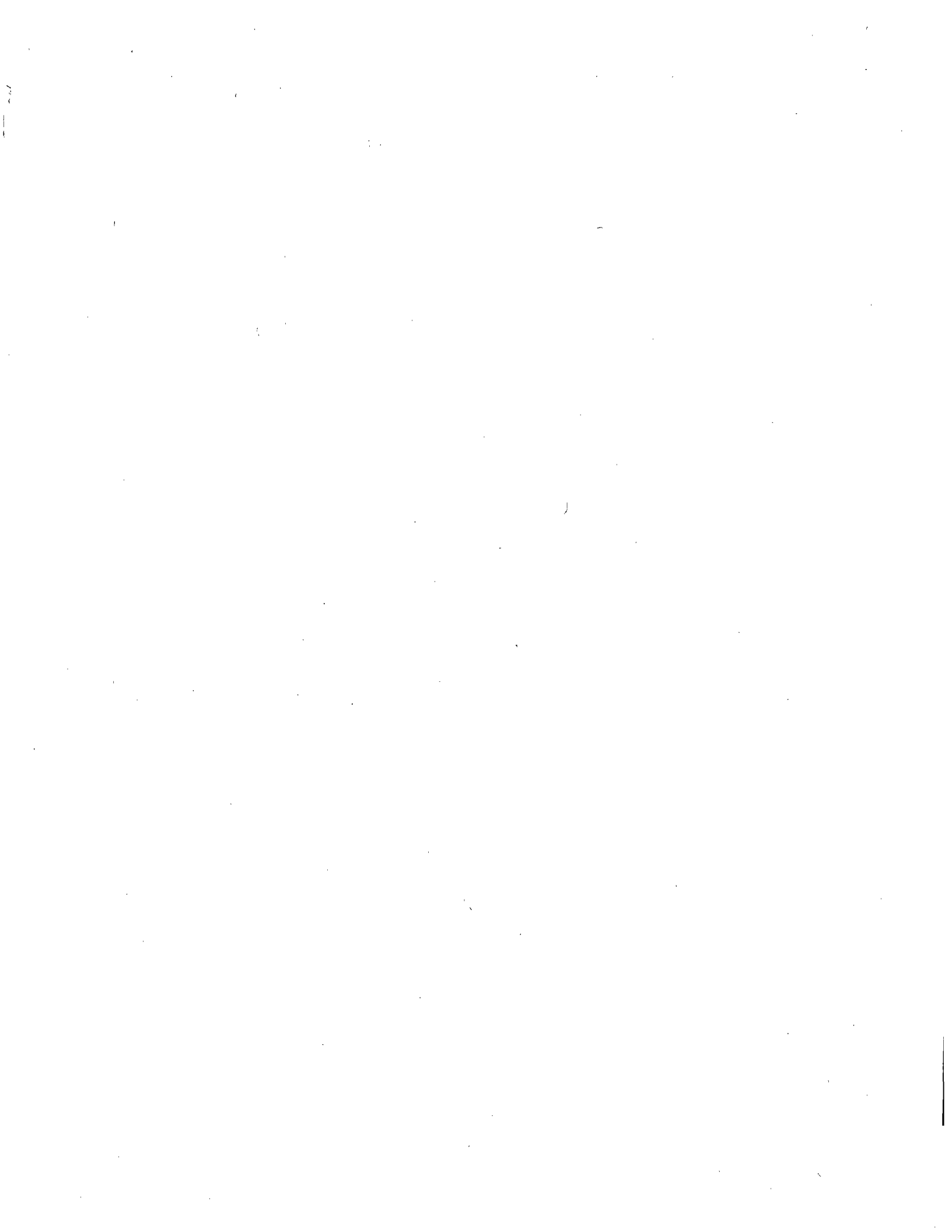
HARRISBURG

REPORT ON THE  
MORTALITY EXPERIENCE OF  
PENNSYLVANIA WORKERS  
1983 THROUGH 1985

DEPARTMENT OF HEALTH  
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## PREFACE

This publication was prepared by the Pennsylvania State Health Data Center, Pennsylvania Department of Health.

The analysis was conducted by the State Health Data Center (SHDC) under a cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH) to establish state level occupational health surveillance capacity.

Included in this report is a summary of race/sex specific associations between work experience and underlying cause of death with significantly elevated proportionate mortality ratios. Space restrictions prevent the inclusion of complete results for all associations, or other levels of stratification used in the analysis. The SHDC can provide additional tables of work experience/cause of death associations to persons or organizations having a use for this information, and can provide additional analysis or assistance in conducting studies using Pennsylvania death data to examine relationships between occupational experience and adverse health effects.

The SHDC welcomes questions, comments, and suggestions regarding this analysis and our occupational health surveillance system. Our staff is available to respond to requests for specific proportional analyses, and to aid those interested in conducting occupational health studies. Persons interested in occupational health are encouraged to contact us.

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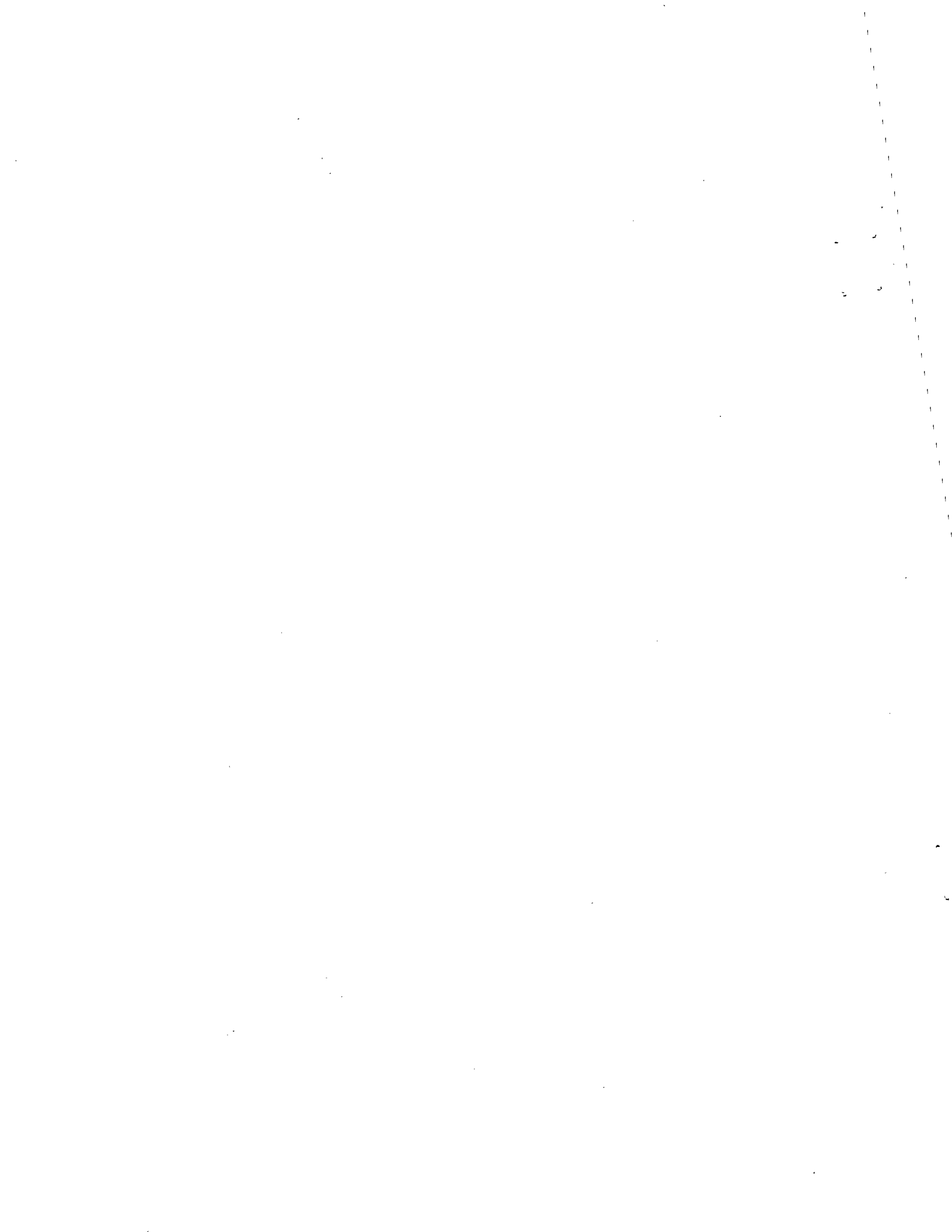
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T H E M O R T A L I T Y E X P E R I E N C E O F

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I N T R O D U C T I O N

The association between certain occupations and specific adverse health effects is well recognized. Information regarding work related injuries and acute conditions is readily available in Pennsylvania from the Commonwealth of Pennsylvania Workers' Compensation Program. Information regarding the association of work experience with chronic disease is more elusive. The long exposure period, and/or long latency period, often required for the manifestation of the disease make it difficult to establish the association. However, many chronic diseases or conditions with long latency periods appear to be more prevalent in specific occupations and industries, or have been shown to be related to specific agents found in the workplace. In Pennsylvania the best known occupationally related condition is coalworker's pneumoconiosis (black lung). However, for most occupationally related diseases, the association is not so dramatic or well established. In 1972 a Federal task force

estimated that 100,000 excess deaths may occur annually due to occupational disease (13). The most controversial estimates of occupational disease involve the incidence of cancer attributable to occupational exposure. Environmental factors including workplace exposures have been estimated to account for up to 90% of all cancers.(21) However, the estimates for cancers caused by occupational exposure range from less than 5% to nearly 40%.(1) The recognition that the combinations of different factors, such as cigarette smoking and asbestos exposure, can substantially increase the risk of cancer over that expected by the separate agents alone, further obscures any specific estimates.(7) Although the full extent of the impact of work experience on the health of workers may be unclear, even at conservative estimates it is an important factor in the public health. Furthermore, because the work environment and the actions of workers are largely controllable, these adverse health effects can be prevented or substantially reduced if the related conditions or agents in the workplace, or the workers actually at risk, can be identified.

To identify possible relationships at the state level requires a broad data base. As in the identification of other public health indices, vital records mortality data provides a state-wide data source having the additional advantage of being relatively uniform from state to state. The use of the occupational and cause of death information

from death certificates as an indicator of possible relationships between mortality and employment has been used since the mid-1800's in England. In the U.S. the oldest and most extensive efforts to use death certificate data to suggest work experience cause of death relationships has been conducted by Dr. Samuel Milham (9) in Washington state. The promising results in identifying known disease/occupation relationships from Dr. Milham's work, and the nearly universal availability of occupational information from death certificates in the United States, has prompted the National Institute For Occupational Safety and Health (NIOSH) to explore the use of these data for a broad based occupational health surveillance program. Through a cooperative agreement between NIOSH and the State Health Data Center (SHDC) of the Pennsylvania Department of Health, staff of the SHDC have been trained in the coding of industry and occupation information on Pennsylvania death certificates using the U.S. Bureau of the Census Industry and Occupation Classification System (APPENDIX B) for the decedent's usual work experience. The coding of occupational information began in the spring of 1984 and is continuing. The SHDC has used these data for two previous reports, the Mortality Experience of Pennsylvania Workers - 1983 and a Proportional Analysis of Associations Between Elementary and Secondary School Teachers and Deaths From Malignant Neoplasms. These two reports, although suffering the defects of limited data and reliance on broad groupings

of occupation and cause of death groups, provided us with experience in working with occupational information. This report utilizes three years of Pennsylvania mortality data and attempts to define the cause of death groups and the occupational groups as precisely as possible given the nature of the raw data.

## PURPOSE

The purpose of the Occupational Health Surveillance program is to identify possible relationships between usual work experience and adverse health effects in order to promote the investigation and abatement of occupationally related disease.

This report focuses on associations between cause of death groups and grouped industries and grouped occupations. The groupings of causes of death, industries, and occupations were assembled by the SHDC to best represent the mortality experience of Pennsylvania workers within the confines of the coding schemes and the amount of data available. The computer program used to produce this report will support any variation of this analysis for occupation, industry and cause of death, as long as it can be defined within the confines of the coding schemes.

Although this analysis is insufficient to establish causal relationships, the associations herein may have utility beyond hypothesis generation. The associations found between occupation/industry and causes of death are statistically significant whether due to an agent present in the workplace, socio-economic factors or some other unknown factor. These associations therefore provide a source of insight into the relative health risks of different groups.

## SOURCES OF DATA

The data used for this analysis are from the SHDC computerized 1983, 1984 and 1985 Pennsylvania mortality data files. The specific data items used are the race, sex, age, underlying cause of death, industry, and occupation coded from Pennsylvania death certificates.

The Pennsylvania death certificate conforms to the standard U.S. Death Certificate. Race, sex, and age are coded directly to numeric codes. The underlying cause of death is determined by the Automated Classification of Medical Entities (ACME) system from all medical conditions listed on the death certificate (a copy of the Pennsylvania death certificate and an explanation of the ACME system are included in APPENDIX A). These are coded using the International Classification of Diseases, Ninth Revision (ICD-9).(20) The occupation and industry information is coded using the Bureau of the Census Alphabetical Index of Industry and Occupation (18) to code the decedent's usual work experience.

## DATA QUALITY AND LIMITATIONS

The data items coded from death certificates are validated and edited for inconsistencies with other information provided on the certificate. Quality assurance testing of SHDC files by the National Center for Health Statistics (NCHS) has shown that coding errors for items such as race, sex and age are less than 2 percent, and less than 5 percent for the more difficult coding of medical conditions listed on the death certificate to ICD-9 codes. The coding of work experience information like the coding of medical conditions requires special training and the use of coding manuals and reference materials. NIOSH has tested Pennsylvania's occupation and industry coding of death records for the first six months of 1983 (the first 6 mo. of I/O coding by our Division of Vital Records) detecting error rates of 2.3 percent for industry and 3.6 percent for occupation. We conducted our own analysis to evaluate the quality of the industry and occupation information being provided the SHDC from two independent sources (Death Certificates and Pennsylvania Cancer Registry Abstracts) available to the SHDC. In the course of this analysis of cases matched to 1984 deaths it was necessary to examine the literal information for records with non-agreeing industry and occupation codes. Although not a true random sample (only including cancer deaths), there is no reason to expect the

coding of these deaths not to be representative of the coding of all deaths. The error rates reflected an improvement in coding as the coders gained experience, with error rates of 1.7 percent for industry and 2.1 percent for occupation.

The underlying cause of death used in this analysis is dependent on the completeness of the information provided by the physician completing the "cause of death" and "other significant conditions" portion of the Death Certificate. This information could be incorrect or less specific than desirable due to variation in the availability of diagnostic equipment, completeness of the decedent's medical history, and whether or not an autopsy was performed. An incorrect diagnosis cannot be readily detected without access to a complete medical history, or comparison with autopsy reports. In our examination of deaths from malignant neoplasms among school teachers we compared the information from the underlying cause of death to the site information on matched cancer registry abstracts. Although we examined only a few malignant neoplasms of interest to that study, the accuracy of death certificates for cancer seems consistent with the observations of Percy et al. (12). In examining the accuracy of cancer death certificates Percy found the overall agreement between death certificate cancer sites and the sites represented on pathology reports to be 86.7 percent, with the agreement for particular sites

varying widely. Cancer sites reported on death certificates tended to be less specific and sometimes reflect metastatic sites rather than the primary site, with accuracy varying substantially by site.

The occupation and industry information used in the analysis only reflect the one usual work experience of the decedent as reported on the death certificate. This may obscure work experience/disease relationships where the decedent worked in more than one occupation or where a short-term employment experience may have exposed the decedent to harmful agents. Additionally, occupational information is usually obtained by the funeral director from the next-of-kin, who may not have a complete knowledge of the decedent's work history.

To test the quality of the I/O information available to the SHDC we compared the I/O information for matching cases from the two sources available to the the SHDC (Pennsylvania Death Certificates and Cancer Registry Abstracts) for exact code agreement. Those cases that did not agree were checked for coding error and the cases where the information provided was different were included in a follow-back study requesting a work history. Using the proportion of returned work histories with industry and occupation information agreeing with the death certificate to estimate the overall I/O agreement, the estimated accuracy was 82 percent for industry information and 79 percent for occupation

information. We feel these are conservative estimates based on the assumption that all returned work histories represented the "best" information.

Our comparison of the occupational information from death certificates with the occupational information from the work histories suggests a propensity for the information from death certificates to sometimes reflect more recent employment or a more prestigious occupation. Other studies of the quality of occupational information from death certificates also suggest the aforementioned and indicate that the quality of occupational information may diminish for older persons due to being retired, having second careers, or simply not having a next of kin with knowledge of their work history.(17) Despite the limitations of single entry occupation and industry information from death certificates, studies of the quality of occupational information from death certificates support the utility of these data for surveillance activities.(16) Death certificates provide a widely available and uniform source of data for generating hypotheses regarding occupation/disease relationships.

The variability in the specificity of the diagnosis or work experience is mitigated in some instances by the use of the broader groupings of work experience and cause of death. It is important to consider the limitations of these data, in

both the information provided on the source documents and the coding schemes, and possible misinformation and coding errors, when interpreting the findings of this analysis.

Inherent in statistical tests is the limitation imposed by the amount of data available. When the number of deaths in a particular occupation/industry group is low, or the cause of death is rare, the impact of an additional (or missing) death will produce a dramatic change in the effect measure (PMR) and its significance. This can occur either from chance occurrence or as a result of misinformation or miscoding. Incorporated in this analysis is a test for sufficient data to support the significance test. The limitations of these data can be critical when the number of deaths are low; the impact from chance occurrence, information errors, or coding errors diminish as the number of deaths increase.

To the extent that most misinformation and coding discrepancies would be expected to be random, their overall impact would tend to dilute occupational/disease associations. Therefore, although the results of this analysis should be viewed with an understanding of possible errors in the data, random error is not likely to be critical in associations where the number of deaths are high. The same characteristics of these data which may falsely increase the apparent association between

occupation/industry and cause of death will also obscure possible associations. As additional data become available for the surveillance of associations between work experience and adverse health effects, the likelihood of detecting apparent associations which are in fact not significant, and not detecting associations which are significant, should diminish.

Each possible relationship between work experience and adverse health effect presented in the results of this analysis should be examined with the data limitations in mind.

## METHOD OF ANALYSIS

Occupational information coded to Bureau of Census codes has been grouped to form the work experience groups used for this analysis, and the underlying cause of death coded to ICD-9 codes has been grouped to form the underlying cause of death groups. All code groupings appear in the results with the detected associations, and lists of the groupings used for the analysis are included in appendices C, D, and E.

The extent of the association between the work experience group and the cause of death groups is expressed by the Proportional Mortality Ratio (PMR). The PMR represents the ratio of observed deaths from a particular cause of death group for a particular work experience to the expected deaths for the same cause of death group and work experience, times one hundred. A PMR of 100 would indicate that the proportion of deaths from a particular cause of death for a particular work experience is exactly the same as that for the population under study.

The age-standardized PMRs, for deaths from a particular cause in a particular work experience group for the population under study ( e.g. white males), in the results of this analysis are calculated as follows.

$$PMR = \frac{O}{E} (100)$$

Where:

PMR = The ratio of observed deaths to expected deaths multiplied by 100.

O = The observed number of deaths for a W work experience group from C cause of death.

E = The expected number of deaths for W work experience group from C cause of death group, summed over A age groups, and represents the total number of deaths under the null hypothesis of no association.

$$E = \sum_{a=1}^A \frac{C}{T} (W)$$

Where:

A = The total number of age strata (A=15 over all age groups, for five year age groups i.e. 16-24, 25-29, ..., 85-89, 90 or older).

C = The number of deaths in the population under study due to the cause of death group.

W = The number of deaths in the population under study among the work experience group.

T = The total number of deaths in the population under study.

To test the significance of association between the work experience group and the cause of death group (the PMR), a Mantel-Haenszel one-degree of freedom chi-square test (MHS CHI-SQ), pooled over the fifteen age groups, is used. The MHS CHI-SQ tests the overall association between the work experience group and the cause of death stratified by age. (6) The calculation of the MHS CHI-SQ may be represented symbolically in the context of this analysis as:

$$\text{MHS CHI-SQ} = \left( \left| \sum_{a=1}^A O - \sum_{a=1}^A E \right| - 1/2 \right)^2 / \sum_{a=1}^A \frac{W(T-W)O(T-O)}{(T-1)T(T)}$$

Where:

MHS CHI-SQ = A chi-square value which is compared to the table value of the chi-square distribution with 1-DF.

The MHS CHI-SQ has been corrected for continuity by subtracting .5 from the absolute value of the difference between the observed and expected deaths over all strata never correcting past zero. Although Mantel includes this continuity correction in the Mantel-Haenszel procedure, there is some controversy over its use. Kleimbaum et al. recommend against using it. A critic of the general use of the continuity correction, W. J. Conover, feels that it can be beneficial when the test "... involves estimating the exceedance probability associated with a known possible value (usually an observed value) of a discrete random variable." (2). Comparison of the exceedance probabilities

for the corrected and the non-corrected chi-square with the significance factors for the ratio of an observed value of a Poisson variable to its expectation, shows the probability of chance occurrence to be more consistent with significance for the corrected chi-square being much closer to that of a Poisson variable as the number of expected deaths decrease (less than 30). Although a very slight conservative bias is imposed by the continuity correction, its impact on the analysis is negligible.

The sample size required for this test is based on the total number of subjects on the margins ( the number of deaths due to cause and the number of deaths among occupation or industry group) of the fourfold table for each stratum summed over all strata (age groups) for each work experience/disease relationship. The precision of the test increases as the number of subjects increases (8). If the amount of data are insufficient to support the test statistic it is indicated as question marks flanking the exceedance probability in the results for the race/sex specific summary associations.

To examine work experience/cause of death associations over race, sex, and race & sex, the stratified analysis can be continued. For any particular stratification, all levels of strata are summed when computing the MHS CHI-SQ. The result is to control for the items on which the analysis is

stratified. Although the complete analysis stratified over race and sex cannot be included in this report due to space limitations, examples of the output are included in the Discussion section of this report. This analysis controls for age in all associations; race & sex, race, and sex are controlled for in the results when they are included as strata for the analysis. The tables depicting stratification over race and sex display the overall age standardized race/sex specific association, as well as the associations stratified over race & sex, over race, and over sex. In viewing these data it must be recognized that stratification (controlling) over race or sex is inappropriate if the effect measures are in opposite directions. When the race or sex specific PMRs are dissimilar (one below or at unity (100), and the other elevated) controlling for race or sex will obscure the association. When interpreting these results, keep in mind that the association may be over both race and sex, specific to race or sex, or reside only in a race/sex specific group.

The 95 percent test based confidence interval approximation is tested for all race & sex strata and indicated on the report if the interval exceeds unity. The approximation of the confidence interval provided by the test based interval estimate obtains the variance for the PMR indirectly from the association's MHS CHI-SQ value. The test based interval

estimate for ratio measures is calculated as an exponent of the ratio measure of the following form:

$$\exp( 1 \pm Z_{1-\alpha/2} / \sqrt{\text{MHS CHI-SQ}} )$$

The calculation of the low end of the 95 percent confidence interval for the PMR in the context of these data is calculated as:

$$\text{PMR} \left( 1 \pm 1.96 / \sqrt{\text{MHS CHI-SQ}} \right)$$

Although the approximation of the confidence interval tends to be slightly narrower than more rigorously developed interval estimates, Klienbaum et. al. in Epidemiologic Research (6) feel that the difference is usually negligible. The test based interval estimate provides a single measure combining the effect measure (PMR) and significance of an association in order to compare or rank associations. And, although it would be suspect to assert that any year or multi-years of death data represent a random sample of deaths over time (particularly in regard to association with work experience due to the dynamics of the work place) the notion that these data are representative of all deaths is implicit in their use for surveillance. Therefore we feel that the test based interval estimate provides useful information about possible work experience/adverse health effect relationships.

## DISCUSSION

The summary associations depicting the mortality experience of Pennsylvania workers resulting from this analysis follow on pages 37 through 104. Reported in these results are all occupation and industry groups with six or more observed deaths in a cause of death group, and a PMR greater than 110 with a probability of chance occurrence of 1% or less for the one-tailed test. The results are displayed by industry or occupation group with the race/sex specific underlying cause of death appearing in order of the ICD-9 codes.

The analysis tested the association of 315 occupation groups (APPENDIX D), and 263 industry groups (APPENDIX E), with 168 underlying causes of death (APPENDIX C). This analysis groups the work experiences and the adverse health effects which are available within the coding schemes used. The discrete groups represented by the coding schemes may also have multiple subgroups. The groupings used for the analysis are not mutually exclusive. Both the work experience groups and the cause of death groups contain some broad general groups and more specific sub-groups. Therefore, significant associations detected in a broad group may be due to the strength of an association in a specific subset of the group. The use of broad code groupings will tend to reduce limitations in the specificity

of the data and permit sufficient data to be collected to test the association. The associations detected for the more discrete groupings will likely produce the most interesting results. However, as more discrete codes are used, the data limitations imposed by the specificity and accuracy of the underlying cause of death and the occupational information available becomes more critical. In viewing the associations reported herein, an understanding of the attributes of the work experience will be extremely useful in suggesting agents or conditions which might account for significantly elevated PMRs.

Associations were yielded for all combinations of work experience and cause of death where either the work experience or the cause of death comprising the association account for at least one death. The analysis of deaths occurring in Pennsylvania, for persons 16 years of age or older, resulted in 201,355 associations for occupation groups and 177,454 for industry groups over the six race/sex specific populations. Of the associations yielded by the analysis 18,527 associations for occupation had at least six observed deaths, (the minimum we required to test an association) 1,034 of which had elevated PMRs with an exceedance probability of 1% or less. For industry 19,698 associations exhibited six or more observed deaths, 931 of which had elevated PMRs with an exceedance probability of 1% or less.

There were 360,311 deaths to person sixteen years of age or older used in this analysis. Although this represents a substantial number of observations, many associations had insufficient data to test the association. To gain the fullest surveillance capacity from these data will require additional years of data for Pennsylvania. The use of data from multiple states could also provide a more effective and timely surveillance capacity.

Comprising the largest segment of the workforce, associations for white males predominate in this analysis. There were, however, sufficient data to test and detect a number of significant associations for women and blacks. Although there are problems regarding the duration of employment and the reporting of the work experience for women, their increasing participation in the workforce makes it important to examine both the overall contribution of women to work experience mortality, and for the possible impacts of the workplace on female specific adverse health effects. For some occupations women are the major component of the workforce and are increasingly comprising a larger portion of the workforce in many other occupations. It is unclear what impact the increased participation in the labor force will have on female mortality. Recent research by Marian Passannante and Constance Nathanson on mortality rates suggests that the increased employment of women has

T A B L E I

EXAMPLES OF ASSOCIATIONS WHERE STRATIFICATION OVER SEX STRENGTHENS THE ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH

PENNSYLVANIA 1983 - 1985

" \*\* " = DATA SUFFICIENT TO SUPPORT MHS CHI-SQUARE TEST STATISTIC  
 "++ ++" = THE 95% TEST BASED INTERVAL ESTIMATE FOR THE PMR EXCEEDS UNITY

O C C U P A T I O N G R O U P	W H I T E			B L A C K			O T H E R			S T R A T . O N R / S	S T R A T I F I E D O N S E X		S T R A T I F I E D O N R A C E	
	M	F	M	M	F	M	W H I T E	B L A C K	O T H E R		W H I T E	B L A C K	W H I T E	F E M A L E
CAUSE OF DEATH OF: MN COLON ICD-9 CODES OF 1530-1539														
POSTMASTERS AND MAIL SUPERINTENDENTS	OB 7	++	7	0	0	0	14	0	0	14	0	0	7	7
STRAIFIED ANALYSIS	EX 4.6	2.6	0.1	0.0	0.0	0.0	7.3	0.0	0.0	7.3	0.0	0.0	4.7	2.6
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	151	267	N/A	N/A	N/A	N/A	192	N/A	N/A	192	N/A	N/A	150	267
	18.9%	00.8%					01.0%	00.9%		01.0%	00.9%		19.6%	00.8%
CAUSE OF DEATH OF: MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE ICD-9 CODES OF 2030-2038														
PHARMACISTS	OB 5	++	2	0	0	0	7	0	0	7	0	0	5	2
STRAIFIED ANALYSIS	EX 1.1	0.2	0.1	0.0	0.0	0.0	1.4	0.1	0.0	1.4	0.1	0.0	1.2	0.2
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	450	X10	N/A	N/A	N/A	N/A	515	N/A	N/A	515	N/A	N/A	419	X10
ELEMENTARY SCHOOL TEACHERS	OB 7	++	29	1	1	0	38	2	0	38	2	0	8	30
STRAIFIED ANALYSIS	EX 4.1	16.2	0.3	1.3	0.0	0.0	21.9	1.6	0.0	21.9	1.6	0.0	4.4	17.5
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	171	179	333	078	N/A	N/A	174	127	N/A	174	127	N/A	183	171
	11.5%	00.1%	35.7%				<0.1%	36.6%		<0.1%	36.6%		06.7%	00.2%

NOTE:

In the first example of colon cancer among postmasters, the sex specific associations are not significant or lack sufficient data to support the Mantel-Haenszel CHI-SQUARE statistic; however, when the analysis is stratified over sex, the overall association has sufficient data to support the test statistic and its interval estimate exceeds unity at the 95% level. For Multiple Myeloma & Immunoproliferative cancers, the association for pharmacists, although still lacking sufficient data, becomes more noteworthy when the strata for females is included. The association for elementary school teachers while significant for women, can be assumed not to be sex specific because the effect measure (PMR) for the association for men is similar even though there is not sufficient data to make the white/male specific association significant.

not dramatically altered the male/female mortality differential.(11) Although women can be expected to continue to out-live men there is no reason to expect women not to be affected by their work experience. The contribution of females to the work experience/cause of death associations in this analysis has resulted in a substantial increase in both the strength and the number of associations. Table I contains examples of associations where females contribute the data necessary to establish a significant work experience/cause of death association.

In our analysis of one year of Pennsylvania death data we noted that some of the associations were substantially different for blacks in the same occupation or industry as those for whites. Because the amount of data available for blacks is limited by their proportion of the total population, the detection of possible work experience/death relationships are likely to be found first among the larger white population. However marked differences for blacks may be useful in isolating particular conditions or agents related to adverse health effects if the difference can be tied to some other factor. Because of the data requirements of this type of analysis, little race specific surveillance worker mortality has been conducted.

T A B L E 11

EXAMPLE OF SHARP DIFFERENCES IN RACE SPECIFIC ASSOCIATIONS  
 BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH FOR  
 CANCER OF THE PANCREAS, ICD-9 CODES OF 1570-1579

PENNSYLVANIA 1983 - 1985

\*\* = DATA SUFFICIENT TO SUPPORT MHS CHI-SQUARE TEST STATISTIC  
 \*\*\* = THE 95% TEST BASED INTERVAL ESTIMATE FOR THE PMR EXCEEDS UNITY

O C C U P A T I O N G R O U P	WHITE		BLACK		OTHER		STRAT. ON R/S	STRATIFIED ON SEX		STRATIFIED ON RACE		
	M	F	M	F	M	F		WHITE	BLACK	MALE	FEMALE	
ELEMENTARY SCHOOL TEACHERS	OB 9	60	1	9	0	0	79	69	10	0	10	69
156		**	**	**	**	**	**	**	**	**	**	**
STRATIFIED ANALYSIS	EX 11.9	50.7	0.7	2.7	0.0	0.0	65.9	62.5	3.4	0.0	12.6	53.4
AGE STANDARDIZED PMR	076	118	152	328	N/A	N/A	120	110	295	N/A	080	129
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	10.2%	33.3%	<0.1%	<0.1%			05.7%	22.0%	<0.1%		01.7%	
LICENSED PRACTICAL NURSES	OB 0	11	1	7	0	0	19	11	8	0	1	18
207		**	**	**	**	**	**	**	**	**	**	**
STRATIFIED ANALYSIS	EX 0.3	11.0	0.0	2.4	0.0	0.0	13.7	11.3	2.5	0.0	0.3	13.4
AGE STANDARDIZED PMR	N/A	100	X10	288	N/A	N/A	138	098	325	N/A	300	134
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS		01.1%	00.4%				09.6%	00.1%			38.6%	12.8%
MACHINE OPERATORS, NOT SPECIFIED	OB 53	5	13	4	0	0	75	58	17	0	66	9
779		*****	*****	*****	*****	*****	**	**	**	**	**	**
STRATIFIED ANALYSIS	EX 54.5	7.5	6.6	1.6	0.0	0.0	70.1	62.0	8.1	0.0	61.1	9.0
AGE STANDARDIZED PMR	097	067	198	256	N/A	N/A	107	094	209	N/A	108	100
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS		00.9%	05.7%				29.5%	00.1%			28.1%	
TRUCK DRIVERS, HEAVY	OB 58	0	21	0	0	0	79	58	21	0	79	0
804		*****	*****	*****	*****	*****	**	**	**	**	**	**
STRATIFIED ANALYSIS	EX 59.4	0.2	9.2	0.0	0.0	0.0	68.8	59.6	9.2	0.0	68.6	0.2
AGE STANDARDIZED PMR	098	N/A	228	N/A	N/A	N/A	115	097	227	N/A	115	N/A
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS		<0.1%					11.6%	<0.1%			11.1%	

NOTE:  
 The above examples all exhibit a significant association for blacks between the occupation and cancer of the pancreas, while the same occupations among whites show observed deaths close to the expected.

Table II provides an example of some associations which do not fit well with the corresponding analysis for whites. The summary results of the analysis provided in this report allow various industry and occupation groups to be examined for significantly elevated race/sex specific PMRs. Additional information may be gained by continuing the analysis over race and sex, as demonstrated by the preceding race/sex stratified analyses. Because this analysis is age-standardizing (age controlled for by stratification on 5 year age groups) useful information may also be obtained from the age-specific PMRs produced by the analysis. The PMRs for summary age groups are available for the race/sex specific associations produced by this analysis, providing information on the age group(s) where the effect measure is prominent. Depending on the association, information from the summary age groups may provide useful information on the age group risk, or insight into the latency of suspected exposures. Table III is the output of associations with summary age groups for white females, where the effect measure (PMR) for the associations predominate in the lower age ranges.

Although the age-stratification used in this analysis controls for age when determining the significance of associations, examination of the age specific occurrences may aid in isolating casual relationships and identify those associations where intervention can provide greater benefit

T A B L E III

EXAMPLE OF ASSOCIATIONS PREDOMINATING IN YOUNGER AGE GROUPS  
ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH FOR  
WHITE FEMALE REGISTERED NURSES

PENNSYLVANIA 1983 - 1985

OCCUPATIONAL GROUP OF REGISTERED NURSES CENSUS CODES=095	N=2947	A G E A T D E A T H											MHS CHI-SQ ( 1-TAILED % PROB. )		
		16	10	34	35	10	49	50	10	64	65	10		79	80
N=381 CAUSE OF DEATH OF: OTHER DISORDERS CIR. SYSTEM/VEINS&LYMPH ICD-9=4510-4599	OBSERVED DEATHS	0	2	4	2	4	9	2	1.44	302	2.98	2	2.15	17	11.785
	EXPECTED DEATHS	0.22	0.52	1.44	2.77	7.93	10.10	17.70	23.33	30.22	38.66	46.99	55.55	7.31	<.1%
	AGE-STANDARDIZED PMR	0	386	277	277	277	302	93	93	93	93	93	93	233	
N=957 CAUSE OF DEATH OF: OTHER DISEASES OF RESPIRATORY SYSTEM ICD-9=5100-5199	OBSERVED DEATHS	2	2	4	2	4	10	10	2.62	126	7.93	6.00	167	28	5.579
	EXPECTED DEATHS	0.29	0.86	2.33	4.59	7.93	10.10	17.70	23.33	30.22	38.66	46.99	55.55	17.70	0.9%
	AGE-STANDARDIZED PMR	692	233	153	153	153	126	167	167	167	167	167	167	158	
N=875 CAUSE OF DEATH OF: SUICIDE & SELF-INFLICTED INJURY ICD-9=9500-9590	OBSERVED DEATHS	11	15	5	4	4	4	0	5.13	142	2.82	0.35	0	35	8.019
	EXPECTED DEATHS	6.37	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	21.81	0.2%
	AGE-STANDARDIZED PMR	173	210	97	97	97	142	0	0	0	0	0	0	160	

NOTE: Death due to suicide, although significantly elevated for this occupation group, is following the expected age trend for suicide with suicides occurring in the younger age groups. The other two cause of death groups depart somewhat from the expected occurrences by age with proportionately more deaths occurring in the younger age groups.

by preventing deaths occurring at an early age. As additional data become available for occupational health surveillance, it may be useful to test the significance for the summary age groupings. However, because the age of death is largely a function of the particular adverse health effect the most effective age groupings would differ among different groups of adverse health effects.

The less obvious relationships may be more important in facilitating the identification of associations which, through further study, might lead to a new understanding of the risks of a particular activity or exposure. Although it is not the purpose of this report to examine individual associations to decide what associations should be further investigated, the appearance of associations between work experience and causes of death which have also been identified by scientific study, or in a similar surveillance effort, provide some validation of this effort. In reviewing the summary of results for this analysis many obvious associations are evident. The associations between coal mining and coalworkers pneumoconiosis, motor vehicle accidents among truck drivers, and homicide among police officers are evident and to be expected.

I A B L E I V

ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH OF  
MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE NEOPLASMS, ICD-9 CODES OF 2030-2038

PENNSYLVANIA 1983 - 1985

" \*\* " = DATA SUFFICIENT TO SUPPORT MHS CHI-SQUARE TEST STATISTIC  
\*\*\* \*\* = THE 95% TEST BASED INTERVAL ESTIMATE FOR THE PMR EXCEEDS UNITY

O C C U P A T I O N G R O U P	WHITE		BLACK		OTHER		STRAT. ON R/S	STRATIFIED ON SEX		STRATIFIED ON RACE		
	M	F	M	F	M	F		WHITE	BLACK	MALE	FEMALE	
MANAGERS AND ADMINISTRATORS N.E.C. O19	OR 35 **	17 *****	1	1	0	0	54 **	52 **	2 **	0	36 **	18 *****
STRATIFIED ANALYSIS	EX 32.5	8.4	1.5	0.5	0.0	0.0	42.9	40.9	2.0	0.0	34.0	8.9
AGE STANDARDIZED PMR	108	203	066	201	N/A	N/A	126	127	100	N/A	106	203
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	35.8%	00.2%	50.0%				04.8%	04.4%			39.7%	00.2%
PHARMACISTS O96	OR 5 **	2 **	0	0	0	0	7 **	7 **	0	0	5 **	2 **
STRATIFIED ANALYSIS	EX 1.1	0.2	0.1	0.0	0.0	0.0	1.4	1.3	0.1	0.0	1.2	0.2
AGE STANDARDIZED PMR	450	X10	N/A	N/A	N/A	N/A	515	556	N/A	N/A	419	X10
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	00.1%	<0.1%					<0.1%	<0.1%			00.1%	00.1%
INSTRUCTORS, TEACHERS & COUNSELORS (ALL) I13-163	OR 14 *****	33 *****	1	1	0	0	49 *****	47 *****	2 *****	0	15 *****	34 *****
STRATIFIED ANALYSIS	EX 6.6	18.8	0.4	1.4	0.0	0.0	27.2	25.4	1.8	0.0	7.0	20.2
AGE STANDARDIZED PMR	212	176	250	069	N/A	N/A	180	185	109	N/A	214	168
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	00.3%	00.1%	43.6%				<0.1%	<0.1%	45.3%		00.2%	00.1%
ELEMENTARY SCHOOL TEACHERS 159	OR 7 *****	29 *****	1	1	0	0	38 *****	36 *****	2 *****	0	8 *****	30 *****
STRATIFIED ANALYSIS	EX 4.1	16.2	0.3	1.3	0.0	0.0	21.9	20.3	1.6	0.0	4.4	17.5
AGE STANDARDIZED PMR	171	179	333	078	N/A	N/A	174	177	127	N/A	183	171
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	11.5%	00.1%	35.7%				<0.1%	<0.1%	36.6%		06.7%	00.2%
SALES WORKERS; MOTOR VEHICLES AND BOATS 263	OR 7 **	0 **	0	0	0	0	7 **	7 **	0	0	7 **	0 **
STRATIFIED ANALYSIS	EX 2.0	0.1	0.0	0.0	0.0	0.0	2.1	2.1	0.0	0.0	2.1	0.1
AGE STANDARDIZED PMR	345	N/A	N/A	N/A	N/A	N/A	331	333	N/A	N/A	341	N/A
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	00.1%						00.1%	00.1%			00.1%	
MAIL & MESSAGE DISTRIBUTING OCCUPATIONS 354-357	OR 10 **	1 **	5 **	0 **	0 **	0 **	16 *****	11 **	5 **	0 **	15 *****	1 **
STRATIFIED ANALYSIS	EX 5.8	0.7	1.8	0.2	0.0	0.0	8.4	6.4	2.0	0.0	7.6	0.8
AGE STANDARDIZED PMR	174	145	276	N/A	N/A	N/A	190	171	254	N/A	198	119
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	05.8%	35.2%	02.2%				00.7%	05.4%	03.4%		00.6%	43.0%
HEALTH SERVICE AIDES & ASSISTANTS 445-447	OR 0 **	5 **	1 **	5 **	0 **	0 **	11 **	5 **	6 **	0 **	1 **	10 **
STRATIFIED ANALYSIS	EX 0.8	5.2	0.4	1.7	0.0	0.0	8.0	6.0	2.0	0.0	1.2	6.8
AGE STANDARDIZED PMR	N/A	097	263	301	N/A	N/A	137	084	294	N/A	085	146
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS			42.3%	01.3%			18.7%		00.7%		15.1%	

T A B L E IV (CONTINUED FOR INDUSTRY)

ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH OF MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE NEOPLASMS. ICD-9 CODES OF 2030-2038

PENNSYLVANIA 1983 - 1985

\*\* = DATA SUFFICIENT TO SUPPORT MHS CHI-SQUARE TEST STATISTIC  
 \*\*\* = THE 95% TEST BASED INTERVAL ESTIMATE FOR THE PMR EXCEEDS UNITY

INDUSTRY GROUP	WHITE		BLACK		OTHER		STRAT. ON R/S	STRATIFIED ON SEX		STRATIFIED ON RACE	
	M	F	M	F	M	F		WHITE	BLACK	MALE	FEMALE
MINERAL EXTRACTION (EX. COAL)	OB 8	0	0	0	0	0	8	0	0	8	0
STANDARDIZED ANALYSIS	EX 2.5	0.1	0.1	0.0	0.0	0.0	2.6	0.1	0.0	2.5	0.1
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	PMR 327	N/A	N/A	N/A	N/A	N/A	306	N/A	N/A	318	N/A
LEATHER & LEATHER PRODUCTS	OB 2	9	1	0	0	0	12	1	0	3	9
STANDARDIZED ANALYSIS	EX 2.3	2.2	0.1	0.1	0.0	0.0	4.6	0.2	0.0	2.4	2.2
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	PMR 088	413	769	N/A	N/A	N/A	259	569	N/A	124	405
U.S. POSTAL SERVICE	OB 12	1	6	0	0	0	19	6	0	18	1
STANDARDIZED ANALYSIS	EX 7.0	0.9	2.2	0.0	0.0	0.0	10.3	2.4	0.0	9.2	1.1
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	PMR 173	108	271	N/A	N/A	N/A	185	252	N/A	196	091
RETAIL TRADE	OB 55	43	2	0	0	0	102	4	0	57	45
STANDARDIZED ANALYSIS	EX 41.9	31.8	2.7	1.2	0.0	0.0	77.6	3.9	0.0	44.7	32.9
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	PMR 131	135	074	168	N/A	N/A	131	102	N/A	128	137
DEPARTMENT STORES	OB 1	13	0	2	0	0	16	2	0	1	15
STANDARDIZED ANALYSIS	EX 2.2	7.3	0.5	0.3	0.0	0.0	10.2	0.8	0.0	2.6	7.6
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	PMR 047	177	N/A	667	N/A	N/A	156	264	N/A	038	197
MOTOR VEHICLE DEALERS	OB 9	1	0	0	0	0	10	0	0	9	1
STANDARDIZED ANALYSIS	EX 4.2	0.4	0.2	0.0	0.0	0.0	4.7	0.2	0.0	4.3	0.4
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	PMR 217	250	N/A	N/A	N/A	N/A	212	N/A	N/A	209	248
DRUG STORES	OB 5	3	0	0	0	0	8	0	0	5	3
STANDARDIZED ANALYSIS	EX 1.3	1.1	0.1	0.1	0.0	0.0	2.6	0.2	0.0	1.4	1.2
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	PMR 385	270	N/A	N/A	N/A	N/A	312	N/A	N/A	358	258
ELEMENTARY AND SECONDARY SCHOOLS	OB 15	42	1	4	0	0	62	5	0	16	46
STANDARDIZED ANALYSIS	EX 11.0	25.0	1.2	2.6	0.0	0.0	39.7	3.8	0.0	12.2	27.6
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	PMR 137	168	082	157	N/A	N/A	156	133	N/A	131	167
COLLEGES AND UNIVERSITIES	OB 8	3	0	0	0	0	11	0	0	8	3
STANDARDIZED ANALYSIS	EX 3.3	2.6	0.4	0.3	0.0	0.0	6.5	0.7	0.0	3.7	2.9
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	PMR 246	118	N/A	N/A	N/A	N/A	169	N/A	N/A	218	105
ONE-TAILED PCT. PROB. STRATIFIED ANALYSIS	PMR 246	118	N/A	N/A	N/A	N/A	169	N/A	N/A	218	105

Table IV contains industry and occupation associations for myeloma & immunoproliferative neoplasms (multiple myeloma is the predominate diagnosis within this ICD-9 rubric, accounting for 99.4% of the immunoproliferative neoplasms recorded on the death certificates used in this study). This cause of death was chosen because it has been shown to have high accuracy as an underlying cause of death on death certificates(12), and has been associated with some diverse environmental and occupational exposures.(15) However, because of the rarity of the disease (age-adjusted mortality per 100,000 pop. for the U.S. is 2.5) (10), the occupational risk for multiple myeloma is difficult to identify. Table IV contains only those occupations and industries where the association appears to reside. Table V gives those work experiences which have been identified in other studies for the associations detected in Table IV. Although there are nine industries and seven occupations represented in the table, they seem to comprise nine different work experiences.

Of the nine work experiences, four have been implicated with multiple myeloma in other studies. Three others, "Mineral extraction (ex. coal)", "Managers and Administrators N.E.C." and "Health Service Aids and Assistants" have either somewhat similar findings or plausible exposures. This leaves only two of the nine work experiences without collaboration of some sort, lending support to the viability

TABLE V

WORK EXPERIENCE GROUPS REPRESENTED BY  
THE ASSOCIATIONS DETECTED IN THE ANALYSIS OF THREE YEARS OF PENNSYLVANIA DEATH DATA  
REFLECTED IN TABLE IV  
FOUND TO BE AT RISK FOR MULTIPLE MYELOMA IN OTHER STUDIES

OCCUPATION OR INDUSTRY GROUP	SIMILAR FINDINGS AND POSSIBLE EXPOSURES
MINERAL EXTRACTION (ex. coal)	The observed deaths that fall in this general industry group come from two broad industrial groups of "non-metallic mining" and "crude petroleum and natural gas extraction". The amount of data available for these groups are too small to test their significance but both have PMRs greater than 300. Although the industry groups involved don't lend themselves to analysis, both would be expected to have possible exposures, such as asbestos or petrochemicals.
LEATHER & LEATHER PRODUCTS	Leather workers have exhibited high risk for Multiple Myeloma in Dorken and Voilmer's retrospective study in Hamburg, Germany (4) and Decoufle et al.'s study of cancer patients at Roswell Park Cancer Center. (3)
PHARMACISTS DRUG STORES	Milham also detected a significantly elevated PMR for pharmacists and druggists (9) in his analysis of deaths in Washington state 1950 - 1979. ( 6 observed deaths with a PMR of 221)
MAIL & MESSAGE DISTRIBUTING OCCUPATIONS U.S. POSTAL SERVICE	We know of no other studies suggesting an association between mail or postal workers and Multiple Myeloma.
RETAIL TRADE DEPARTMENT STORES	Increased risk for Multiple Myeloma among both male and female sales personnel was detected in an interview study by Williams et al. on cases ascertained through the Third National Cancer Survey for U.S.(19)
SALES; MOTOR VEHICLES AND BOATS MOTOR VEHICLE DEALERS	We known of no other studies suggesting an association between motor vehicle sales and Multiple Myeloma; however this occupational group is small.
ELEMETARY SCHOOL TEACHERS ELEMENTARY AND SECONDARY SCHOOLS COLLEGES AND UNIVERSITIES INSTRUCTORS, TEACHERS & COUNSELORS (ALL)	"School Professionals" were found to exhibit increased risk for Multiple Myeloma in Dubrow and Wegman's study of cancer mortality (5). A strong association between Multiple Myeloma and teachers was recorded in a retrospective study conducted by Dorken et al. in 1968 in Hamburg, Germany.(4) Milham detected an association between school custodians and Multiple Myeloma but none for teachers.(9)
MANAGERS AND ADMINISTRATORS N.E.C.	This catch-all grouping for managers doesn't lend itself to analysis; however, two groups found to have significantly elevated PMRs in Milham's study (9) would fall into this grouping: "Hotel/motel owners and managers" and "Building and construction, contractors and foremen".
HEALTH SERVICE AIDES & ASSISTANTS	The association in this occupation is limited to blacks. Although death rates for blacks due to Multiple Myeloma are higher than those for whites (15) there should be no impact on this race specific analysis. Unfortunately, the lack of occupational analysis specific to blacks precludes comparisons. Hospital workers can come in contact with a number of hazards, two of which, radiation (15), and benzene (14), have been linked to Multiple Myeloma.

of a death certificate based occupational health surveillance. Further investigation of those two work experiences - mail handling and motor vehicle salesperson occupation - might provide valuable insight into the causes of multiple myeloma. Is there some material in post offices which could account for this elevated PMR such as adhesives or paper products? What factor is unique to car sales? Could that "new car smell" (the outgassing of vinyl and plastic in the confined space of an automobile) be hazardous to your health?

In addition to the race/sex specific summary results of the analysis which are provided herein, the analysis with summary age groups, and a continuation of the analysis over race and sex are available. These outputs could not be included in this publication due to their size. Persons who are interested in these reports may contact the SHDC about receiving copies. Custom analyses of these data can also be conducted by the SHDC.

In viewing the results of this analysis, both the value for the PMR (relative effect measure) and its level of significance (probability of chance occurrence) must be taken into account. The significance in any association is affected by both the extent of the elevation of the PMR and the amount of data available for analysis of the association.

It must be recognized that any number of factors may account for a significant association between an occupation group and a cause of death group. Socio-economic or lifestyle factors associated with the occupational group could account for the significantly elevated PMRs. In many cases, known occupational exposures or conditions might explain the relationship. Further study might result in the detection of agents or conditions which, if moderated, could reduce occupationally related disease.

The State Health Data Center is continuing to code occupation and industry information from death certificates. We expect to enhance the effectiveness of this surveillance activity as additional data become available, and our experience increases. However, as a surveillance system relying on a broad but sometimes imprecise information source (death certificates), it can only suggest possible relationships between work experience and adverse health effects. To precisely identify those workers at risk, the extent of that risk, and the agents or conditions responsible, will require persons or organizations, public and private, to undertake more rigorous investigation of the possible relationships detected through these surveillance activities.

Persons with questions regarding this analysis, requests for more specific PMR analysis, or those interested in conducting studies of possible occupational relationships are encouraged to contact the State Health Data Center.

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CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF AGRICULTURAL PROD., CROPS & LIVESTOCK							
CENSUS CODES=010-011							
MN GENITAL ORGANS	1790-1879	W/M	174	139.81	008.79	124	0.15%
MN PROSTATE	1850	W/M	171	137.37	008.64	124	0.16%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	125	92.86	011.40	135	0.04%
LEUKEMIAS (ALL)	2040-2089	W/M	62	41.58	010.02	149	0.08%
LYMPHOID LEUKEMIA	2040-2049	W/M	24	13.35	008.06	180	0.23%
DISEASES OF THE MUSCULOSKELETAL SYSTEM	7100-7399	W/M	14	6.61	007.51	212	0.31%
MEDICAL MISADVENTURES & ADVERSE EFFECTS	8700-8799, 9300-9499	W/M	17	8.84	006.93	192	0.42%
ACCIDENTS CAUSED BY FIRE & FLAMES	8900-8990, 9294	W/M	15	6.53	010.13	230	0.07%
ACCIDENTS DUE TO NATURAL & ENV. FACTORS	9000-9090, 9295	W/M	15	2.74	052.31	547	?? <.01% ??
ACC.S DUE TO OTHER ENVIRONMENTAL FACTORS	9020-9090, 9295	W/M	11	1.15	077.64	957	?? <.01% ??
ACCIDENTAL DROWNING & SUBMERSION	9100-9109	W/M	13	4.00	018.90	325	?? <.01% ??
ACCIDENTAL IMPACT WITH OBJECTS	9160-9180	W/M	9	2.60	013.66	346	?? <.01% ??
ACCIDENTS CAUSED BY MACHINERY	9190-9199	W/M	38	2.24	569.52	1696	?? <.01% ??

CENSUS CODES=010

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF AGRICULTURAL PRODUCTION, CROPS							
CENSUS CODES=010							
MN CONNECTIVE AND OTHER SOFT TISSUE	1710-1719	W/M	9	3.91	005.58	230	?? 0.90% ??
MN GENITAL ORGANS	1790-1879	W/M	150	122.72	006.29	122	0.61%
MN PROSTATE	1850	W/M	147	120.57	006.00	122	0.71%
ACCIDENTS CAUSED BY FIRE & FLAMES	8900-8990, 9294	W/M	15	5.67	014.24	265	0.01%
ACCIDENTS DUE TO NATURAL & ENV. FACTORS	9000-9090, 9295	W/M	13	2.34	045.37	556	?? <.01% ??
ACC.S DUE TO OTHER ENVIRONMENTAL FACTORS	9020-9090, 9295	W/M	9	0.97	059.61	928	?? <.01% ??
ACCIDENTAL DROWNING & SUBMERSION	9100-9109	W/M	13	3.54	023.66	367	?? <.01% ??
ACCIDENTAL IMPACT WITH OBJECTS	9160-9180	W/M	8	2.24	012.62	357	?? 0.02% ??
ACCIDENTS CAUSED BY MACHINERY	9190-9199	W/M	32	1.90	472.07	1684	?? <.01% ??

CENSUS CODES=011

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF AGRICULTURAL PRODUCTION, LIVESTOCK							
CENSUS CODES=011							
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	25	12.62	011.48	198	0.04%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	10	3.10	013.30	323	?? 0.01% ??
LEUKEMIAS (ALL)	2040-2089	W/M	12	5.52	006.56	217	0.52%
ACUTE MYOCARDIAL INFARCTION	4100	W/M	128	105.00	005.83	122	0.78%
ACCIDENTS CAUSED BY MACHINERY	9190-9199	W/M	6	0.34	078.81	1765	?? <.01% ??

CENSUS CODES=020-021

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF AGRICULTURAL & HORTICULTURAL SERVICES							
CENSUS CODES=020-021							
MN BREAST	1740-1759	W/F	6	2.20	005.50	273	?? 0.95% ??
EMPHYSEMA	4920-4929	W/M	8	2.57	009.56	311	?? 0.10% ??
GASTROINTESTINAL HEMORRHAGE	5780-5789	W/M	6	1.39	012.34	432	?? 0.02% ??
ACCIDENTAL POISONINGS	8500-8699, 9292	W/M	7	2.70	005.57	259	?? 0.91% ??

CENSUS CODES=021

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF HORTICULTURAL SERVICES							
CENSUS CODES=021							
EMPHYSEMA	4920-4929	W/M	6	2.08	005.64	288	?? 0.88% ??
GASTROINTESTINAL HEMORRHAGE	5780-5789	W/M	6	1.16	016.47	517	?? <.01% ??
ACCIDENTAL POISONINGS	8500-8699, 9292	W/M	7	2.57	006.31	272	?? 0.60% ??

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CAUSE OF DEATH GROUP OF: ICD-9 CODES OF: RACE & SEX OBSERVED DEATHS EXPECTED DEATHS MHS CHI-SQ AGE-STD PMR EXCEEDANCE PROBABILITY

INDUSTRIAL GROUP OF MINERAL EXTRACTION (EX. COAL)

CAUSE OF DEATH GROUP OF	ICD-9 CODES OF	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
CENSUS CODES=040,042-050							
MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/M	8	2.45	010.45	327	?? 0.06% ??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	106	81.89	007.76	129	0.27%
PNEUMONIA & INFLUENZA	4800-4879	W/M	33	21.15	006.39	156	0.57%
MOTOR VEHICLE ACCIDENTS	8100-8259,9290	W/M	17	9.65	006.01	176	0.71%

INDUSTRIAL GROUP OF COAL MINING

CAUSE OF DEATH GROUP OF	ICD-9 CODES OF	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
CENSUS CODES=041							
TUBERCULOSIS	0100-0189,1370-1374	W/M	16	6.86	011.55	233	0.03%
MN STOMACH	1510-1519	W/M	95	74.89	005.49	127	0.95%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	2076	838.03	> 1000	248	<.01%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	7	2.37	007.68	295	?? 0.28% ??
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	B/M	26	16.05	006.31	162	0.60%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	451	400.78	006.91	113	0.43%
EMPHYSEMA	4920-4929	W/M	89	65.75	008.45	135	0.18%
COALWORKERS PNEUMOCONIOSIS	5000	W/M	1349	102.56	> 1000	1315	<.01%
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	16	7.56	008.86	212	0.15%
PNEUMOCONIOSIS DUE TO OTHER SILICATES	5020	W/M	11	3.05	019.39	361	?? <.01% ??
ACCIDENTS CAUSED BY EXPLOSIVES	9230-9239	W/M	7	0.72	047.35	972	?? <.01% ??

INDUSTRIAL GROUP OF CRUDE PETROLEUM & NATURAL GAS EXTRACTION

CAUSE OF DEATH GROUP OF	ICD-9 CODES OF	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
CENSUS CODES=042							
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	63	40.10	014.32	157	0.01%
PNEUMONIA & INFLUENZA	4800-4879	W/M	22	11.17	010.04	197	0.08%

INDUSTRIAL GROUP OF NONMETALLIC MINE & QUARRYING, EXC. FUEL

CAUSE OF DEATH GROUP OF	ICD-9 CODES OF	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
CENSUS CODES=050							
HEART DISEASE	3900-3989,4020-4029,4040-4299	W/F	9	4.33	007.28	208	?? 0.35% ??

INDUSTRIAL GROUP OF CONSTRUCTION

CAUSE OF DEATH GROUP OF	ICD-9 CODES OF	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
CENSUS CODES=060							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	1285	1124.82	027.48	114	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	1232	1076.28	027.01	114	<.01%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959,1990-1999	W/F	12	5.79	005.82	207	0.79%
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	19	10.62	006.35	179	0.58%
ASBESTOSIS	5010	W/M	8	2.51	010.85	319	?? 0.05% ??
APPENDICITIS	5400-5430	W/M	6	1.60	010.30	375	?? 0.07% ??
TRANSPORT ACCIDENTS	8000-8489,9290-9291	W/M	388	340.51	009.33	114	0.11%
TRANSPORT ACCIDENTS	8000-8489,9290-9291	W/F	11	5.23	006.71	210	0.48%
MOTOR VEHICLE ACCIDENTS	8100-8259,9290	W/M	368	321.28	009.48	115	0.10%
ACCIDENTAL POISONINGS	8500-8699,9292	B/M	16	7.99	008.03	200	0.23%
ACCIDENTAL FALLS	8800-8880,9293	W/M	129	77.67	036.68	166	<.01%
ACCIDENTS CAUSED BY MACHINERY	9190-9199	W/M	22	12.45	007.32	177	0.34%
ACCIDENTS CAUSED BY ELECTRIC CURRENT	9250-9259	W/M	17	7.07	013.96	240	0.01%
HOMICIDE & LEGAL INTERVENTION	9600-9780	B/M	71	52.97	007.99	134	0.23%

INDUSTRIAL GROUP OF FOOD & KINDRED PRODUCTS

CAUSE OF DEATH GROUP OF	ICD-9 CODES OF	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
CENSUS CODES=100-121							
MN LIP, ORAL CAVITY AND PHARYNX	1400-1499	B/M	7	2.26	008.18	310	?? 0.21% ??
MN OF GENITOURINARY ORGANS	1790-1899	B/M	19	8.95	010.89	212	0.05%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
FOOD & KINDRED PRODUCTS							
(CONTINUED)							
MN GENITAL ORGANS	1790-1879	B/M	17	7.39	0.11.94	230	0.03%
MN PROSTATE	1850	F/M	16	7.24	0.10.02	221	0.08%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	429	378.59	0.07.57	113	0.30%
INDUSTRIAL GROUP OF MEAT PRODUCTS							
CENSUS CODES=100							
MN BREAST	1740-1759	W/F	11	5.06	0.06.31	217	0.60%
MN OF GENITOURINARY ORGANS	1790-1899	B/M	7	2.48	0.06.94	282	?? 0.42% ??
MN GENITAL ORGANS	1790-1879	B/M	7	2.00	0.10.58	350	?? 0.06% ??
MN PROSTATE	1850	B/M	7	1.96	0.11.02	357	?? 0.04% ??
DISEASES OF PULMONARY CIRCULATION	4150-4179	W/M	9	3.46	0.07.44	260	?? 0.32% ??
INDUSTRIAL GROUP OF BAKERY PRODUCTS							
CENSUS CODES=111							
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	W/M	19	10.00	0.07.37	190	0.33%
INDUSTRIAL GROUP OF SUGAR AND CONFECTIONERY PRODUCTS							
CENSUS CODES=112							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/F	10	4.51	0.05.60	222	?? 0.89% ??
MN UTERUS (EXCEPT CERVIX)	1790-1799, 1820-1828	W/F	7	2.52	0.06.35	278	?? 0.58% ??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	63	39.97	0.14.34	158	0.01%
INDUSTRIAL GROUP OF BEVERAGE INDUSTRIES							
CENSUS CODES=120							
MN OF GENITOURINARY ORGANS	1790-1899	W/F	6	2.16	0.05.43	278	?? 0.99% ??
MN GENITAL ORGANS	1790-1879	W/F	6	1.70	0.08.74	353	?? 0.16% ??
RHEUMATIC FEVER & RHEUMATIC HEART DISEASE	3900-3989	W/M	6	1.67	0.08.86	359	?? 0.15% ??
INDUSTRIAL GROUP OF TOBACCO MANUFACTURES							
CENSUS CODES=130							
ACUTE MYOCARDIAL INFARCTION	4100	W/F	84	63.83	0.07.18	132	0.37%
INDUSTRIAL GROUP OF TEXTILE MILL PRODUCTS							
CENSUS CODES=132-150							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/F	52	34.90	0.08.14	149	0.22%
SEPTICEMIA	0380-0389	W/F	44	29.30	0.07.09	150	0.39%
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	191	156.53	0.08.03	122	0.23%
MN STOMACH	1510-1519	W/F	32	15.48	0.17.01	207	< 0.1%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/F	72	53.83	0.06.04	134	0.70%
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	B/M	6	2.08	0.06.01	288	?? 0.71% ??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	298	238.05	0.17.08	125	< 0.1%
PEPTIC ULCERS	5310-5339	W/M	13	6.01	0.07.15	216	0.37%
OTHER DISEASES INTESTINES & PERITONEUM	5600-5699	W/M	16	8.19	0.06.63	195	0.50%
INDUSTRIAL GROUP OF KNITTING MILLS							
CENSUS CODES=132							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	65	48.43	0.05.73	134	0.83%
MN URINARY ORGANS	1880-1899	W/M	11	5.19	0.05.52	212	0.94%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	66	48.06	0.07.22	137	0.36%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF FLOOR COVERINGS, EXCEPT HARD SURFACE							
MN URINARY ORGANS	1880-1899	W/M	7	2.56	006.11	273	?? 0.67% ??
MN BLADDER	1880-1889	W/M	6	1.56	010.02	385	?? 0.08% ??
INDUSTRIAL GROUP OF YARN, THREAD, AND FABRIC MILLS							
CENSUS CODES=141							
MN STOMACH	1510-1519	W/F	24	9.53	020.77	252	<.01%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/F	50	33.25	008.23	150	0.21%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	14	6.85	006.57	204	0.52%
RHEUMATIC FEVER & RHEUMATIC HEART DISEASE	3900-3989	W/F	18	9.31	007.32	193	0.34%
ACUTE MYOCARDIAL INFARCTION	4100	W/F	266	231.21	006.07	115	0.68%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	189	150.96	010.67	125	0.05%
PEPTIC ULCERS	5310-5339	W/M	11	3.82	011.89	288	?? 0.03% ??
OTHER DISEASES INTESTINES & PERITONEUM	5600-5699	W/M	12	5.17	007.82	232	0.26%
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/M	15	7.87	005.69	191	0.85%
INDUSTRIAL GROUP OF MISCELLANEOUS TEXTILE MILL PRODUCTS							
CENSUS CODES=150							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/F	6	1.15	016.72	522	?? <.01% ??
INDUSTRIAL GROUP OF APPAREL & OTHER FINISHED TEXTILES							
CENSUS CODES=151-152							
MYCOSES	1100-1180	W/F	7	1.61	015.38	435	?? <.01% ??
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/F	24	13.83	007.02	174	0.40%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	196	166.41	005.51	118	0.94%
MN GENITAL ORGANS	1790-1879	W/F	164	130.89	008.75	125	0.15%
MN OVARY	1830	W/F	89	67.43	006.98	132	0.41%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	13	5.63	008.49	231	0.18%
MYELOID LEUKEMIA	2050-2059	W/M	10	3.91	008.05	256	?? 0.23% ??
DIABETES MELLITUS	2500-2509	W/F	165	133.73	007.55	123	0.30%
HYPERTENSIVE DISEASE	4010-4059	W/F	92	71.99	005.54	128	0.93%
HEART DISEASE	4010-4019, 4030-4039	W/F	30	17.64	008.27	170	0.20%
OTHER & ILL-DEFINED HEART DISEASE	3900-3989, 4020-4029, 4040-4299	W/M	489	431.92	013.02	113	0.02%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	147	110.97	012.91	132	0.02%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/F	605	546.60	007.25	111	0.35%
INDUSTRIAL GROUP OF APPAREL AND ACCESSORIES, EXCEPT KNIT							
CENSUS CODES=151							
MYCOSES	1100-1180	W/F	7	1.58	015.89	443	?? <.01% ??
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/F	24	13.57	007.58	177	0.29%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	193	163.11	005.74	118	0.83%
MN GENITAL ORGANS	1790-1879	W/F	161	128.30	008.70	125	0.16%
MN OVARY	1830	W/F	87	66.09	006.68	132	0.49%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	13	5.41	009.42	240	0.11%
MYELOID LEUKEMIA	2050-2059	W/M	10	3.76	008.86	266	?? 0.15% ??
DIABETES MELLITUS	2500-2509	W/F	160	131.08	006.57	122	0.52%
HYPERTENSION	4010-4019, 4030-4039	W/F	30	17.30	008.92	173	0.14%
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	W/M	467	415.56	010.97	112	0.05%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	142	106.82	012.78	133	0.02%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
APPAREL AND ACCESSORIES, EXCEPT KNIT (CONTINUED)							
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	593	535.99	007.04	111	0.40%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/F	28	16.21	008.58	173	0.17%
INDUSTRIAL GROUP OF MISC. FABRICATED TEXTILE PRODUCTS CENSUS CODES=152							
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	W/M	11	4.67	008.38	236	?? 0.19% ??
INDUSTRIAL GROUP OF MISCELLANEOUS PAPER AND PULP PRODUCTS CENSUS CODES=161							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	10	4.25	006.98	235	?? 0.41% ??
INDUSTRIAL GROUP OF PAPERBOARD CONTAINERS AND BOXES CENSUS CODES=162							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	B/M	7	2.03	010.67	345	?? 0.05% ??
INDUSTRIAL GROUP OF PRINTING, PUBLISHING, & ALLIED IND. CENSUS CODES=171-172							
GASTROINTESTINAL HEMORRHAGE	5780-5789	W/M	14	6.73	006.92	208	0.43%
INDUSTRIAL GROUP OF NEWSPAPER PUBLISHING AND PRINTING CENSUS CODES=171							
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	45	27.69	010.64	163	0.06%
GASTROINTESTINAL HEMORRHAGE	5780-5789	W/M	8	2.71	008.57	295	?? 0.17% ??
INDUSTRIAL GROUP OF PRINTING, PUBLISHING, EXCEPT NEWSPAPERS CENSUS CODES=172							
MN BONE, CONNECTIVE TISSUE, AND SKIN	1700-1739	W/M	15	7.90	005.61	190	0.89%
INDUSTRIAL GROUP OF CHEMICALS & ALLIED PRODUCTS CENSUS CODES=180-192							
HEART DISEASE	3900-3989	B/F	9	3.49	009.69	258	?? 0.09% ??
DISEASES OF PULMONARY CIRCULATION	4150-4179	W/M	23	12.90	007.27	178	0.35%
PNEUMONITIS DUE TO SOLIDS & LIQUIDS	5070-5078	W/M	12	4.54	010.81	264	?? 0.05% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/F	12	5.16	007.93	233	0.24%
INDUSTRIAL GROUP OF PLASTICS, SYNTHETICS, AND RESINS CENSUS CODES=180							
DISEASES OF PULMONARY CIRCULATION	4150-4179	W/M	8	2.00	015.17	400	?? < 0.01% ??
INDUSTRIAL GROUP OF DRUGS CENSUS CODES=181							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	12	5.87	005.77	204	0.81%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	12	5.71	006.24	210	0.62%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	25	14.64	007.59	171	0.29%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/F	7	2.69	005.54	260	?? 0.92% ??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF INDUSTRIAL AND AGRICULTURAL CHEMICALS CENSUS CODES=191-192							
MN COLON	1530-1539	W/F	12	5.12	008.22	234	0.21%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	116	93.30	005.89	124	0.76%
PNEUMONITIS DUE TO SOLIDS & LIQUIDS	5070-5078	W/M	9	2.55	014.11	353	?? 0.01% ??
INDUSTRIAL GROUP OF PETROLEUM & COAL PRODUCTS CENSUS CODES=200-201							
SUICIDE & SELF-INFLICTED INJURY	9500-9590	W/M	20	9.71	010.47	206	0.06%
INDUSTRIAL GROUP OF PETROLEUM REFINING CENSUS CODES=200							
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	49	34.34	006.16	143	0.65%
SUICIDE & SELF-INFLICTED INJURY	9500-9590	W/M	18	8.50	010.05	212	0.08%
INDUSTRIAL GROUP OF RUBBER & MISC. PLASTICS PRODUCTS CENSUS CODES=210-212							
ACUTE MYOCARDIAL INFARCTION	4100	B/M	7	2.77	005.58	253	?? 0.91% ??
INDUSTRIAL GROUP OF TIRES AND INNER TUBES CENSUS CODES=210							
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	B/M	8	3.65	005.68	219	?? 0.86% ??
INDUSTRIAL GROUP OF LEATHER & LEATHER PRODUCTS CENSUS CODES=220-222							
MN UTERUS (EXCEPT CERVIX)	1790-1799, 1820-1828	W/F	12	4.03	014.05	298	?? 0.01% ??
MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/F	9	2.18	018.54	413	?? < 0.01% ??
HYPERTENSIVE DISEASE	4010-4059	W/F	19	7.98	014.15	238	0.01%
HYPERTENSION	4010-4019, 4030-4039	W/F	6	1.94	006.61	309	?? 0.51% ??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	80	61.54	006.04	130	0.70%
NONINFECTIVE ENTERITIS & COLITIS	5550-5580	W/M	7	1.94	010.73	361	?? 0.05% ??
INDUSTRIAL GROUP OF FOOTWEAR, EXCEPT RUBBER AND PLASTIC CENSUS CODES=221							
MN UTERUS (EXCEPT CERVIX)	1790-1799, 1820-1828	W/F	9	3.44	007.50	262	?? 0.31% ??
MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/F	6	1.86	007.20	323	?? 0.36% ??
HYPERTENSIVE DISEASE	4010-4059	W/F	15	6.80	008.91	221	0.14%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	72	52.53	007.89	137	0.25%
INDUSTRIAL GROUP OF LUMBER, WOOD PRODUCTS, AND FURNITURE CENSUS CODES=230-242							
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	193	163.77	005.73	118	0.83%
ACCIDENTAL IMPACT WITH OBJECTS	9160-9180	W/M	19	1.66	173.42	1145	?? < 0.01% ??
ACCIDENTS CAUSED BY MACHINERY	9190-9199	W/M	10	1.33	050.91	752	?? < 0.01% ??
INDUSTRIAL GROUP OF LOGGING CENSUS CODES=230							
ACCIDENTAL IMPACT WITH OBJECTS	9160-9180	W/M	15	0.23	854.20	6522	?? < 0.01% ??

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF SAWMILLS, PLANING MILLS, AND MILLWORK CENSUS CODES=231							
ACCIDENTS CAUSED BY MACHINERY	9190-9199	W/M	6	0.46	055.61	1304	?? < .01% ??
INDUSTRIAL GROUP OF STONE, CLAY, GLASS, & CONCRETE PRODUCTS CENSUS CODES=250-262							
HYPERTENSION							
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4010-4019, 4030-4039	W/F	6	1.99	006.29	302	?? 0.60% ??
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4400-4489	W/M	94	69.37	008.77	136	0.15%
OTHER & UNSPECIFIED C.O.P.D.	4900-4969	W/M	159	130.29	006.53	122	0.53%
PNEUMOCONIOSIS (EXCEPT COAL)	4940-4969	W/M	126	101.46	006.03	124	0.70%
PNEUMOCONIOSIS DUE TO OTHER SILICATES	5010-5050	W/M	16	2.50	068.86	640	?? < .01% ??
NONINFECTIVE ENTERITIS & COLITIS	5020	W/M	12	1.02	110.45	1176	?? < .01% ??
OTHER DISEASES INTESTINES & PERITONEUM	5550-5580	W/M	17	8.48	007.74	200	0.27%
TRANSPORT ACCIDENTS	5600-5699	W/F	9	3.23	008.70	279	?? 0.16% ??
MOTOR VEHICLE ACCIDENTS	8000-8489, 9290-9291 8100-8259, 9290	W/F	14	5.88	010.98	238	0.05%
		W/F	13	5.67	009.09	229	0.13%
INDUSTRIAL GROUP OF GLASS AND GLASS PRODUCTS CENSUS CODES=250							
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	9	3.81	006.50	236	?? 0.54% ??
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	9	3.68	007.04	245	?? 0.40% ??
INDUSTRIAL GROUP OF STRUCTURAL CLAY PRODUCTS CENSUS CODES=252							
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	8	0.40	126.48	2000	?? < .01% ??
PNEUMOCONIOSIS DUE TO OTHER SILICATES	5020	W/M	7	0.16	253.83	4375	?? < .01% ??
INDUSTRIAL GROUP OF MISC. NONMETALLIC MINERAL & STONE PROD. CENSUS CODES=262							
MN BREAST	1740-1759	W/F	10	4.45	006.29	225	?? 0.60% ??
DISEASES OF BLOOD & BLOOD FORMING ORGANS	2800-2899	W/M	6	2.06	005.82	291	?? 0.79% ??
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	W/M	28	13.63	014.50	205	0.01%
INDUSTRIAL GROUP OF STEELMILLS AND IRON & STEEL FOUNDRIES CENSUS CODES=270-271							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	1406	1286.14	018.84	111	< .01%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	B/M	141	110.77	009.69	127	0.09%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	1342	1212.71	016.72	111	< .01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	B/M	135	103.24	011.40	131	0.04%
MN KIDNEY	1890	W/F	7	1.66	014.32	422	?? 0.01% ??
DISORDERS OF THYROID GLAND	2400-2469	W/M	7	2.71	005.79	258	?? 0.81% ??
ANEMIAS	2800-2859	B/M	6	2.15	005.71	279	?? 0.84% ??
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	B/M	435	369.96	017.81	118	< .01%
ISCHEMIC HEART DISEASE	4100-4149	B/M	279	202.18	038.09	138	< .01%
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	W/M	2031	1776.14	046.07	114	< .01%
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	B/M	142	87.06	040.64	163	< .01%
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	26	12.29	015.72	212	< .01%
PNEUMOCONIOSIS DUE TO OTHER SILICATES	5020	W/M	16	5.00	024.47	320	?? < .01% ??
MEDICAL MISADVENTURES & ADVERSE EFFECTS	8700-8799, 9300-9499	B/M	6	2.19	005.50	274	?? 0.95% ??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF BLAST FURNACES & STEELMILLS							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	1310	1176.77	018.25	111	<.01%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	B/M	129	102.74	007.80	126	0.26%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	1252	1127.13	016.65	111	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	B/M	123	95.74	008.94	128	0.14%
MN KIDNEY	1890	W/F	6	1.47	011.13	408	?? 0.04% ??
MN BRAIN	1910-1919	W/M	79	61.16	005.41	129	1.00% ??
ANEMIAS	2800-2859	B/M	6	2.03	006.45	296	?? 0.55% ??
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	B/M	403	345.28	014.91	117	0.01%
ISCHEMIC HEART DISEASE	4100-4149	B/M	261	188.67	035.93	138	<.01%
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	W/M	1885	1649.02	042.23	114	<.01%
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	B/M	134	81.37	039.63	165	<.01%
PNEUMOCONIOSIS DUE TO OTHER SILICATES	5020	W/M	10	4.63	005.61	216	?? 0.89% ??
MEDICAL MISADVENTURES & ADVERSE EFFECTS	8700-8799, 9300-9499	B/M	6	2.06	006.29	291	?? 0.61% ??
INDUSTRIAL GROUP OF IRON AND STEEL FOUNDRIES							
CENSUS CODES=271							
BRONCHITIS	4900-4919	W/M	6	1.51	010.47	397	?? 0.06% ??
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	B/M	6	2.01	006.23	299	?? 0.62% ??
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	8	0.88	050.45	909	?? <.01% ??
PNEUMOCONIOSIS DUE TO OTHER SILICATES	5020	W/M	6	0.36	074.69	1667	?? <.01% ??
INDUSTRIAL GROUP OF PRIMARY METAL IND. (EX. IRON & STEEL)							
CENSUS CODES=272-280							
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE DISEASES OF PULMONARY CIRCULATION	2020-2029, 4150-4179	W/M	15	6.60	009.62	227	0.10%
		W/M	18	7.68	012.75	234	0.02%
INDUSTRIAL GROUP OF PRIMARY ALUMINUM INDUSTRIES							
CENSUS CODES=272							
MN URINARY ORGANS	1880-1899	W/M	13	6.54	005.50	199	0.95%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	11	2.91	020.07	378	?? <.01% ??
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	W/M	12	5.14	007.96	233	0.24%
INDUSTRIAL GROUP OF OTHER PRIMARY METAL INDUSTRIES							
CENSUS CODES=280							
DISEASES OF PULMONARY CIRCULATION	4150-4179	W/M	12	4.34	011.94	276	?? 0.03% ??
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	36	22.00	008.64	164	0.16%
INDUSTRIAL GROUP OF METAL FABRICATION & N.S. METAL IND.							
CENSUS CODES=281-301							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	39	25.46	007.20	153	0.36%
DISEASES OF PULMONARY CIRCULATION	4150-4179	W/F	8	3.04	006.58	263	?? 0.51% ??
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	B/M	9	3.72	006.36	242	?? 0.58% ??
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	B/M	8	3.00	006.95	267	?? 0.42% ??
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	131	105.77	006.12	124	0.67%
INDUSTRIAL GROUP OF CUTLERY, HAND TOOLS, AND OTHER HARDWARE							
CENSUS CODES=281							
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	16	8.55	005.93	187	0.74%

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
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CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF FABRICATED STRUCTURAL METAL PRODUCTS							
NONINFECTIVE ENTERITIS & COLITIS	5550-5580	W/M	8	2.63	009.21	304	?? 0.12% ??
INDUSTRIAL GROUP OF SCREW MACHINE PRODUCTS							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	16	8.80	005.65	182	0.87%
INDUSTRIAL GROUP OF ORDNANCE							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	9	3.51	007.58	256	?? 0.29% ??
INDUSTRIAL GROUP OF MISCELLANEOUS FABRICATED METAL PRODUCTS							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	20	10.62	008.00	188	0.23%
DISEASES OF BLOOD & BLOOD FORMING ORGANS	2800-2899	W/M	8	3.21	005.84	249	?? 0.78% ??
INDUSTRIAL GROUP OF MACHINERY MFG., (EX. ELECTRICAL)							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	31	17.57	010.28	176	0.07%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	31	17.11	011.31	181	0.04%
MN SKIN	1720-1739	W/F	6	1.43	011.64	420	?? 0.03% ??
ISCHEMIC HEART DISEASE	4100-4149	B/F	6	1.66	010.46	361	?? 0.06% ??
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	W/M	122	93.65	008.71	130	0.16%
INDUSTRIAL GROUP OF ENGINES AND TURBINES							
LEUKEMIAS (ALL)	2040-2089	W/M	10	4.29	006.40	233	?? 0.57% ??
MYELOID LEUKEMIA	2050-2059	W/M	6	1.80	007.64	333	?? 0.28% ??
INDUSTRIAL GROUP OF FARM MACHINERY AND EQUIPMENT							
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	W/M	23	13.44	006.98	171	0.41%
INDUSTRIAL GROUP OF CONSTRUCTION & MATERIAL HANDLING MACH.							
MYELOID LEUKEMIA	2050-2059	W/M	6	1.97	006.31	305	?? 0.60% ??
INDUSTRIAL GROUP OF METALWORKING MACHINERY							
NEOPLASM OF UNCERTAIN BEHAVIOR OR BENIGN	2100-2399	W/M	8	2.91	007.30	275	?? 0.34% ??
MENTAL DISORDERS	2900-3199	W/M	10	3.91	008.12	256	?? 0.22% ??
DISORDERS OF GALLBLADDER & BILIARY TRACT	5740-5769	W/M	6	1.45	011.53	414	?? 0.03% ??
INDUSTRIAL GROUP OF MACHINERY, EXCEPT ELECTRICAL, N.E.C.							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	16	7.80	008.18	205	0.21%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	16	7.61	008.80	210	0.15%
ACUTE MYOCARDIAL INFARCTION	4100	W/M	371	329.45	006.35	113	0.58%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF ELECTRICAL MACHINERY, EQUIP., & SUPPLIES CENSUS CODES=340-350							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	83	57.92	011.35	143	0.04%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	80	56.43	010.25	142	0.07%
MN PROSTATE	1850	W/M	99	78.01	005.64	127	0.88%
ISCHEMIC HEART DISEASE	4100-4149	B/M	27	16.51	007.24	164	0.36%
ACUTE MYOCARDIAL INFARCTION	4100	B/M	20	9.65	011.15	207	0.04%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	66	50.46	005.43	131	0.99%
INDUSTRIAL GROUP OF ELECT. MACH., EQUIP., & SUPPLIES N.E.C. CENSUS CODES=342							
ISCHEMIC HEART DISEASE	4100-4149	B/M	19	10.24	007.99	186	0.23%
ACUTE MYOCARDIAL INFARCTION	4100	B/M	13	5.86	008.30	222	0.20%
DISEASES OF ESOPHAGUS	5300-5309	W/M	6	1.74	008.16	345	?? 0.21% ??
INDUSTRIAL GROUP OF NOT SPEC. ELECT. MACH., EQUIP., & SPLYS CENSUS CODES=350							
MN PANCREAS	1570-1579	W/F	10	4.41	006.01	227	?? 0.71% ??
NEOPLASM OF UNCERTAIN BEHAVIOR OR BENIGN	2100-2399	W/M	11	3.02	018.61	364	?? < 0.1% ??
PEPTIC ULCERS	5310-5339	W/M	7	2.35	007.38	298	?? 0.33% ??
INDUSTRIAL GROUP OF TRANSPORTATION EQUIPMENT CENSUS CODES=351-370							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	20	11.69	005.63	171	0.88%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	20	11.39	006.22	176	0.63%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	67	47.79	008.97	140	0.14%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	63	44.86	008.44	140	0.18%
INDUSTRIAL GROUP OF AIRCRAFT & GUIDED MISSILES AND PARTS CENSUS CODES=352,362							
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	B/M	8	3.68	005.46	217	?? 0.97% ??
ISCHEMIC HEART DISEASE	4100-4149	B/M	6	2.03	007.06	296	?? 0.39% ??
INDUSTRIAL GROUP OF SHIP AND BOAT BUILDING AND REPAIRING CENSUS CODES=360							
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/M	24	11.57	012.63	207	0.02%
DISEASES OF LIVER (EX. ALCOHOL RELATED)	5700-5709, 5714-5739	W/M	15	6.70	009.29	224	0.11%
INDUSTRIAL GROUP OF CYCLES AND MISC. TRANSPORTATION EQUIP. CENSUS CODES=370							
CEREBROVASCULAR DISEASE	4300-4380	W/M	7	2.63	005.97	266	?? 0.72% ??
INDUSTRIAL GROUP OF PROFESSIONAL & PHOTO EQUIPMENT & WATCHES CENSUS CODES=371-382							
MN ESOPHAGUS	1500-1509	W/M	11	3.92	011.17	281	?? 0.04% ??
OTHER DISEASES OF RESPIRATORY SYSTEM	5100-5199	W/M	11	4.17	009.73	264	?? 0.09% ??
INDUSTRIAL GROUP OF SCIENTIFIC AND CONTROLLING INSTRUMENTS CENSUS CODES=371							
PNEUMONIA & INFLUENZA	4800-4879	W/M	16	7.76	007.96	206	0.24%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	10	4.77	005.52	210	?? 0.94% ??

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF PHOTOGRAPHIC EQUIPMENT AND SUPPLIES							
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	9	3.92	006.01	230	?? 0.71% ??
INDUSTRIAL GROUP OF OTHER & NOT SPECIFIED OR MISC. MFG.							
CENSUS CODES=380							
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/M	77	58.14	006.05	132	0.69%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	50	34.77	006.49	144	0.54%
CEREBROVASCULAR DISEASE	4300-4380	W/M	305	262.52	007.35	116	0.33%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	104	80.50	006.91	129	0.43%
INDUSTRIAL GROUP OF MISCELLANEOUS MANUFACTURING INDUSTRIES							
CENSUS CODES=391							
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	8	3.18	005.99	252	?? 0.72% ??
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	W/M	206	181.31	005.63	114	0.88%
ACUTE MYOCARDIAL INFARCTION	4100	B/M	7	2.54	006.85	276	?? 0.44% ??
INDUSTRIAL GROUP OF NOT SPECIFIED MANUFACTURING INDUSTRIES							
CENSUS CODES=392							
CEREBROVASCULAR DISEASE	4300-4380	W/M	268	233.44	005.42	115	0.99%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	96	72.45	007.69	133	0.28%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/F	18	10.21	005.63	176	0.88%
ACCIDENTAL FALLS	8800-8880, 9293	W/M	35	23.25	005.63	151	0.88%
INDUSTRIAL GROUP OF RAILROADS							
CENSUS CODES=400							
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	B/M	14	5.47	012.38	256	0.02%
INFLAMMATORY DISEASES OF THE CNS	3200-3260	W/M	8	2.72	008.72	294	?? 0.16% ??
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	W/M	922	835.48	010.85	110	0.05%
RAILWAY ACCIDENTS	8000-8079	W/M	8	0.52	096.07	1538	?? <.01% ??
INDUSTRIAL GROUP OF TRANSPORTATION (EX. RAIL & TRUCKING)							
CENSUS CODES=401-402, 411-432							
MN COLON	1530-1539	B/M	25	15.08	006.32	166	0.60%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	421	377.99	005.47	111	0.97%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	35	22.56	006.79	155	0.46%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	405	361.89	005.71	112	0.84%
MN OF GENITOURINARY ORGANS	1790-1899	B/M	47	31.60	007.80	149	0.26%
MN GENITAL ORGANS	1790-1879	B/M	39	26.44	006.07	148	0.69%
MN PROSTATE	1850	P/M	39	25.99	006.64	150	0.50%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	14	7.12	006.90	197	0.43%
AIR TRANSPORT ACCIDENTS	8400-8459	W/M	25	2.16	238.06	1157	?? <.01% ??
ACCIDENTAL FALLS	8800-8880, 9293	W/F	8	2.83	007.76	283	?? 0.27% ??
SUICIDE & SELF-INFLICTED INJURY	9500-9590	P/M	14	7.19	006.00	195	0.71%
INDUSTRIAL GROUP OF BUS SERVICE AND URBAN TRANSIT							
CENSUS CODES=401							
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	B/M	6	1.51	011.20	397	?? 0.04% ??
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	B/M	6	1.36	013.29	441	?? 0.01% ??

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF TAXICAB SERVICE CENSUS CODES=402							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	10	4.16	006.92	240	?? 0.42% ??
SEPTICEMIA	0380-0389	W/M	8	3.05	006.56	262	?? 0.52% ??
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	25	15.19	006.01	165	0.71%
SUICIDE & SELF-INFLICTED INJURY	9500-9590	W/M	12	5.98	005.54	201	0.93%
INDUSTRIAL GROUP OF TRUCKING SERVICE CENSUS CODES=410							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	471	388.92	019.76	121	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	450	371.86	018.61	121	<.01%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	193	156.57	008.86	123	0.15%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	203	110.31	098.92	184	<.01%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	B/M	16	5.73	017.96	279	<.01%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	198	103.36	109.19	192	<.01%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	B/M	15	5.19	017.90	289	<.01%
OTHER & UNSPECIFIED ACCIDENTAL CAUSES	9260-9289, 9298, 9299, 9200-9219, 9140, 9150	W/M	18	8.30	010.59	217	0.06%
INDUSTRIAL GROUP OF WAREHOUSING AND STORAGE CENSUS CODES=411							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	30	18.48	007.35	162	0.33%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	28	17.69	006.06	158	0.69%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	9	3.50	007.28	257	?? 0.35% ??
INDUSTRIAL GROUP OF U.S. POSTAL SERVICE CENSUS CODES=412							
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	7	1.70	014.61	412	?? 0.01% ??
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	7	1.64	015.47	427	?? <.01% ??
ACCIDENTAL FALLS	8800-8880, 9293	W/F	7	1.60	015.07	438	?? 0.01% ??
SUICIDE & SELF-INFLICTED INJURY	9500-9590	B/M	7	2.35	007.68	298	?? 0.28% ??
INDUSTRIAL GROUP OF WATER TRANSPORTATION CENSUS CODES=420							
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	25	8.06	034.25	310	<.01%
INDUSTRIAL GROUP OF AIR TRANSPORTATION CENSUS CODES=421							
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	27	10.58	031.61	255	<.01%
AIR TRANSPORT ACCIDENTS	8400-8459	W/M	24	0.34	> 1000	7059	?? <.01% ??
INDUSTRIAL GROUP OF COMMUNICATIONS CENSUS CODES=440-442							
SEPTICEMIA	0380-0389	W/F	23	13.51	006.10	170	0.67%
MN BFEAST	1740-1759	W/F	82	54.16	015.07	151	0.01%
INDUSTRIAL GROUP OF TELEPHONE (WIRE AND RADIO) CENSUS CODES=441							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	66	46.47	008.39	142	0.19%
MN COLON	1530-1539	W/M	30	18.77	006.31	160	0.60%
MN BFEAST	1740-1759	W/F	78	50.52	015.73	154	<.01%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/M	27	15.53	007.95	174	0.24%

CAUSE OF DEATH GROUP OF: TELEPHONE (WIRE AND RADIO)	ICD-9 CODES OF: (CONTINUED)	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
DISEASES OF THE MUSCULOSKELETAL SYSTEM 7100-7399							
INDUSTRIAL GROUP OF UTILITIES & SANITARY SERVICES							
CENSUS CODES=460-472							
W/F	9	3.87	005.66	233	??	0.87%	??
INDUSTRIAL GROUP OF ELECTRIC LIGHT AND POWER							
CENSUS CODES=460							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	205	174.33	005.68	118	0.85%
MN COLON	1530-1539	W/M	95	70.99	008.13	134	0.22%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/F	15	7.12	007.85	211	0.25%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/F	14	5.33	012.80	263	0.02%
ACCIDENTAL IMPACT WITH OBJECTS	9160-9180	W/M	7	2.00	010.26	350	?? 0.07% ??
INDUSTRIAL GROUP OF GAS AND STEAM SUPPLY SYSTEMS							
CENSUS CODES=461							
W/F	12	6.11	005.63	196	??	0.88%	??
W/M	9	3.61	006.65	249	??	0.50%	??
INDUSTRIAL GROUP OF WHOLESALE TRADE - DURABLE GOODS							
CENSUS CODES=500-532							
W/F	20	11.43	006.11	175	??	0.67%	??
W/F	20	11.14	006.78	180	??	0.46%	??
W/F	26	13.76	011.04	189	??	0.04%	??
W/M	17	5.79	020.12	294	??	< 0.1%	??
W/M	7	2.07	009.54	338	??	0.10%	??
W/M	29	17.15	007.67	169	??	0.28%	??
W/M	6	1.81	007.63	331	??	0.29%	??
INDUSTRIAL GROUP OF MOTOR VEHICLES AND EQUIPMENT							
CENSUS CODES=500							
W/M	7	2.16	009.51	324	??	0.10%	??
INDUSTRIAL GROUP OF LUMBER AND CONSTRUCTION MATERIALS							
CENSUS CODES=502							
W/M	12	4.92	009.15	244	??	0.12%	??
W/M	9	3.19	009.06	282	??	0.13%	??
W/M	9	3.11	009.64	289	??	0.10%	??
INDUSTRIAL GROUP OF ELECTRICAL GOODS							
CENSUS CODES=512							
W/F	8	2.85	008.20	281	??	0.21%	??
W/F	8	2.78	008.64	288	??	0.16%	??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF MACHINERY, EQUIPMENT, AND SUPPLIES							
CENSUS CODES=530							
DISEASES OF BLOOD & BLOOD FORMING ORGANS	2800-2899	W/M	7	1.82	012.09	385	?? 0.03% ??
HYPERTENSIVE DISEASE	4010-4059	W/M	14	5.35	012.57	262	0.02%
HYPERTENSION	4010-4019, 4030-4039	W/M	7	1.65	014.43	424	?? 0.01% ??
INDUSTRIAL GROUP OF WHOLESALE TRADE - NONDURABLE GOODS							
CENSUS CODES=540-571							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/F	11	4.79	006.94	230	?? 0.42% ??
SEPTICEMIA	0380-0389	W/F	10	3.80	008.61	263	?? 0.17% ??
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/F	18	8.41	010.11	214	0.07%
DISEASES OF ESOPHAGUS	5300-5309	W/M	6	1.67	008.96	359	?? 0.14% ??
INDUSTRIAL GROUP OF GROCERIES AND RELATED PRODUCTS							
CENSUS CODES=550							
OTHER DISORDERS CIR. SYSTEM/VEINS&LYMPH	4510-4599	W/M	7	1.89	011.33	370	?? 0.04% ??
INDUSTRIAL GROUP OF PETROLEUM PRODUCTS							
CENSUS CODES=552							
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/F	6	1.84	007.48	326	?? 0.31% ??
INDUSTRIAL GROUP OF RETAIL TRADE							
CENSUS CODES=580-640, 642-691							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	406	334.52	017.10	121	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	393	325.13	015.83	121	<.01%
MN OVARY	1830	W/F	137	107.77	008.29	127	0.20%
ALL OTHER SPECIFIED LEUKEMIAS	2060-2078	W/M	9	3.40	008.27	265	?? 0.20% ??
DIABETES MELLITUS	2500-2509	W/M	231	194.84	007.15	119	0.37%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	W/M	170	139.70	006.93	122	0.42%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	119	85.81	013.54	139	0.01%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	109	89.11	005.48	122	0.96%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	107	86.72	005.85	123	0.78%
ACCIDENTAL POISONINGS	8500-8699, 9292	B/M	8	3.27	005.92	245	?? 0.75% ??
MEDICAL MISADVENTURES & ADVERSE EFFECTS	8700-8799, 9300-9499	W/F	28	16.89	007.05	166	0.39%
INDUSTRIAL GROUP OF HARDWARE STORES							
CENSUS CODES=581							
DIABETES MELLITUS	2500-2509	W/M	10	4.33	006.31	231	?? 0.60% ??
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	W/M	49	34.83	006.26	141	0.61%
INDUSTRIAL GROUP OF DEPARTMENT STORES							
CENSUS CODES=591							
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/M	6	1.85	007.35	324	?? 0.33% ??
HODGKINS DISEASE	2010-2019	W/F	6	1.78	007.91	337	?? 0.24% ??
METABOLIC DISEASES	2700-2788	W/M	6	2.10	005.41	286	?? 1.00% ??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	R/M	14	7.47	005.52	187	0.94%
INDUSTRIAL GROUP OF MISCELLANEOUS GENERAL MERCHANDISE STORES							
CENSUS CODES=600							
CEREBROVASCULAR DISEASE	4300-4380	W/F	20	8.34	016.56	240	<.01%

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF GROCERY STORES CENSUS CODES=601							
NEOPLASMS (ALL) OF NERVOUS SYSTEM	1910-1929, 2250-2259, 2375-2379	W/M	21	9.45	013.12	222	0.01%
MN BRAIN	1910-1919	W/M	19	8.86	010.69	214	0.05%
CONGENITAL ANOMALIES	7400-7599	W/M	8	2.67	008.85	300	?? 0.15% ??
MEDICAL MISADVENTURES & ADVERSE EFFECTS	8700-8799, 9300-9499	W/F	7	2.42	006.91	289	?? 0.43% ??
INDUSTRIAL GROUP OF DAIRY PRODUCTS STORES CENSUS CODES=602							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	6	1.68	008.78	357	?? 0.15% ??
SEPTICEMIA	0380-0389	W/M	6	1.33	013.34	451	?? 0.01% ??
INDUSTRIAL GROUP OF RETAIL BAKERIES CENSUS CODES=610							
MN COLON	1530-1539	W/F	12	5.40	007.11	222	0.38%
INDUSTRIAL GROUP OF FOOD STORES, N.E.C. CENSUS CODES=611							
DIABETES MELLITUS	2500-2509	W/M	15	7.11	007.82	211	0.26%
OTHER DISEASES INTESTINES & PERITONEUM	5600-5699	W/M	6	1.70	008.62	353	?? 0.17% ??
INDUSTRIAL GROUP OF MOTOR VEHICLE DEALERS CENSUS CODES=612							
MN STOMACH	1510-1519	W/M	20	10.43	008.03	192	0.23%
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/M	12	5.41	006.96	222	0.41%
INDUSTRIAL GROUP OF AUTO AND HOME SUPPLY STORES CENSUS CODES=620							
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	W/M	195	169.39	006.41	115	0.57%
ISCHEMIC HEART DISEASE	4100-4149	W/M	145	120.27	006.99	121	0.41%
ACUTE MYOCARDIAL INFARCTION	4100	W/M	97	73.85	008.57	131	0.17%
INDUSTRIAL GROUP OF GASOLINE SERVICE STATIONS CENSUS CODES=621							
MN OF GENITOURINARY ORGANS	1790-1899	W/F	6	1.23	015.41	488	?? < 0.01% ??
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	W/M	280	248.41	006.72	113	0.48%
ISCHEMIC HEART DISEASE	4100-4149	W/M	206	176.57	006.79	117	0.46%
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	W/M	90	68.65	007.25	131	0.35%
INDUSTRIAL GROUP OF APPAREL & ACCESSORY STORES, EXCEPT SHOES CENSUS CODES=630							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	17	8.08	008.96	210	0.14%
SEPTICEMIA	0380-0389	W/M	14	6.32	008.27	222	0.20%
INDUSTRIAL GROUP OF HSLD. APPLIANCES, TV, AND RADIO STORES CENSUS CODES=640							
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	W/M	180	156.93	005.62	115	0.89%

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF EATING AND DRINKING PLACES							
CENSUS CODES=641							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	51	32.40	010.40	157	0.06%
INFECTIOUS AND PARASITIC DISEASES	0010-1399	F/M	23	12.70	008.01	181	0.23%
OTHER & UNSPECIFIED INFECTIOUS/PARASITIC	0900-1049, 1200-1349, 1360-1369, 1398	W/M	7	2.09	009.47	335	?? 0.10% ??
MN LIP, ORAL CAVITY AND PHARYNX	1400-1499	W/M	24	14.68	005.43	163	0.99%
MN LIP, ORAL CAVITY AND PHARYNX	1400-1499	B/M	9	3.88	005.77	232	?? 0.82% ??
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	191	157.13	007.83	122	0.26%
MN LARYNX	1610-1619	W/M	15	7.68	006.18	195	0.64%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	185	152.81	007.25	121	0.35%
DIABETES MELLITUS	2500-2509	W/M	61	44.21	006.21	138	0.63%
DISORDERS INVOLVING THE IMMUNE MECHANISM	2790-2799	W/M	10	2.38	022.03	420	?? < 0.1% ??
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	W/M	12	5.74	005.91	209	0.75%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	219	181.36	008.27	121	0.20%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/F	115	86.94	009.25	132	0.12%
EMPHYSEMA	4920-4929	W/F	25	13.12	010.19	191	0.07%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/F	84	64.44	005.93	130	0.74%
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	125	95.78	009.11	131	0.13%
PEPTIC ULCERS	5310-5339	W/M	15	7.01	008.20	214	0.21%
CHRONIC LIVER DISEASE (ALCOHOL RELATED)	5710-5713	W/M	26	13.40	011.24	194	0.04%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	71	44.04	016.49	161	< 0.1%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/F	52	37.05	005.85	140	0.78%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	90	60.91	018.19	148	< 0.1%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	88	59.24	018.17	149	< 0.1%
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	24	13.58	007.65	177	0.28%
UNKNOWN IF ACC. OR PURPOSELY INFLECTED	9800-9890	W/M	15	6.73	009.37	223	0.11%
UNKNOWN IF ACC. OR PURPOSELY INFLECTED	9800-9890	W/F	11	4.92	006.68	224	?? 0.49% ??
INDUSTRIAL GROUP OF DRUG STORES							
CENSUS CODES=642							
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	61	40.30	011.45	151	0.04%
OTHER DISEASES OF RESPIRATORY SYSTEM	5100-5199	W/M	8	2.44	010.49	328	?? 0.06% ??
INDUSTRIAL GROUP OF SPORTING GOODS, BICYCLES, & HOBBY STORE							
CENSUS CODES=651							
PNEUMONIA & INFLUENZA	4800-4879	W/M	7	2.58	006.14	271	?? 0.66% ??
INDUSTRIAL GROUP OF BOOK AND STATIONERY STORES							
CENSUS CODES=652							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	7	2.34	007.84	299	?? 0.26% ??
INDUSTRIAL GROUP OF JEWELRY STORES							
CENSUS CODES=660							
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/F	7	2.38	007.34	294	?? 0.34% ??
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/F	6	0.63	036.99	952	?? < 0.1% ??
INDUSTRIAL GROUP OF DIRECT SELLING ESTABLISHMENTS							
CENSUS CODES=671							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	10	4.28	005.86	234	?? 0.44% ??

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF FUEL AND ICE DEALERS							
CENSUS CODES=672							
ISCHEMIC HEART DISEASE	4100-4149	W/F	20	12.09	006.46	165	0.55%
INDUSTRIAL GROUP OF RETAIL FLORISTS							
CENSUS CODES=681							
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	W/F	77	62.19	005.97	124	0.73%
INDUSTRIAL GROUP OF MISCELLANEOUS RETAIL STORES							
CENSUS CODES=682							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	21	12.26	005.95	171	0.74%
INDUSTRIAL GROUP OF NOT SPECIFIED RETAIL TRADE							
CENSUS CODES=691							
LYMPHOID LEUKEMIA	2040-2049	W/M	12	4.08	013.63	294	?? 0.01% ??
OTHER DISORDERS OF THE CNS	3400-3499	W/F	15	6.95	008.35	216	0.19%
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	67	49.90	005.77	134	0.81%
SUICIDE & SELF-INFLICTED INJURY	9500-9590	W/M	39	26.85	005.64	145	0.87%
INDUSTRIAL GROUP OF FINANCE, INSURANCE, & REAL ESTATE							
CENSUS CODES=700-712							
OTHER & UNSPECIFIED INFECTIOUS/PARASITIC	0900-1049, 1200-1349, 1360-1369, 1398	W/M	9	2.36	016.36	381	?? <.01% ??
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	135	100.90	012.26	134	0.02%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	134	98.05	014.01	137	0.01%
MN BONE, CONNECTIVE TISSUE, AND SKIN	1700-1739	W/F	27	14.13	011.21	191	0.04%
MN BREAST	1740-1759	W/F	166	123.66	015.87	134	<.01%
MN OF GENITOURINARY ORGANS	1790-1899	W/M	187	152.41	008.15	123	0.22%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	117	89.03	008.89	131	0.14%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/F	24	14.59	005.59	164	0.90%
RHEUMATIC FEVER & RHEUMATIC HEART DISEASE	3900-3989	W/F	30	15.60	012.72	192	0.02%
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	W/M	130	98.18	010.53	132	0.06%
INDUSTRIAL GROUP OF BANKING							
CENSUS CODES=700							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	62	42.60	009.08	146	0.13%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	61	41.40	009.53	147	0.10%
MN BREAST	1740-1759	W/F	80	52.18	015.84	153	<.01%
LEUKEMIAS (ALL)	2040-2089	W/M	17	8.57	007.42	198	0.32%
LEUKEMIA OF UNSPECIFIED CELL TYPE	2080-2089	W/M	7	2.18	008.59	321	?? 0.17% ??
OTHER DISORDERS OF THE CNS	3400-3499	W/M	8	2.80	007.97	286	?? 0.24% ??
RHEUMATIC FEVER & RHEUMATIC HEART DISEASE	3900-3989	W/F	15	6.54	009.87	229	0.08%
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	W/M	42	24.46	012.29	172	0.02%
INDUSTRIAL GROUP OF S & L S AND CREDIT AGENCIES, N.F.C.							
CENSUS CODES=701-702							
MN BREAST	1740-1759	W/F	10	4.20	007.30	238	?? 0.34% ??
ACUTE MYOCARDIAL INFARCTION	4100	W/M	30	19.67	006.07	153	0.68%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF INSURANCE							
MN COLON	1530-1539	W/F	33	21.25	006.18	155	0.64%
MN OF GENITOURINARY ORGANS	1790-1899	W/M	84	60.00	009.68	140	0.09%
MN GENITAL ORGANS	1790-1879	W/M	55	38.84	006.57	142	0.52%
MN PROSTATE	1850	W/M	55	38.04	007.41	145	0.32%
INDUSTRIAL GROUP OF REAL ESTATE, INCLUDE R.E. - INS. - LAW OFF.							
MN ESOPHAGUS	1500-1509	W/M	14	6.38	008.08	219	0.22%
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/M	12	5.69	006.01	211	0.71%
INDUSTRIAL GROUP OF BUSINESS & REPAIR SVC. (EX. AUTOMOTIVE)							
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	B/M	13	3.96	019.25	328	?? <.01% ??
METABOLIC DISEASES	2700-2788	B/M	7	1.85	012.08	378	?? 0.03% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	970-999	W/M	68	44.46	012.39	153	0.02%
INDUSTRIAL GROUP OF SERVICES TO DWELLINGS & OTHER BUILDINGS							
MN LARYNX	1610-1619	W/M	6	1.72	008.45	349	?? 0.18% ??
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	B/M	7	2.03	010.11	345	?? 0.07% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	970-999	W/M	20	9.43	010.96	212	0.05%
INDUSTRIAL GROUP OF COM. RESEARCH, DEV. & TESTING LABS							
MN COLON	1530-1539	W/M	7	2.56	006.29	273	?? 0.61% ??
INDUSTRIAL GROUP OF BUSINESS MGMT. & CONSULTING SERVICES							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	12	5.89	005.73	204	0.83%
MN OF GENITOURINARY ORGANS	1790-1899	W/M	8	2.97	007.13	269	?? 0.38% ??
MN GENITAL ORGANS	1790-1879	W/M	7	1.77	012.83	395	?? 0.02% ??
MN PROSTATE	1850	W/M	7	1.69	013.96	414	?? 0.01% ??
INDUSTRIAL GROUP OF DETECTIVE AND PROTECTIVE SERVICES							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	R/M	7	2.20	008.73	318	?? 0.16% ??
SEPTICEMIA	0380-0389	W/M	8	3.27	005.54	245	?? 0.93% ??
SEPTICEMIA	0380-0389	B/M	6	1.40	012.34	429	?? 0.02% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	970-999	W/M	16	7.09	010.18	226	0.07%
INDUSTRIAL GROUP OF AUTOMOTIVE SERVICES & REPAIR							
MN URINARY ORGANS	1880-1899	W/M	41	26.50	007.59	155	0.29%
MN BLADDER	1880-1889	W/M	26	14.48	008.57	180	0.17%
INDUSTRIAL GROUP OF AUTOMOTIVE SERVICES, EXCEPT REPAIR							
MN OF GENITOURINARY ORGANS	1790-1899	W/M	8	2.99	007.08	268	?? 0.39% ??

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF AUTOMOTIVE REPAIR SHOPS							
MN BLADDER	1880-1889	W/M	24	13.89	006.81	173	0.45%
INDUSTRIAL GROUP OF ELECTRICAL REPAIR SHOPS							
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/M	12	4.37	011.94	275	?? 0.03% ??
INDUSTRIAL GROUP OF MISCELLANEOUS REPAIR SERVICES							
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	2900-2909, 2930-3029, 3060-3190	W/M	6	1.95	006.52	308	?? 0.53% ??
INDUSTRIAL GROUP OF PRIVATE HOUSEHOLDS							
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	27	15.52	008.88	174	0.14%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	238	205.71	005.86	116	0.77%
CHRONIC LIVER DISEASE (ALCOHOL RELATED)	5710-5713	B/F	14	7.32	005.87	191	0.77%
DISEASES OF PANCREAS	5770-5779	B/F	7	2.73	006.17	256	?? 0.65% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/F	27	16.04	006.95	168	0.42%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/F	154	126.50	007.31	122	0.34%
INDUSTRIAL GROUP OF LODGING PLACES							
DIABETES MELLITUS	2500-2509	B/M	7	1.43	018.46	490	?? <.01% ??
EMPHYSEMA	4920-4929	W/F	8	2.32	011.67	345	?? 0.03% ??
DISEASES OF URINARY SYSTEM	5800-5999	W/M	17	9.19	005.92	185	0.75%
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	W/M	13	6.27	006.29	207	0.61%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	14	7.36	006.09	190	0.68%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	14	7.14	006.71	196	0.48%
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	7	2.69	005.65	260	?? 0.87% ??
INDUSTRIAL GROUP OF HOTELS AND MOTELS							
DIABETES MELLITUS	2500-2509	B/M	7	1.41	018.87	496	?? <.01% ??
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/F	25	15.02	006.19	166	0.64%
EMPHYSEMA	4920-4929	W/F	8	2.15	013.35	372	?? 0.01% ??
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	14	7.01	007.20	200	0.36%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	14	6.80	007.85	206	0.25%
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	7	2.60	006.14	269	?? 0.66% ??
INDUSTRIAL GROUP OF LAUNDRY, CLEANING, AND GARMENT SERVICES							
SEPTICEMIA	0380-0389	W/M	13	6.27	006.25	207	0.62%
MN CERVIX	1800-1809	W/F	7	1.91	011.16	366	?? 0.04% ??
PNEUMONIA & INFLUENZA	4800-4879	W/M	29	18.55	005.57	156	0.91%
INDUSTRIAL GROUP OF BEAUTY & BARBER SHOPS							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	75	52.77	009.84	142	0.09%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	73	50.55	010.43	144	0.06%
DISEASES OF URINARY SYSTEM	5800-5999	W/M	30	13.80	018.37	217	<.01%

CAUSE OF DEATH GROUP OF: ICD-9 CODES OF: RACE OBSERVED EXPECTED MHS AGE-STD EXCEEDANCE  
& SEX DEATHS DEATHS CHI-SO PMR PROBABILITY  
BEAUTY & BARBER SHOPS (CONTINUED)

NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS 5800-5899 W/M 20 9.17 011.87 218 0.03%  
OTHER DISEASES OF THE URINARY SYSTEM 5900-5999 R/F 6 1.64 009.27 366 ?? 0.12% ??

INDUSTRIAL GROUP OF BEAUTY SHOPS CENSUS CODES=772

MN COLON 1530-1539 W/M 10 2.51 020.10 398 ?? <.01% ??

INDUSTRIAL GROUP OF BARBER SHOPS CENSUS CODES=780

MN RECTUM, RECTOSIGMOID JUCT. & ANUS 1540-1548 W/M 8 3.28 005.45 244 ?? 0.98% ??  
MN RESPIRATORY & INTRATHORACIC ORGANS 1600-1659 W/M 66 44.22 011.22 149 0.04%  
MN TRACHEA, BRONCHUS AND LUNG 1620-1629 W/M 64 42.41 011.47 151 0.04%  
DISEASES OF URINARY SYSTEM 5800-5999 W/M 28 12.39 018.96 226 <.01%  
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS 5800-5899 W/M 18 8.19 010.79 220 0.05%  
OTHER DISEASES OF THE URINARY SYSTEM 5900-5999 W/M 10 4.19 006.79 239 ?? 0.46% ??

INDUSTRIAL GROUP OF OTHER & MISCELLANEOUS PERSONAL SERVICES CENSUS CODES=781-791

MN PANCREAS 1570-1579 W/M 11 4.48 008.21 246 ?? 0.21% ??  
MN RESPIRATORY & INTRATHORACIC ORGANS 1600-1659 B/F 8 3.34 005.51 240 ?? 0.94% ??  
MN TRACHEA, BRONCHUS AND LUNG 1620-1629 B/F 8 3.19 006.15 251 ?? 0.65% ??  
PNEUMONIA & INFLUENZA 4800-4879 W/F 24 14.21 006.31 169 0.60%  
CONGENITAL ANOMALIES 7400-7599 W/M 6 0.45 056.70 1333 ?? <.01% ??

INDUSTRIAL GROUP OF SHOE REPAIR SHOPS CENSUS CODES=782

ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY 7970-7999 W/M 7 1.71 013.47 409 ?? 0.01% ??  
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY 7970-7999 B/M 7 1.66 015.87 422 ?? <.01% ??

INDUSTRIAL GROUP OF DRESSMAKING SHOPS CENSUS CODES=790

INFECTIOUS AND PARASITIC DISEASES 0010-1399 W/F 12 4.78 009.60 251 ?? 0.10% ??  
PNEUMONIA & INFLUENZA 4800-4879 W/F 20 11.39 006.01 176 0.71%

INDUSTRIAL GROUP OF MISCELLANEOUS PERSONAL SERVICES CENSUS CODES=791

MN TRACHEA, BRONCHUS AND LUNG 1620-1629 W/F 8 3.37 005.42 237 ?? 0.99% ??  
MN BREAST 1740-1759 W/F 10 4.65 005.61 215 ?? 0.89% ??

INDUSTRIAL GROUP OF ENTERTAINMENT & RECREATION SERVICES CENSUS CODES=800-802

MN LIP, ORAL CAVITY AND PHARYNX 1400-1499 W/M 11 4.61 007.62 239 ?? 0.29% ??  
MN SKIN 1720-1739 W/M 11 4.56 007.85 241 ?? 0.25% ??

INDUSTRIAL GROUP OF THEATERS AND MOTION PICTURES CENSUS CODES=800

MN LIP, ORAL CAVITY AND PHARYNX 1400-1499 W/M 6 1.87 007.09 321 ?? 0.39% ??  
MN BONE, CONNECTIVE TISSUE, AND SKIN 1700-1739 W/M 7 2.69 005.43 260 ?? 0.99% ??  
MN SKIN 1720-1739 W/M 7 2.00 010.21 350 ?? 0.07% ??

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
(CONTINUED)							
NUTRITIONAL, METABOLIC & IMMUNE DISORDER 2600-2799							
INDUSTRIAL GROUP OF HEALTH CARE SERVICES							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	8	2.68	008.81	299	?? 0.15% ??
SEPTICEMIA	0380-0389	B/F	46	31.20	007.33	147	0.34%
MN PANCREAS	1570-1579	B/F	37	24.36	006.70	152	0.48%
MN PANCREAS	1570-1579	W/M	43	29.48	005.91	146	0.75%
MN PANCREAS	1570-1579	B/F	24	14.58	006.02	165	0.71%
LYMPHOSARCOMA AND RETICULOSARCOMA	2000-2008	W/M	14	7.22	005.55	194	0.92%
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	2900-2909, 2930-3029, 3060-3190	W/M	16	7.85	007.62	204	0.29%
ACUTE MYOCARDIAL INFARCTION	4100	B/M	40	27.70	005.63	144	0.88%
OTHER DISORDERS CIR. SYSTEM/VEINS&LYMPH	4510-4599	W/M	13	6.04	007.06	215	0.39%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	434	388.83	005.71	112	0.84%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/F	223	173.91	014.72	128	0.01%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/F	173	128.85	015.90	134	<.01%
DISEASES OF THE MUSCULOSKELETAL SYSTEM	7100-7399	B/F	13	5.96	007.94	218	0.24%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	112	91.41	005.55	123	0.92%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	109	88.46	005.69	123	0.85%

CENSUS CODES=812-840

CENSUS CODES=812

CENSUS CODES=812

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF OFFICES OF PHYSICIANS							
MN PANCREAS	1570-1579	W/M	16	6.96	010.66	230	0.05%
MN OF GENITOURINARY ORGANS	1790-1899	W/M	39	25.79	006.54	151	0.53%
MN GENITAL ORGANS	1790-1879	W/M	28	16.98	006.73	165	0.47%
MN UTERUS (EXCEPT CERVIX)	1790-1799, 1820-1828	W/F	7	2.52	006.31	278	?? 0.60% ??
MN PROSTATE	1850	W/M	28	16.65	007.31	168	0.34%
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/M	18	7.88	011.91	228	0.03%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	13	5.13	010.72	253	0.05%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	29	18.47	005.79	157	0.80%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/F	15	6.12	011.77	245	0.03%
SUICIDE & SELF-INFLICTED INJURY	9500-9590	W/M	16	8.81	005.46	182	0.97%

CENSUS CODES=820

CENSUS CODES=820

CENSUS CODES=820

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF OFFICES OF DENTISTS							
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	15	6.84	008.76	219	0.15%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	7	1.69	013.76	414	?? 0.01% ??
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	13	5.68	008.70	229	0.16%

CENSUS CODES=831

CENSUS CODES=831

CENSUS CODES=831

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF HOSPITALS							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	B/F	42	27.29	008.18	154	0.21%
SEPTICEMIA	0380-0389	R/F	34	21.44	007.45	159	0.32%
MN LIP, ORAL CAVITY AND PHARYNX	1400-1499	W/F	22	13.12	005.63	168	0.88%
MN PANCREAS	1570-1579	B/F	23	12.81	008.01	180	0.23%
HYPERTENSION	4010-4019, 4030-4039	W/M	9	3.91	005.46	230	?? 0.97% ??
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/F	178	138.31	011.90	129	0.03%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/F	137	102.81	011.74	133	0.03%
DISEASES OF THE MUSCULOSKELETAL SYSTEM	7100-7399	R/F	11	5.07	006.37	217	0.58%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF NURSING AND PERSONAL CARE FACILITIES CENSUS CODES=832							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	70	52.37	006.07	134	0.68%
MN PANCREAS	1570-1579	W/M	7	2.49	006.54	281	?? 0.53% ??
ACUTE MYOCARDIAL INFARCTION	4100	W/F	143	106.61	014.29	134	0.01%
MEDICAL MISADVENTURES & ADVERSE EFFECTS	8700-8799, 9300-9499	W/F	6	1.76	008.00	341	?? 0.23% ??
INDUSTRIAL GROUP OF HEALTH SERVICES, N.E.C. CENSUS CODES=840							
PNEUMONIA & INFLUENZA	4800-4879	W/F	8	3.23	005.76	248	?? 0.82% ??
INDUSTRIAL GROUP OF LEGAL SERVICES CENSUS CODES=841							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	31	13.66	022.21	227	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	30	13.25	021.28	226	<.01%
MN BONE, CONNECTIVE TISSUE, AND SKIN	1700-1739	W/F	7	2.34	007.55	299	?? 0.30% ??
MENTAL DISORDERS	2900-3199	W/F	8	1.94	015.89	412	?? <.01% ??
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	2900-2909, 2930-3029, 3060-3190	W/F	8	1.74	019.33	460	?? <.01% ??
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/M	15	6.72	009.19	223	0.12%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	10	4.21	006.72	238	?? 0.48% ??
INDUSTRIAL GROUP OF CULTURAL, EDUCATIONAL & SCIENTIFIC SVC. CENSUS CODES=842-861, 872							
MN COLON	1530-1539	W/F	278	226.19	012.65	123	0.02%
MN PANCREAS	1570-1579	B/F	15	6.74	009.40	223	0.11%
MN BONE, CONNECTIVE TISSUE, AND SKIN	1700-1739	W/M	41	25.65	008.89	160	0.14%
MN SKIN	1720-1739	W/M	32	19.53	007.58	164	0.29%
MN BREAST	1740-1759	W/F	462	333.66	055.63	138	<.01%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	298	236.44	017.27	126	<.01%
MN GENITAL ORGANS	1790-1879	W/F	231	181.70	014.26	127	0.01%
MN UTERUS: (EXCEPT CERVIX)	1790-1799, 1820-1828	W/F	77	52.56	011.58	146	0.03%
MN OVARY	1830	W/F	124	90.15	013.21	138	0.01%
NEOPLASMS (ALL) OF NERVOUS SYSTEM	1910-1929, 2250-2259, 2375-2379	W/M	36	21.10	010.18	171	0.07%
MN BRAIN	1910-1919	W/M	34	19.92	009.57	171	0.10%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	133	91.81	018.97	145	<.01%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/F	201	162.27	009.73	124	0.09%
LYMPHOSARCOMA AND RETICULOSARCOMA	2000-2008	W/F	33	19.55	009.07	169	0.13%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	49	23.60	027.11	208	<.01%
MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/F	46	28.88	010.12	159	0.07%
DIABETES MELLITUS	2500-2509	R/M	11	5.09	005.99	216	0.72%
DISORDERS INVOLVING THE IMMUNE MECHANISM	2790-2799	W/M	10	2.64	018.48	379	?? <.01% ??
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	50	28.83	015.34	173	<.01%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/F	83	61.62	007.53	135	0.30%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	81	57.38	010.83	141	0.05%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	76	55.63	008.22	137	0.21%
ACCIDENTAL FALLS	8800-8880, 9293	W/F	63	46.45	005.88	136	0.76%
INDUSTRIAL GROUP OF ELEMENTARY AND SECONDARY SCHOOLS CENSUS CODES=842							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	R/F	40	26.58	006.96	150	0.42%
MN COLON	1530-1539	W/F	235	196.59	007.89	120	0.25%

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF: ELEMENTARY AND SECONDARY SCHOOLS	ICD-9 CODES OF: (CONTINUED)	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
MN PANCREAS	1570-1579	B/F	14	5.80	010.69	241	0.05%
MN BREAST	1740-1759	W/F	390	283.20	044.89	138	<.01%
MN BREAST	1740-1759	B/F	31	19.75	006.49	157	0.54%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	246	202.46	009.94	122	0.08%
MN GENITAL ORGANS	1790-1879	W/F	190	154.91	008.34	123	0.19%
MN UTERUS (EXCEPT CERVIX)	1790-1799, 1820-1828	W/F	65	45.30	008.59	143	0.17%
MN OVARY	1830	W/F	102	76.58	008.62	133	0.17%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	91	67.69	008.02	134	0.23%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/F	178	139.56	011.06	128	0.04%
LYMPHOSARCOMA AND RETICULOSARCOMA	2000-2008	W/F	29	16.75	008.63	173	0.16%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	33	17.40	013.45	190	0.01%
MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/F	42	25.00	011.45	168	0.04%
LEUKEMIA OF UNSPECIFIED CELL TYPE	2080-2089	W/F	21	12.11	006.08	173	0.68%
DIABETES MELLITUS	2500-2509	W/M	69	50.42	006.72	137	0.47%
DIABETES MELLITUS	2500-2509	B/M	10	3.78	008.98	265	?? 0.14% ??
DISORDERS INVOLVING THE IMMUNE MECHANISM	2790-2799	W/M	6	1.89	007.08	317	?? 0.39% ??
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	37	21.46	010.83	172	0.05%
ACUTE MYOCARDIAL INFARCTION	4100	W/M	594	536.10	007.67	111	0.28%
INFECTIONS OF SKIN & SUBCUTANEOUS TISSUE	6800-6869	W/F	9	3.57	007.08	252	?? 0.39% ??
CONGENITAL ANOMALIES	7400-7599	W/F	14	6.98	006.40	201	0.57%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	69	46.29	012.16	149	0.02%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	64	44.90	008.76	143	0.15%
ACCIDENTAL FALLS	8800-8880, 9293	W/F	58	41.05	006.96	141	0.42%

INDUSTRIAL GROUP OF COLLEGES AND UNIVERSITIES

CENSUS CODES=850

MN PANCREAS	1570-1579	W/M	18	9.57	006.68	188	0.49%
MN BONE, CONNECTIVE TISSUE, AND SKIN	1700-1739	W/M	12	5.78	005.72	208	0.84%
MN SKIN	1720-1739	W/M	11	4.39	008.62	251	?? 0.17% ??
MN BREAST	1740-1759	W/F	48	33.85	006.05	142	0.69%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	43	22.40	018.97	192	<.01%
MN GENITAL ORGANS	1790-1879	W/F	33	17.78	012.71	186	0.02%
MN OVARY	1830	W/F	17	9.09	006.21	187	0.63%
MN BLADDER	1880-1889	W/F	7	2.20	008.50	318	?? 0.18% ??
NEOPLASMS (ALL) OF NERVOUS SYSTEM	1910-1929, 2250-2259, 2375-2379	W/M	13	4.73	012.90	275	?? 0.02% ??
MN BRAIN	1910-1919	W/M	13	4.49	014.55	290	?? 0.01% ??
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	39	20.28	016.86	192	<.01%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	15	5.23	016.57	287	<.01%
MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/M	8	3.25	005.60	246	?? 0.90% ??
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	13	6.21	006.47	209	0.55%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/F	11	4.87	006.57	226	?? 0.52% ??
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	B/M	28	17.57	007.98	159	0.24%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	B/M	13	6.65	005.80	195	0.80%
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	W/F	23	13.51	006.18	170	0.64%
MEDICAL MISADVENTURES & ADVERSE EFFECTS	8700-8799, 9300-9499	W/F	7	1.36	019.47	515	?? <.01% ??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF CHILD DAY CARE SERVICES							
ACUTE MYOCARDIAL INFARCTION	4100	B/F	6	1.76	008.87	341	?? 0.14% ??
INDUSTRIAL GROUP OF SOCIAL SERVICES, N.E.C.							
MN BREAST	1740-1759	B/F	7	2.60	006.29	269	?? 0.61% ??
INDUSTRIAL GROUP OF MUSEUMS, ART GALLERIES, AND ZOOS							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	9	3.18	009.79	283	?? 0.09% ??
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	9	3.05	010.67	295	?? 0.05% ??
INDUSTRIAL GROUP OF RELIGIOUS & MEMBERSHIP ORGANIZATIONS							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	128	91.45	015.35	140	< 0.01%
MN COLON	1530-1539	W/M	59	37.46	012.25	158	0.02%
MN BREAST	1740-1759	W/F	60	41.60	008.35	144	0.19%
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/M	16	7.00	010.48	229	0.06%
INDUSTRIAL GROUP OF RELIGIOUS ORGANIZATIONS							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	87	64.28	008.27	135	0.20%
MN PANCREAS	1570-1579	W/M	19	10.29	006.64	185	0.50%
MN BREAST	1740-1759	W/F	48	27.98	014.67	172	0.01%
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/M	13	5.04	011.16	258	0.04%
METABOLIC DISEASES	2700-2788	W/M	9	3.58	006.78	251	?? 0.46% ??
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/F	12	5.50	006.65	218	0.50%
INDUSTRIAL GROUP OF MEMBERSHIP ORGANIZATIONS							
MN LIP, ORAL CAVITY AND PHARYNX	1400-1499	W/M	7	2.37	007.30	295	?? 0.34% ??
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	41	27.19	007.03	151	0.40%
MN COLON	1530-1539	W/M	22	10.86	010.75	203	0.05%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	20	11.78	005.43	170	0.99%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	20	11.45	006.07	175	0.69%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	18	9.26	007.69	194	0.28%
MN GENITAL ORGANS	1790-1879	W/F	15	7.33	007.29	205	0.35%
INDUSTRIAL GROUP OF ENGINEERING & ACCOUNTING PROF. SVC.							
MN COLON	1530 1539	W/M	42	26.11	009.37	161	0.11%
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	W/M	19	10.88	005.43	175	0.98%
INDUSTRIAL GROUP OF ENGINEERING, ARCHITECTURAL, & SURVEYING							
MN BREAST	1740-1759	W/F	8	3.08	006.98	260	?? 0.41% ??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF ACCOUNTING, AUDITING, AND BOOKKEEPING							
CENSUS CODES=890							
MN COLON	1530-1539	W/M	20	11.51	005.72	174	0.84%
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	W/M	11	4.98	006.23	221	?? 0.62% ??
INDUSTRIAL GROUP OF OTHER PROFESSIONAL & RELATED SERVICES							
CENSUS CODES=841,862-871,892							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	74	51.04	010.68	145	0.05%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	72	49.60	010.44	145	0.06%
MN GENITAL ORGANS	1790-1879	R/F	9	3.17	009.38	284	?? 0.11% ??
LEUKEMIAS (ALL)	2040-2089	W/M	18	9.33	007.27	193	0.35%
NEOPLASM OF UNCERTAIN BEHAVIOR OR BENIGN	2100-2399	W/F	11	5.15	005.64	214	0.87%
MENTAL DISORDERS	2900-3199	W/F	14	6.29	008.39	223	0.19%
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	2909,2930-3029,3060-3190	W/F	13	5.52	008.94	236	0.14%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	W/M	24	11.93	011.45	201	0.04%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	14	7.04	006.02	199	0.70%
INDUSTRIAL GROUP OF MISC. PROFESSIONAL AND RELATED SERVICES							
CENSUS CODES=892							
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/F	27	15.26	008.61	177	0.17%
OTHER DISEASES INTESTINES & PERITONEUM	5600-5699	W/F	9	2.62	013.38	344	?? 0.01% ??
INDUSTRIAL GROUP OF GOVERNMENT OFFICIALS & PUBLIC ADMIN.							
CENSUS CODES=900-932							
OTHER & UNSPECIFIED INFECTIOUS/PARASITIC	0900-1049,1200-1349,1360-1369,1398	W/F	7	1.17	024.38	598	?? < 0.01% ??
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	R/F	37	25.10	005.76	147	0.82%
MN PANCREAS	1570-1579	B/M	20	11.10	006.84	180	0.45%
MN BREAST	1740-1759	W/F	165	133.17	008.17	124	0.21%
MN BREAST	1740-1759	B/F	34	18.73	012.91	182	0.02%
MN URINARY ORGANS	1880-1899	W/M	119	92.81	007.55	128	0.30%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/F	27	16.92	005.58	160	0.91%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	W/F	49	34.00	006.39	144	0.57%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/F	34	20.49	008.47	166	0.18%
OTHER DISORDERS CIR. SYSTEM/VEINS&LYMPH	4510-4599	W/F	13	6.59	005.41	197	1.00%
GASTROINTESTINAL HEMORRHAGE	5780-5789	W/M	33	21.75	005.57	152	0.91%
INDUSTRIAL GROUP OF GENERAL GOVERNMENT, N.E.C.							
CENSUS CODES=901							
OTHER VIRAL DISEASES	0450-0799,1380-1389,1390,1391	W/M	6	1.99	006.34	302	?? 0.59% ??
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	R/M	60	40.63	009.88	148	0.08%
MN COLON	1530-1539	B/F	13	6.16	006.82	211	0.45%
MN PANCREAS	1570-1579	R/M	16	7.27	009.85	220	0.08%
MN BREAST	1740-1759	B/F	22	11.61	009.22	189	0.12%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919,2920-2929,3030-3059	W/M	11	5.02	006.08	219	0.68%
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	R/M	13	6.52	005.76	199	0.82%
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	128	100.82	007.46	127	0.31%
GASTROINTESTINAL HEMORRHAGE	5780-5789	W/M	22	9.07	017.38	243	< 0.01%
DISEASES OF THE MUSCULOSKELETAL SYSTEM	7100-7399	W/F	12	5.22	007.69	230	0.28%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INDUSTRIAL GROUP OF JUSTICE, PUBLIC ORDER, AND SAFETY CENSUS CODES=910							
MN URINARY ORGANS	1880-1899	W/M	38	25.42	005.89	149	0.76%
ISCHEMIC HEART DISEASE	4100-4149	B/F	10	4.70	005.86	213	?? 0.77% ??
ACUTE MYOCARDIAL INFARCTION	4100	B/M	18	9.52	007.40	189	0.33%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	29	16.45	009.39	176	0.11%
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	B/M	6	1.79	008.00	335	?? 0.23% ??
MEDICAL MISADVENTURES & ADVERSE EFFECTS	8700-8799, 9300-9499	W/M	9	3.91	005.45	230	?? 0.98% ??
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	14	5.95	009.92	235	0.08%
INDUSTRIAL GROUP OF PUBLIC FINANCE, TAXATION, MONETARY POLICY CENSUS CODES=921							
NEOPLASMS (ALL) OF NERVOUS SYSTEM	1910-1929, 2250-2259, 2375-2379	W/M	6	1.58	009.74	380	?? 0.09% ??
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/F	7	1.54	015.95	455	?? < 0.01% ??
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	W/F	9	3.08	009.66	292	?? 0.09% ??
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/F	6	1.88	007.11	319	?? 0.38% ??
ISCHEMIC HEART DISEASE	4100-4149	B/M	6	2.25	005.57	267	?? 0.91% ??
PNEUMONIA & INFLUENZA	4800-4879	W/M	15	7.98	005.50	188	0.95%
INDUSTRIAL GROUP OF ADMIN. OF HUMAN RESOURCES PROGRAMS CENSUS CODES=922							
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/F	13	6.41	005.97	203	0.73%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	W/F	11	3.52	014.03	313	?? 0.01% ??
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/F	6	1.62	009.34	370	?? 0.11% ??
INDUSTRIAL GROUP OF ADMINISTRATION OF ECONOMIC PROGRAMS CENSUS CODES=931							
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/F	7	2.62	005.90	267	?? 0.75% ??
INDUSTRIAL GROUP OF NAT. SECURITY AND INTERNATIONAL AFFAIRS CENSUS CODES=932							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	122	93.74	009.24	130	0.12%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	118	89.72	009.62	132	0.10%
INDUSTRIAL GROUP OF INFO. INSUFFICIENT TO ALLOCATE IND. CENSUS CODES=951-990							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	241	167.29	036.21	144	< 0.01%
SEPTICEMIA	0380-0389	W/M	173	112.97	034.53	153	< 0.01%
DIABETES MELLITUS	2500-2509	W/F	2862	2600.08	072.53	110	< 0.01%
DIABETES MELLITUS	2500-2509	B/F	268	241.41	006.71	111	0.48%
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/M	102	81.66	005.68	125	0.86%
METABOLIC DISEASES	2700-2788	W/M	72	54.33	006.36	133	0.58%
MENTAL DISORDERS	2900-3199	W/M	129	72.55	049.83	178	< 0.01%
MENTAL DISORDERS	2900-3199	B/M	104	73.39	020.22	142	< 0.01%
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	2900-2909, 2930-3029, 3060-3190	W/M	69	39.54	023.93	175	< 0.01%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	W/M	60	33.01	025.18	182	< 0.01%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	B/M	83	57.21	018.83	145	< 0.01%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	W/M	282	191.34	051.41	147	< 0.01%
OTHER DISORDERS OF THE CNS	3400-3499	W/M	134	66.58	084.08	201	< 0.01%
DISORDERS OF PERIPHERAL NERVOUS SYSTEM	3500-3599	W/M	55	24.00	060.09	229	< 0.01%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	1509	1377.22	015.40	110	< 0.01%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INFO. INSUFFICIENT TO ALLOCATE IND. (CONTINUED)							
PNEUMONIA & INFLUENZA	4800-4879	W/M	395	302.94	031.27	130	<.01%
PNEUMONITIS DUE TO SOLIDS & LIQUIDS	5070-5078	W/M	66	33.38	034.02	198	<.01%
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	567	487.68	014.72	116	0.01%
PEPTIC ULCERS	5310-5339	W/M	51	34.70	007.89	147	0.25%
CHRONIC LIVER DISEASE (ALCOHOL RELATED)	5710-5713	W/M	93	69.72	008.40	133	0.19%
DISORDERS OF GALLBLADDER & BILIARY TRACT	5740-5769	W/M	38	21.83	012.27	174	0.02%
DISEASES OF URINARY SYSTEM	5800-5999	W/M	227	189.28	008.10	120	0.22%
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/M	84	59.64	010.42	141	0.06%
CONGENITAL ANOMALIES	7400-7599	W/M	65	35.70	033.29	182	<.01%
SYMPTOMS/SIGNS/NONSPEC. ABNORMAL FINDING	7800-7969	W/M	27	15.74	008.48	172	0.18%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	465	221.31	302.15	210	<.01%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	R/M	638	465.86	103.73	137	<.01%
ACCIDENTS DUE TO NATURAL & ENV. FACTORS	9000-9090,9295	W/M	26	16.80	005.96	155	0.73%
ACCIDENTS DUE TO EXCESSIVE COLD	9010-9019	W/M	15	7.89	007.65	190	0.28%
ACCIDENTAL SUFFOCATION	9110-9139	W/M	50	30.85	014.02	162	0.01%
ACCIDENTAL SUFFOCATION	9110-9139	W/F	165	147.47	005.42	112	0.99%
UNKNOWN IF ACC. OR PURPOSELY INFLICTED	9800-9890	W/M	75	57.61	007.15	130	0.37%

CENSUS CODES=942

OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	131	105.00	006.93	125	0.42%
AIR TRANSPORT ACCIDENTS	8400-8459	W/M	6	0.96	021.79	625	?? <.01% ??

INDUSTRIAL GROUP OF RETIRED

CENSUS CODES=951

MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	45	30.20	007.25	149	0.35%
MN PANCREAS	1570-1579	W/F	12	5.58	006.41	215	0.57%
DISEASES OF BLOOD & BLOOD FORMING ORGANS	2800-2899	W/M	9	3.83	005.73	235	?? 0.83% ??
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	W/F	12	5.75	005.82	209	0.79%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/F	10	3.94	007.96	254	?? 0.24% ??
CEREBROVASCULAR DISEASE	4300-4380	W/M	87	63.27	009.19	138	0.12%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	47	30.90	008.42	152	0.19%
EMPHYSEMA	4920-4929	W/F	6	1.78	007.78	337	?? 0.26% ??
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	R/M	21	11.44	007.65	184	0.28%
NONINFECTIVE ENTERITIS & COLITIS	5500-5580	W/M	10	3.03	014.01	330	?? 0.01% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	38	14.61	036.66	260	<.01%

INDUSTRIAL GROUP OF NEVER WORKED

CENSUS CODES=961

INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	55	32.18	017.45	171	<.01%
SEPTICEMIA	0380-0389	W/M	30	15.53	013.22	193	0.01%
MN CONNECTIVE AND OTHER SOFT TISSUE	1710-1719	W/M	19	11.36	006.17	167	0.65%
DIABETES MELLITUS	2500-2509	W/F	2731	2460.02	075.69	111	<.01%
DIABETES MELLITUS	2500-2509	R/F	241	209.07	009.60	115	0.10%
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/M	35	23.56	006.19	149	0.64%
METABOLIC DISEASES	2700-2788	W/M	26	14.67	009.93	177	0.08%
METABOLIC DISEASES	2900-3199	W/M	41	18.03	033.18	227	<.01%
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	2900-2909, 2930-3029, 3060-3190	W/M	22	7.02	036.11	313	<.01%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	W/M	19	11.02	005.93	172	0.74%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
NEVER WORKED							
(CONTINUED)							
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	W/F	42	31.75	006.06	132	0.69%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	W/M	143	58.09	160.51	246	<.01%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	R/M	17	7.73	012.14	220	0.02%
OTHER DISORDERS OF THE CNS	3400-3499	W/M	83	25.99	159.52	319	<.01%
DISORDERS OF PERIPHERAL NERVOUS SYSTEM	3500-3599	W/M	40	15.46	058.25	259	<.01%
DISORDERS OF PERIPHERAL NERVOUS SYSTEM	3500-3599	B/M	6	1.71	013.12	351	??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	299	208.85	045.34	143	<.01%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	217	135.37	055.40	160	<.01%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	R/M	42	29.61	005.85	142	0.78%
PNEUMONIA & INFLUENZA	4800-4879	W/M	110	39.45	137.14	279	<.01%
PNEUMONIA & INFLUENZA	4800-4879	B/M	17	8.90	007.24	191	0.36%
PNEUMONITIS DUE TO SOLIDS & LIQUIDS	5070-5078	W/M	20	4.54	054.00	441	??
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	120	95.88	006.51	125	0.53%
PEPTIC ULCERS	5310-5339	W/M	16	4.95	023.86	323	??
DISEASES OF URINARY SYSTEM	5800-5999	W/M	45	23.26	020.43	193	<.01%
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	B/M	14	6.91	006.88	203	0.43%
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/M	24	6.86	042.22	350	<.01%
CONGENITAL ANOMALIES	7400-7599	W/M	47	20.47	048.00	230	<.01%
CONGENITAL ANOMALIES	7400-7599	B/M	9	4.26	006.82	211	??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	87	42.18	051.13	206	<.01%
ACCIDENTAL POISONINGS	8500-8699, 9292	W/F	94	79.37	005.43	118	0.99%
ACCIDENTS DUE TO NATURAL & ENV. FACTORS	9000-9090, 9295	W/M	19	7.99	018.95	238	<.01%
ACCIDENTS DUE TO EXCESSIVE COLD	9010-9019	W/M	12	4.03	020.14	298	??
ACCIDENTAL SUFFOCATION	9110-9139	W/M	23	11.47	014.04	201	0.01%

CENSUS CODES=981

INDUSTRIAL GROUP OF REFERRAL	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
MN RESPIRATORY & INTRATHORACIC ORGANS	10	4.23	007.28	236	??
MN TRACHEA, BRONCHUS AND LUNG	10	4.05	008.12	247	??

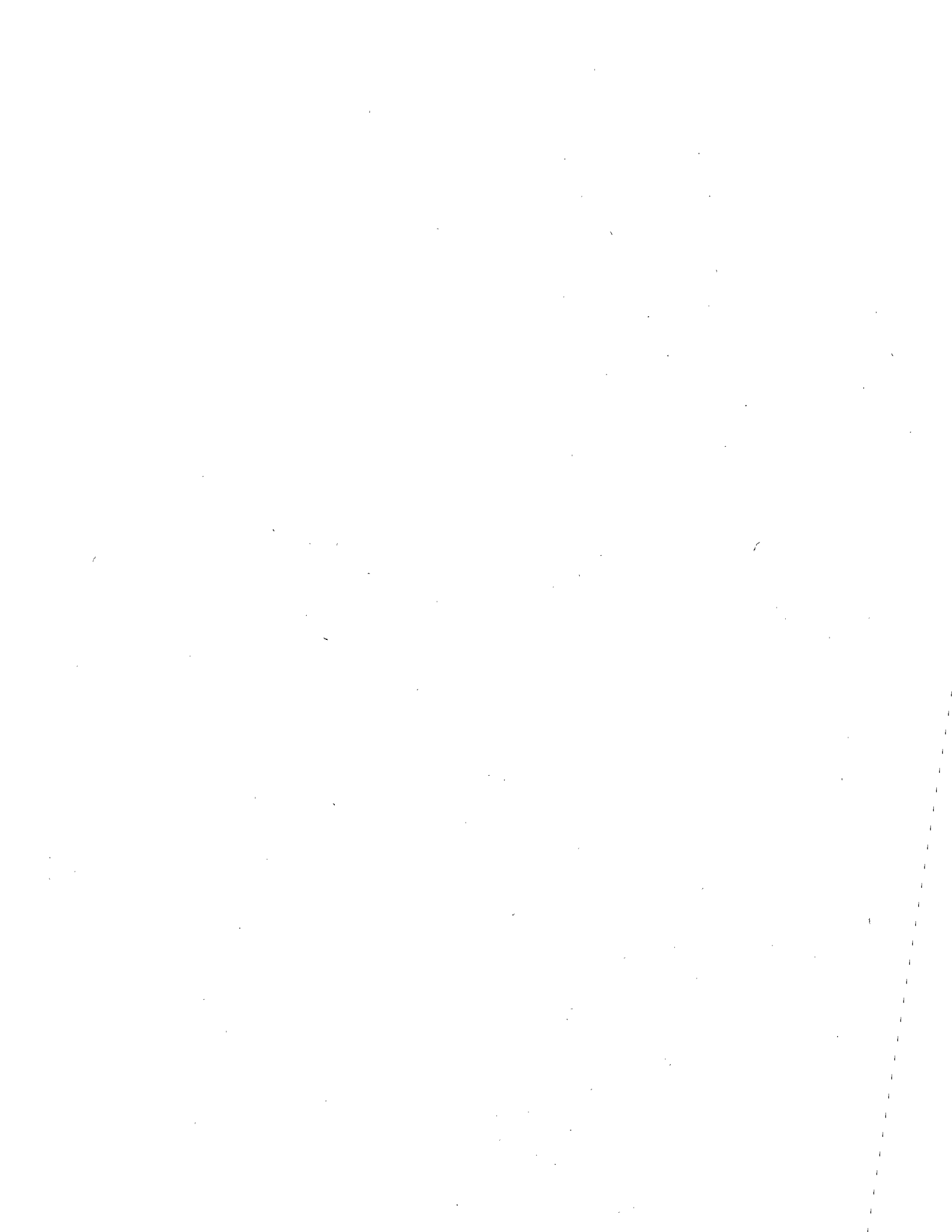
INDUSTRIAL GROUP OF UNKNOWN

CENSUS CODES=990

INDUSTRIAL GROUP OF UNKNOWN	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INFECTIOUS AND PARASITIC DISEASES	170	121.72	020.25	140	<.01%
INFECTIOUS AND PARASITIC DISEASES	84	63.89	006.29	131	0.60%
SEPTICEMIA	129	86.86	021.42	149	<.01%
OTHER VIRAL DISEASES	10	4.11	007.36	243	??
MN LIP, ORAL CAVITY AND PHARYNX	74	54.58	007.06	136	0.39%
MN COLON	166	138.66	005.54	120	0.92%
MN LARYNX	7	1.84	012.80	380	??
MN OTHER & UNSPECIFIED GENITAL ORGANS	15	5.91	012.91	254	0.02%
LEUKEMIA OF UNSPECIFIED CELL TYPE	18	9.00	008.37	200	0.19%
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	44	30.66	005.61	144	0.89%
NUTRITIONAL DEFICIENCIES	19	7.05	019.18	270	<.01%
MENTAL DISORDERS	83	49.57	023.54	167	<.01%
MENTAL DISORDERS	85	57.40	018.20	148	<.01%
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	43	28.71	007.04	150	0.40%
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	34	22.57	005.48	151	0.96%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	40	20.83	018.12	192	<.01%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	69	44.74	018.32	154	<.01%

RACE SEX SPECIFIC ASSOCIATIONS BETWEEN INDUSTRY AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
UNKNOWN	(CONTINUED)						
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/F	83	62.24	006.93	133	0.42%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	317	266.92	010.08	119	0.07%
PNEUMONIA & INFLUENZA	4800-4879	W/F	137	109.39	007.12	125	0.38%
OTHER & UNSPECIFIED C. O. P. D.	4940-4969	W/M	350	310.17	005.49	113	0.95%
OTHER & UNSPECIFIED C. O. P. D.	4940-4969	W/F	111	85.17	007.95	130	0.24%
PNEUMONITIS DUE TO SOLIDS & LIQUIDS	5070-5078	W/M	44	25.49	013.57	173	0.01%
PNEUMONITIS DUE TO SOLIDS & LIQUIDS	5070-5078	R/M	33	21.65	007.15	152	0.37%
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	403	357.76	006.22	113	0.63%
CHRONIC LIVER DISEASE (ALCOHOL RELATED)	5710-5713	W/M	74	49.79	012.27	149	0.02%
DISORDERS OF GALLBLADDER & BILIARY TRACT	5740-5769	W/M	28	16.84	007.19	166	0.37%
DISEASES OF SKIN & SUBCUTANEOUS TISSUE	6800-7099	W/F	21	9.47	013.29	222	0.01%
OTHER DISEASES SKIN/SUBCUTANEOUS TISSUE	7000-7099	W/F	16	6.39	013.40	250	0.01%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	340	163.70	205.61	208	<.01%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/F	96	53.18	035.20	181	<.01%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/M	566	388.95	121.68	146	<.01%
ACCIDENTS CAUSED BY FIRE & FLAMES	8900-8990, 9294	W/M	35	21.17	009.14	165	0.13%
ACCIDENTS DUE TO NATURAL & ENV. FACTORS	9000-9090, 9295	W/F	8	3.08	006.62	260	?? 0.50% ??
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	66	44.36	011.32	149	0.04%
HOMICIDE & LEGAL INTERVENTION	9600-9780	R/M	231	204.83	006.06	113	0.69%
UNKNOWN IF ACC. OR PURPOSELY INFLICTED	9800-9890	W/M	35	22.29	007.41	157	0.32%



M O R T A L I T Y      E X P E R I E N C E  
B Y  
O C C U P A T I O N

These results include those race/sex specific associations between occupation and underlying cause of death where the PMR is 110 or greater and the exceedance probability is 1 percent or less for the one-tailed test.

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CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF EXEC., ADMIN., & MANAGERIAL OCCUPATIONS CENSUS CODES=003-037							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	1069	942.55	019.85	113	<.01%
MN COLON	1530-1539	W/M	457	381.40	016.72	120	<.01%
MN COLON	1530-1539	W/F	142	112.05	008.22	127	0.21%
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/M	69	45.91	012.28	150	0.02%
MN PANCREAS	1570-1579	W/M	192	155.05	009.55	124	0.10%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	217	166.06	016.95	131	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	212	161.52	017.08	131	<.01%
MN BONE,CONNECTIVE TISSUE, AND SKIN	1700-1739	W/M	120	89.24	011.38	134	0.04%
MN SKIN	1720-1739	W/M	92	68.14	008.87	135	0.14%
MN BREAST	1740-1759	W/F	240	197.18	010.23	122	0.07%
MN OF GENITOURINARY ORGANS	1790-1899	W/M	614	536.22	012.74	115	0.02%
MN GENITAL ORGANS	1790-1879	W/M	421	344.69	018.84	122	<.01%
MN PROSTATE	1850	W/M	409	337.55	016.86	121	<.01%
MN URINARY ORGANS	1880-1899	B/M	8	2.88	007.70	278	?? 0.28% ??
NEOPLASMS (ALL) OF NERVOUS SYSTEM	1910-1929,2250-2259,2375-2379	W/M	104	72.63	014.54	143	0.01%
MN BRAIN	1910-1919	W/M	101	68.41	016.68	148	<.01%
MN ENDOCRINE GLANDS & RELATED STRUCTURES1930-1949		W/M	17	7.02	014.11	242	0.01%
MN OF THYROID GLAND	1930	W/M	12	4.49	012.00	267	?? 0.03% ??
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/F	116	85.71	010.95	135	0.05%
MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE DISORDERS INVOLVING THE IMMUNE MECHANISM2790-2799	2030-2038	W/F	27	14.99	009.14	180	0.12%
ISCHEMIC HEART DISEASE	4100-4149	W/M	18	7.96	012.55	226	0.02%
OTHER ACUTE/SUBACUTE ISCHEMIC HEART DIS.4110		B/M	78	59.99	006.23	130	0.63%
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	W/M	28	16.08	008.95	174	0.14%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	B/M	11	4.57	008.00	241	?? 0.23% ??
TRANSPORT ACCIDENTS	8000-8489,9290-9291	W/F	117	93.11	006.22	126	0.63%
TRANSPORT ACCIDENTS	8000-8489,9290-9291	W/M	230	198.78	005.91	116	0.75%
MOTOR VEHICLE ACCIDENTS	8100-8259,9290	W/F	55	36.32	010.52	151	0.06%
AIR TRANSPORT ACCIDENTS	8400-8459	W/F	49	35.12	005.88	140	0.76%
OCCUPATIONAL GROUP OF GOV. EXEC., OFFICIALS & ADMINISTRATORS CENSUS CODES=003-005							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/F	7	2.70	005.42	259	?? 0.99% ??
OCCUPATIONAL GROUP OF ADMIN. OCC.S (EX. PUBLIC OFFICIALS) CENSUS CODES=006-019							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	769	688.33	010.72	112	0.05%
MN COLON	1530-1539	W/M	323	278.51	007.64	116	0.28%
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/M	49	33.58	007.12	146	0.38%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	156	118.63	012.57	132	0.02%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	151	115.40	011.69	131	0.03%
MN BONE,CONNECTIVE TISSUE, AND SKIN	1700-1739	W/M	85	65.53	005.93	130	0.74%
MN SKIN	1720-1739	W/M	67	50.01	005.87	134	0.77%
MN OF GENITOURINARY ORGANS	1790-1899	W/M	459	392.20	012.49	117	0.02%
MN GENITAL ORGANS	1790-1879	W/M	318	252.24	018.59	126	<.01%
MN PROSTATE	1850	W/M	310	246.95	017.45	126	<.01%
NEOPLASMS (ALL) OF NERVOUS SYSTEM	1910-1929,2250-2259,2375-2379	W/M	77	53.26	010.95	145	0.05%
MN BRAIN	1910-1919	W/M	77	50.17	014.90	153	0.01%
MN ENDOCRINE GLANDS & RELATED STRUCTURES1930-1949		W/M	12	5.14	008.43	233	0.18%

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CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
ADMIN. OCC.S (EX. PUBLIC OFFICIALS) (CONTINUED)							
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE DISORDERS INVOLVING THE IMMUNE MECHANISMS	2000-2089	W/F	83	61.01	007.94	136	0.24%
OTHER BLOOD DISEASES	2790-2799	W/M	12	5.97	005.53	201	0.93%
ISCHEMIC HEART DISEASE	4100-4149	W/M	18	9.48	007.27	190	0.35%
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	B/M	60	43.19	007.47	139	0.31%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	B/M	28	17.97	005.54	156	0.93%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	88	66.70	006.81	132	0.45%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	183	149.86	008.69	122	0.16%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	45	24.45	018.63	184	< 0.1%
AIR TRANSPORT ACCIDENTS	8400-8459	W/F	39	23.61	010.60	165	0.06%
		W/M	17	5.35	024.94	318	< 0.1%
OCCUPATIONAL GROUP OF FINANCIAL MANAGERS CENSUS CODES=007							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	14	5.52	012.53	254	0.02%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	14	5.38	013.30	260	0.01%
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/F	8	3.29	005.62	243	?? 0.88% ??
OCCUPATIONAL GROUP OF PERSONNEL AND LABOR RELATIONS MGR.S CENSUS CODES=008							
MN COLON	1530-1539	W/F	6	1.55	010.43	387	?? 0.06% ??
OCCUPATIONAL GROUP OF MANAGERS-MKT. ING. ADVERTISING, PUB. REL. CENSUS CODES=013							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	39	25.54	007.05	153	0.40%
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/M	6	1.29	013.68	465	?? 0.01% ??
OTHER DISEASES OF RESPIRATORY SYSTEM	5100-5199	W/M	8	2.58	009.49	310	?? 0.10% ??
OCCUPATIONAL GROUP OF ADMINISTRATORS-EDUCATION CENSUS CODES=014							
NEOPLASMS (ALL) OF NERVOUS SYSTEM	1910-1929, 2250-2259, 2375-2379	W/M	8	1.34	029.09	597	?? < 0.01% ??
MN BRAIN	1910-1919	W/M	8	1.26	031.49	635	?? < 0.01% ??
OCCUPATIONAL GROUP OF POSTMASTERS AND MAIL SUPERINTENDENTS CENSUS CODES=017							
MN COLON	1530-1539	W/F	7	2.62	005.91	267	?? 0.75% ??
OCCUPATIONAL GROUP OF FUNERAL DIRECTORS CENSUS CODES=018							
MN PANCREAS	1570-1579	W/M	6	1.90	006.90	316	?? 0.43% ??
OCCUPATIONAL GROUP OF MANAGERS AND ADMINISTRATORS N.E.C. CENSUS CODES=019							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	118	92.90	007.11	127	0.38%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	114	90.37	006.45	126	0.55%
MN OF GENITOURINARY ORGANS	1790-1899	W/M	388	328.32	011.75	118	0.03%
MN GENITAL ORGANS	1790-1879	W/M	273	211.63	019.06	129	< 0.01%
MN PROSTATE	1850	W/M	265	207.13	017.30	128	< 0.01%
NEOPLASMS (ALL) OF NERVOUS SYSTEM	1910-1929, 2250-2259, 2375-2379	W/F	23	13.13	006.87	175	0.44%
MN BRAIN	1910-1919	W/M	58	41.68	006.40	139	0.57%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
MANAGERS AND ADMINISTRATORS N.E.C. (CONTINUED)							
MN BRAIN	1910-1919	W/F	21	11.71	006.78	179	0.46%
MN ENDOCRINE GLANDS & RELATED STRUCTURES	1930-1949	W/M	10	4.28	006.75	234	0.47% ??
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/M	222	190.15	005.59	117	0.90%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/F	68	47.59	008.69	143	0.16%
MN MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/F	17	8.37	008.05	203	0.23%
MN OTHER BLOOD DISEASES	2890-2899	W/M	15	7.92	005.77	189	0.81%
MN OTHER & ILL-DEFINED HEART DISEASE	4200-4299	O/M	6	2.06	007.17	291	0.37% ??
MN DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	R/M	7	2.69	005.51	260	0.94% ??
MN TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	153	127.96	005.73	120	0.83%
MN TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	34	19.28	011.92	176	0.03%
MN MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	30	18.65	007.16	161	0.37%
MN AIR TRANSPORT ACCIDENTS	8400-8459	W/M	15	4.46	023.93	336	0.01% ??
OCCUPATIONAL GROUP OF MANAGEMENT RELATED OCCUPATIONS CENSUS CODES=023-037							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/F	20	11.62	005.46	172	0.97%
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	253	210.13	009.34	120	0.11%
MN COLON	1530-1539	W/M	116	85.10	011.38	136	0.04%
MN DISORDERS INVOLVING THE IMMUNE MECHANISM	2790-2799	W/M	6	1.76	008.08	341	0.22% ??
MN NONINFECTIVE ENTERITIS & COLITIS	5550-5580	W/F	9	3.92	005.40	230	0.00% ??
OCCUPATIONAL GROUP OF ACCOUNTANTS AND AUDITORS CENSUS CODES=023							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/F	11	4.51	008.05	244	0.23% ??
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	125	98.81	007.22	127	0.36%
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/M	11	4.79	006.93	230	0.42% ??
OCCUPATIONAL GROUP OF PERSONNEL, TRAINING, LABOR REL., OFFICERS CENSUS CODES=027							
MN OF GENITOURINARY ORGANS	1790-1899	W/F	7	2.33	007.84	300	0.25% ??
OCCUPATIONAL GROUP OF BUYERS AND PURCHASING AGENTS CENSUS CODES=028-033							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	25	15.13	006.19	165	0.64%
MN COLON	1530-1539	W/F	17	7.05	013.04	241	0.02%
OCCUPATIONAL GROUP OF MGMT. RELATED OCCUPATIONS, N.F.C. CENSUS CODES=037							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	13	6.53	005.88	199	0.76%
OCCUPATIONAL GROUP OF ENGINEERS & ARCHITECTS CENSUS CODES=043-059							
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	R/M	9	3.99	005.73	226	0.83% ??
MN BONE, CONNECTIVE TISSUE, AND SKIN	1700-1739	W/M	33	17.70	012.69	186	0.02%
MN SKIN	1720-1739	W/M	29	13.51	017.05	215	< 0.1%
MN OF GENITOURINARY ORGANS	1790-1899	W/M	132	107.69	005.57	123	0.91%
MN GENITAL ORGANS	1790-1879	W/M	98	69.25	012.06	142	0.03%
MN PROSTATE	1850	W/M	97	67.89	012.62	143	0.02%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	95	65.18	013.74	146	0.01%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
ENGINEERS & ARCHITECTS	(CONTINUED)						
LEUKEMIAS (ALL)	2040-2089	W/M	44	27.35	009.79	161	0.09%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	34	21.25	007.25	160	0.35%
OCCUPATIONAL GROUP OF CIVIL ENGINEERS							
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	2900-2909, 2930-3029, 3060-3190	W/M	7	2.13	009.05	329	?? 0.13% ??
OCCUPATIONAL GROUP OF ELECTRICAL AND ELECTRONIC ENGINEERS							
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	27	14.92	009.25	181	0.12%
OCCUPATIONAL GROUP OF MECHANICAL ENGINEERS							
MN PANCREAS	1570-1579	W/M	10	4.55	005.46	220	?? 0.97% ??
SUICIDE & SELF-INFLICTED INJURY	9500-9590	W/M	12	5.73	006.16	209	0.65%
OCCUPATIONAL GROUP OF OTHER ENGINEERS & ENGINEERS N.F.C.							
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	22	11.49	009.06	191	0.13%
OCCUPATIONAL GROUP OF HEALTH DIAGNOSING OCCUPATIONS							
MN PANCREAS	1570-1579	W/M	26	12.26	014.57	212	0.01%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	40	25.88	007.37	155	0.33%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	15	6.56	009.74	229	0.09%
MYELOID LEUKEMIA	2050-2059	W/M	11	4.47	008.24	246	?? 0.20% ??
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	W/M	44	30.37	005.88	145	0.77%
SUICIDE & SELF-INFLICTED INJURY	9500-9590	W/M	25	14.64	007.12	171	0.38%
OCCUPATIONAL GROUP OF PHYSICIANS							
MN PANCREAS	1570-1579	W/M	17	7.31	011.71	233	0.03%
MYELOID LEUKEMIA	2050-2059	W/M	7	2.68	005.51	261	?? 0.94% ??
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/M	18	8.20	010.75	220	0.05%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	13	5.33	009.78	244	0.09%
SUICIDE & SELF-INFLICTED INJURY	9500-9590	W/M	17	9.10	006.46	187	0.55%
OCCUPATIONAL GROUP OF DENTISTS							
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	15	6.73	009.14	223	0.12%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	7	1.67	014.17	419	?? 0.01% ??
OCCUPATIONAL GROUP OF HEALTH ASSESSMENT & TREATING OCCUPATIONS							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	B/F	23	13.20	006.98	174	0.41%
SEPTICEMIA	0380-0389	B/F	21	10.80	009.23	194	0.12%
MN BREAST	1740-1759	W/F	206	162.69	012.61	127	0.02%
MN KIDNEY	1890	W/M	7	2.05	009.68	341	?? 0.09% ??
OTHER DISORDERS CIR. SYSTEM/VEINS&LYMPH	4510-4599	W/F	19	8.12	013.55	234	0.01%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1% OR LESS) PENNSYLVANIA 1983-1985

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CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-50	AGE-STD PMR	EXCEEDANCE PROBABILITY
HEALTH ASSESSMENT & TREATING OCCUPATIONS (CONTINUED)							
DISEASES OF THE RESPIRATORY SYSTEM							
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4600-5199	W/F	221	184.90	007.43	120	0.32%
OTHER & UNSPECIFIED C.O.P.D.	4900-4969	W/F	117	78.74	019.05	149	< 0.01%
SUICIDE & SELF-INFLICTED INJURY	9500-9590	W/F	87	58.59	013.88	148	0.01%
OCCUPATIONAL GROUP OF REGISTERED NURSES							
CENSUS CODES=095							
INFECTIOUS AND PARASITIC DISEASES							
SEPTICEMIA	0010-1399	B/F	20	11.00	006.95	182	0.42%
MN BREAST	0380-0389	B/F	18	9.07	008.28	198	0.20%
MN OF GENITOURINARY ORGANS	1740-1759	W/F	183	145.41	010.55	126	0.06%
OTHER DISORDERS CIR. SYSTEM/VEINS&LYMPH	1790-1899	W/M	6	1.97	006.49	305	? 0.54% ??
DISEASES OF THE RESPIRATORY SYSTEM	4510-4599	W/F	17	7.31	011.78	233	0.03%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4600-5199	W/F	200	167.63	006.56	119	0.52%
OTHER & UNSPECIFIED C.O.P.D.	4900-4969	W/F	105	71.10	016.48	148	< 0.01%
OTHER DISEASES OF RESPIRATORY SYSTEM	4940-4969	W/F	80	52.93	013.92	151	0.01%
SUICIDE & SELF-INFLICTED INJURY	5100-5199	W/F	28	17.70	005.57	158	0.91%
	9500-9590	W/F	35	21.81	008.01	160	0.23%
OCCUPATIONAL GROUP OF HEALTH CARE OCCUPATIONS							
CENSUS CODES=084-106, 203-208, 445-447							
INFECTIOUS AND PARASITIC DISEASES							
MN PANCREAS	0010-1399	B/F	41	27.66	006.61	148	0.51%
MN PANCREAS	1570-1579	W/M	32	19.87	006.96	161	0.42%
HEART DISEASE	1570-1579	B/F	23	12.86	007.89	179	0.25%
ISCHEMIC HEART DISEASE	3900-3989, 4020-4029, 4040-4299	B/M	64	49.12	005.91	130	0.75%
OTHER DISORDERS CIR. SYSTEM/VEINS&LYMPH	4100-4149	B/M	40	25.96	008.47	154	0.18%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4510-4599	W/F	24	14.46	005.92	166	0.75%
OTHER & UNSPECIFIED C.O.P.D.	4900-4969	W/F	179	139.30	011.82	128	0.03%
DISEASES OF THE MUSCULOSKELETAL SYSTEM	4940-4969	W/F	133	103.23	008.82	129	0.15%
SUICIDE & SELF-INFLICTED INJURY	7100-7399	B/F	11	5.31	005.54	207	0.93%
	9500-9590	W/M	53	35.69	008.88	149	0.14%
OCCUPATIONAL GROUP OF INSTRUCTORS, TEACHERS & COUNSELORS (ALL)							
CENSUS CODES=113-163							
OTHER BACTERIAL DISEASES							
MN DIGESTIVE ORGANS AND PERITONEUM	0200-0370, 0390-0419	W/F	6	1.89	007.23	317	? 0.36% ??
MN COLON	1500-1599	B/F	28	14.73	012.05	190	0.03%
MN RECTUM, RECTOSIGMOID JUCT. & ANUS	1530-1539	W/F	181	152.06	005.69	119	0.85%
MN PANCREAS	1540-1548	W/M	18	9.83	006.09	183	0.68%
MN BONE, CONNECTIVE TISSUE, AND SKIN	1570-1579	B/F	10	3.17	013.12	315	? 0.01% ??
MN BREAST	1700-1739	W/M	21	12.13	005.91	173	0.75%
MN OF GENITOURINARY ORGANS	1740-1759	W/F	302	199.61	057.54	151	< 0.01%
MN GENITAL ORGANS	1790-1899	W/M	88	67.10	006.53	131	0.53%
MN UTERUS (EXCEPT CERVIX)	1790-1879	W/M	184	147.85	009.23	124	0.12%
MN OVARY	1790-1879	W/M	63	43.16	009.00	146	0.13%
MN PROSTATE	1790-1879	W/F	139	110.86	007.35	125	0.34%
NEOPLASMS (ALL) OF NERVOUS SYSTEM	1790-1799, 1820-1828	W/F	48	33.54	006.06	143	0.69%
MN BRAIN	1830	W/F	76	53.08	009.95	143	0.08%
	1850	W/M	62	42.14	009.26	147	0.12%
	1910-1929, 2250-2259, 2375-2379	W/M	22	9.88	013.98	223	0.01%
	1910-1919	W/M	21	9.33	013.64	225	0.01%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INSTRUCTORS, TEACHERS & COUNSELORS (ALL)(CONTINUED)							
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	77	42.18	028.97	183	<.01%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/F	130	105.50	005.80	123	0.80%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	32	10.69	041.18	299	<.01%
MN MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/M	14	6.59	007.33	212	0.34%
MN MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/F	33	18.76	010.48	176	0.06%
MN LEUKEMIA OF UNSPECIFIED CELL TYPE	2080-2089	W/F	19	9.53	008.81	199	0.15%
MN NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/M	19	10.08	007.17	188	0.37%
MN DISORDERS INVOLVING THE IMMUNE MECHANISM	2790-2799	W/M	7	1.51	016.86	464	?? <.01% ??
MN DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/M	35	22.49	006.56	156	0.52%
MN HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	31	13.49	021.92	230	<.01%
MN ACUTE MYOCARDIAL INFARCTION	4100	W/M	369	329.72	005.63	112	0.88%
MN INFECTIONS OF SKIN & SUBCUTANEOUS TISSUE	6800-6869	W/F	8	2.95	007.27	271	?? 0.35% ??
MN TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	57	37.54	011.08	152	0.04%
MN MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	53	36.45	008.14	145	0.22%

CENSUS CODES=113-154

OCCUPATIONAL GROUP OF POSTSECONDARY TEACHERS

MN COLON	1530-1539	W/M	18	9.59	006.70	188	0.48%
MN MN BONE, CONNECTIVE TISSUE, AND SKIN	1700-1739	W/M	8	2.42	010.74	331	?? 0.05% ??
MN SKIN	1720-1739	W/M	7	1.87	011.62	374	?? 0.03% ??
MN BREAST	1740-1759	W/F	15	7.12	008.38	211	0.19%
MN NEOPLASMS (ALL) OF NERVOUS SYSTEM	1910-1929, 2250-2259, 2375-2379	W/M	8	1.95	015.79	410	?? <.01% ??
MN BRAIN	1910-1919	W/M	8	1.86	017.30	430	?? <.01% ??
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	22	8.39	020.98	262	<.01%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	9	2.16	018.71	417	?? <.01% ??
MN DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/M	12	4.36	011.87	275	?? 0.03% ??
MN HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	10	2.63	018.01	380	?? <.01% ??

CENSUS CODES=156

OCCUPATIONAL GROUP OF ELEMENTARY SCHOOL TEACHERS

MN OTHER BACTERIAL DISEASES	0200-0370, 0390-0419	W/F	6	1.59	009.96	377	?? 0.08% ??
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	B/F	25	12.85	011.49	195	0.03%
MN PANCREAS	1570-1579	B/F	9	2.74	012.45	328	?? 0.02% ??
MN BREAST	1740-1759	W/F	253	167.44	047.46	151	<.01%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	162	125.75	010.85	129	0.05%
MN GENITAL ORGANS	1790-1879	W/F	123	93.78	009.33	131	0.11%
MN UTERUS (EXCEPT CERVIX)	1790-1799, 1820-1828	W/F	43	28.82	006.77	149	0.46%
MN OVARY	1830	W/F	65	44.76	009.11	145	0.13%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	47	25.81	017.15	182	<.01%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	20	6.53	026.11	306	<.01%
MN MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/F	29	16.22	009.65	179	0.09%
MN LEUKEMIA OF UNSPECIFIED CELL TYPE	2080-2089	W/F	17	8.16	008.83	208	0.15%
MN NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/M	13	6.25	006.36	208	0.58%
MN HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	20	8.48	014.53	236	0.01%
MN ACUTE MYOCARDIAL INFARCTION	4100	W/M	241	203.02	008.50	119	0.18%
MN INFECTIONS OF SKIN & SUBCUTANEOUS TISSUE	6800-6869	W/F	7	2.56	006.26	273	?? 0.62% ??
MN TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	44	29.52	007.54	149	0.30%
MN ACCIDENTAL FALLS	8800-8880, 9293	W/M	14	6.56	007.45	213	0.32%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF SECONDARY SCHOOL TEACHERS CENSUS CODES=157							
ACUTE MYOCARDIAL INFARCTION	4100	W/M	44	29.00	008.79	152	0.15%
OCCUPATIONAL GROUP OF OTHER & N.E.C. TEACHERS AND COUNSELORS CENSUS CODES=155, 158-159, 163							
MN COLON	1530-1539	W/F	14	6.59	007.50	212	0.31%
LEUKEMIAS (ALL)	2040-2089	W/F	7	2.00	010.20	350	?? 0.07% ??
ISCHEMIC HEART DISEASE	4100-4149	B/F	7	2.21	009.72	317	?? 0.09% ??
OCCUPATIONAL GROUP OF LIBRARIANS, ARCHIVISTS & CURATORS CENSUS CODES=164-165							
MN COLON	1530-1539	W/F	14	7.27	005.50	193	0.95%
MN BREAST	1740-1759	W/F	24	11.97	012.06	201	0.03%
OCCUPATIONAL GROUP OF SOCIAL, RECREATION, & RELIGIOUS WORKERS CENSUS CODES=174-177							
MN COLON	1530-1539	W/M	40	26.01	007.22	154	0.36%
MN BREAST	1740-1759	W/F	46	28.25	011.39	163	0.04%
LEUKEMIAS (ALL)	2040-2089	W/M	18	9.19	007.66	196	0.28%
MYELOID LEUKEMIA	2050-2059	W/M	11	3.77	012.19	292	?? 0.02% ??
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/M	11	5.19	005.54	212	0.93%
HYPERTENSIVE DISEASE	4010-4059	W/M	19	10.89	005.42	174	0.99%
OTHER DISEASES OF RESPIRATORY SYSTEM	5100-5199	W/F	10	4.30	006.32	233	?? 0.60% ??
OCCUPATIONAL GROUP OF SOCIAL WORKERS CENSUS CODES=174							
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/F	9	3.48	007.37	259	?? 0.33% ??
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	24	14.76	005.51	163	0.94%
OCCUPATIONAL GROUP OF CLERGY CENSUS CODES=176							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	69	51.42	006.09	134	0.68%
MN COLON	1530-1539	W/M	33	21.34	006.02	155	0.71%
MN PANCREAS	1570-1579	W/M	17	8.20	008.48	207	0.18%
MN GENITAL ORGANS	1790-1879	R/M	14	7.23	005.82	194	0.79%
MYELOID LEUKEMIA	2050-2059	W/M	8	2.94	007.17	272	?? 0.37% ??
HYPERTENSIVE DISEASE	4010-4059	W/M	17	9.03	006.25	188	0.62%
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	W/M	402	363.93	006.87	110	0.44%
ISCHEMIC HEART DISEASE	4100-4149	W/M	288	254.78	006.05	113	0.69%
OCCUPATIONAL GROUP OF RELIGIOUS WORKERS, N.E.C. CENSUS CODES=177							
MN BREAST	1740-1759	W/F	22	10.06	013.63	219	0.01%
OTHER DISEASES OF RESPIRATORY SYSTEM	5100-5199	W/F	8	2.07	014.26	386	?? 0.01% ??
OCCUPATIONAL GROUP OF LAWYERS & JUDGES CENSUS CODES=178-179							
MN BREAST	1740-1759	W/F	6	1.94	007.11	309	?? 0.38% ??
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/M	20	7.64	018.74	262	<.01%
HEREDITARY & DEGENERATIVE DISEASE OF	CNS:3300-3379	W/M	14	4.88	015.40	287	?? <.01% ??

CAUSE OF DEATH GROUP OF: LAWYERS & JUDGES	ICD-9 CODES OF: (CONTINUED)	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
SUICIDE & SELF-INFLICTED INJURY	9500-9590	W/M	19	9.89	008.16	192	0.21%
OCCUPATIONAL GROUP OF WRITERS, ARTISTS, ENTERTAINERS & ATHLETES CENSUS CODES=183-199							
MN BREAST	1740-1759	W/F	49	31.18	010.52	157	0.06%
MN PROSTATE	1850	W/M	43	28.96	006.56	148	0.52%
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/M	15	7.28	007.25	206	0.35%
DISORDERS INVOLVING THE IMMUNE MECHANISM	2790-2799	W/M	11	1.29	067.55	853	?? <.01% ??
CONGENITAL ANOMALIES	7400-7599	W/M	6	1.80	007.85	333	?? 0.25% ??
OCCUPATIONAL GROUP OF DESIGNERS CENSUS CODES=185							
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	W/M	17	7.82	009.87	217	0.08%
OCCUPATIONAL GROUP OF ACTORS, DIRECTORS, DANCERS & ANNOUNCERS CENSUS CODES=187, 193, 198							
MN OF GENITOURINARY ORGANS	1790-1899	W/M	6	1.64	009.34	366	?? 0.11% ??
OCCUPATIONAL GROUP OF PAINTERS, SCULPTORS, CRAFT-ARTISTS CENSUS CODES=188							
DIABETES MELLITUS	2500-2509	W/M	8	3.20	005.87	250	?? 0.77% ??
OCCUPATIONAL GROUP OF EDITORS AND REPORTERS CENSUS CODES=195							
MN COLON	1530-1539	W/M	10	4.16	007.09	240	?? 0.39% ??
OCCUPATIONAL GROUP OF ATHLETES CENSUS CODES=199							
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	7	2.03	010.33	345	?? 0.07% ??
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	7	1.57	015.91	446	?? <.01% ??
OCCUPATIONAL GROUP OF HEALTH TECHNOLOGISTS & TECHNICIANS CENSUS CODES=203-208							
MN PANCREAS	1570-1579	B/F	8	2.67	009.04	300	?? 0.13% ??
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/F	25	15.24	005.77	164	0.81%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/F	17	8.76	006.98	194	0.41%
OCCUPATIONAL GROUP OF LICENSED PRACTICAL NURSES CENSUS CODES=207							
MN PANCREAS	1570-1579	R/F	7	2.43	007.05	288	?? 0.40% ??
OCCUPATIONAL GROUP OF ENGINEERING TECHNICIANS CENSUS CODES=213-216							
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	25	16.02	005.82	156	0.79%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	24	15.07	006.05	159	0.69%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LFSS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF;	ICD-9 CODES OF;	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF TECH.S (EX. HEALTH, ENGINEERING, & SCI.) CENSUS CODES=226-235							
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	44	26.96	013.44	163	0.01%
AIR TRANSPORT ACCIDENTS	8400-8459	W/M	22	0.83	520.22	2651	?? <.01% ??
OCCUPATIONAL GROUP OF SALES OCCUPATIONS CENSUS CODES=243-285							
MN PANCREAS	1570-1579	W/F	102	78.43	007.19	130	0.36%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	349	272.56	023.74	128	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	342	264.94	024.80	129	<.01%
DIABETES MELLITUS	2500-2509	W/M	259	217.64	008.48	119	0.18%
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/M	194	152.51	012.12	127	0.02%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	137	95.83	018.96	143	<.01%
RHEUMATIC FEVER & RHEUMATIC HEART DISEASE	3900-3989	W/M	52	36.01	*007.25	144	0.35%
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	B/M	6	1.97	006.38	305	?? 0.58% ??
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	95	70.08	010.87	136	0.05%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	90	68.24	008.44	132	0.18%
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	49	34.29	006.46	143	0.55%
OCCUPATIONAL GROUP OF SUPERV. AND PROPRIETORS, SALES OCCS. CENSUS CODES=243							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	80	59.96	006.85	133	0.44%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	80	58.25	008.33	137	0.19%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	B/F	6	2.14	005.64	280	?? 0.87% ??
DIABETES MELLITUS	2500-2509	W/M	131	97.54	011.75	134	0.03%
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/F	18	10.10	005.52	178	0.94%
METABOLIC DISEASES	2700-2788	W/F	15	7.19	007.57	209	0.30%
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/M	96	67.73	011.96	142	0.03%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	68	43.83	013.39	155	0.01%
ACUTE MYOCARDIAL INFARCTION	4100	W/M	1121	1021.22	012.21	110	0.02%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	20	12.04	005.43	166	0.99%
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	22	12.49	006.85	176	0.44%
OCCUPATIONAL GROUP OF SALES REPS, FINANCE & BUSINESS SERVICES CENSUS CODES=253-257							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	32	19.27	008.36	166	0.19%
MN COLON	1530-1539	W/F	18	9.06	008.15	199	0.21%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/F	6	2.00	006.11	300	?? 0.67% ??
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN	3200-3899	W/M	36	24.11	005.51	149	0.94%
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	27	15.28	008.40	177	0.19%
OTHER DISEASES INTESTINES & PERITONEUM	5600-5699	W/F	6	1.60	009.59	375	?? 0.10% ??
OCCUPATIONAL GROUP OF INSURANCE SALES OCCUPATIONS CENSUS CODES=253							
MN OF GENITOURINARY ORGANS	1790-1899	W/M	55	39.67	005.80	139	0.80%
OCCUPATIONAL GROUP OF REAL ESTATE SALES OCCUPATIONS CENSUS CODES=254							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	16	8.44	006.37	190	0.58%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	13	6.65	005.55	195	0.92%
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/M	9	3.07	009.68	293	?? 0.09% ??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF SALES REPS, COMMODITIES EXCEPT RETAIL							
CENSUS CODES=258-259							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	12	4.65	010.83	258	?? 0.05% ??
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	12	4.54	011.46	264	?? 0.04% ??
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/F	8	2.39	011.27	335	?? 0.04% ??
OCCUPATIONAL GROUP OF SALES WORKERS; RETAIL & PERSONAL SERVICE							
CENSUS CODES=263-278							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	234	191.77	010.04	122	0.08%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	227	186.42	009.52	122	0.10%
COAGULATION DEFECTS	2860-2869	W/F	10	3.85	008.56	260	?? 0.17% ??
RHEUMATIC FEVER & RHEUMATIC HEART DISEASE	3900-3989	W/M	18	9.76	006.27	184	0.61%
OCCUPATIONAL GROUP OF SALES WORKERS; MOTOR VEHICLES AND BOATS							
CENSUS CODES=263							
MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE	2030-2038	W/M	7	2.03	009.86	345	?? 0.08% ??
OCCUPATIONAL GROUP OF SALES WORKERS; APPAREL & SHOE							
CENSUS CODES=264-265							
MN PANCREAS	1570-1579	W/F	14	5.73	010.74	244	0.05%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	W/M	9	3.18	009.06	283	?? 0.13% ??
HEREDITARY & DEGENERATIVE DISEASE OF	620-699	W/M	7	2.05	009.82	341	?? 0.09% ??
OCCUPATIONAL GROUP OF SALES WORKERS; FURNITURE & APPLIANCES							
CENSUS CODES=266-267							
MN STOMACH	1510-1519	W/M	7	2.41	007.00	290	?? 0.41% ??
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	7	2.64	005.99	265	?? 0.72% ??
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	7	2.56	006.40	273	?? 0.57% ??
OCCUPATIONAL GROUP OF SALES WORKERS; OTHER COMMODITIES							
CENSUS CODES=274							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	163	128.50	009.83	127	0.09%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	157	124.90	008.72	126	0.16%
NUTRITIONAL DEFICIENCIES	2600-2699	W/M	6	1.66	009.01	361	?? 0.13% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	40	26.65	006.37	150	0.58%
OCCUPATIONAL GROUP OF CASHIERS & COUNTER CLERKS							
CENSUS CODES=275-276							
MN STOMACH	1510-1519	W/M	7	2.63	005.73	266	?? 0.83% ??
MN OF GENITOURINARY ORGANS	1790-1899	W/F	47	28.96	011.21	162	0.04%
MN GENITAL ORGANS	1790-1879	W/F	37	23.22	007.95	159	0.24%
MN OVARY	1830	W/F	22	12.09	007.52	182	0.30%
OCCUPATIONAL GROUP OF SALES RELATED OCCUPATIONS							
CENSUS CODES=283-285							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	7	2.20	009.05	318	?? 0.13% ??
OCCUPATIONAL GROUP OF ADMINISTRATIVE SUPPORT OCCUPATIONS							
CFNSUS CODES=303-389							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	954	848.67	015.37	112	<.01%
MN COLON	1530-1539	W/M	231	193.53	007.61	119	0.29%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
ADMINISTRATIVE SUPPORT OCCUPATIONS (CONTINUED)							
MN COLON	1530-1539	W/F	488	396.74	023.71	123	< 0.01%
MN COLON	1530-1539	B/F	26	13.15	012.65	198	0.02%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	668	582.88	014.73	115	0.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	643	566.69	012.14	113	0.02%
MN BONE, CONNECTIVE TISSUE, AND SKIN	1700-1739	W/F	98	77.46	005.93	127	0.74%
MN BREST	1740-1759	W/F	867	704.02	046.10	123	< 0.01%
MN BREST	1740-1759	B/F	54	33.20	014.47	163	0.01%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	535	467.41	011.25	114	0.04%
MN OVARY	1830	W/F	248	190.80	019.30	130	< 0.01%
MN URINARY ORGANS	1880-1899	W/F	124	95.70	008.99	130	0.14%
MN BLADDER	1880-1889	W/F	67	45.05	011.22	149	0.04%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/F	353	311.31	006.25	113	0.62%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	B/M	21	10.76	009.32	195	0.11%
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/F	109	85.97	006.62	127	0.50%
MN MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	2030-2038	B/M	11	4.10	010.50	268	? ? 0.06% ??
MN HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	110	85.13	007.38	129	0.33%
MN ACUTE MYOCARDIAL INFARCTION	4100	W/M	73	52.60	007.95	139	0.24%
MN DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	B/M	77	56.00	008.63	138	0.16%
MN PNEUMONIA & INFLUENZA	4800-4879	W/F	858	737.31	022.76	116	< 0.01%
MN CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/F	346	291.64	011.10	119	0.04%
MN OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/F	392	328.37	013.77	119	0.01%
MN ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/F	300	243.64	014.40	123	0.01%
MN ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/F	178	148.85	006.16	120	0.65%
OCCUPATIONAL GROUP OF SECRETARIES, STENOGRAPHERS & TYPISTS CENSUS CODES=313-315							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	394	348.62	006.47	113	0.55%
MN ESOPHAGUS	1500-1509	W/F	20	11.28	006.25	177	0.62%
MN COLON	1530-1539	B/F	9	3.00	010.59	300	? ? 0.06% ??
MN OTHER & ILL-DEFINED DIGESTIVE ORGAN	1580-1599	W/F	22	12.60	006.55	175	0.52%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/T	287	243.09	008.70	118	0.16%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	277	236.35	007.65	117	0.28%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	B/F	15	7.85	006.20	191	0.64%
MN BREST	1740-1759	W/F	388	299.41	029.88	130	< 0.01%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	228	195.68	005.67	117	0.86%
MN OVARY	1830	W/F	107	80.08	009.34	134	0.11%
MN BLADDER	1880-1889	W/F	31	18.33	008.40	169	0.19%
MN MENTAL DISORDERS	2900-3199	W/F	40	26.95	006.09	148	0.68%
MN MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	2900-3199	W/F	38	23.57	008.54	161	0.17%
MN HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/F	62	41.29	010.35	150	0.06%
MN DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	359	299.59	012.75	120	0.02%
MN PNEUMONIA & INFLUENZA	4800-4879	W/M	10	3.47	010.84	288	? ? 0.05% ??
MN PNEUMONIA & INFLUENZA	4800-4879	W/T	145	117.46	006.61	123	0.51%
OCCUPATIONAL GROUP OF INFORMATION CLERKS CENSUS CODES=316-323							
MN BRAIN	1910-1919	W/F	7	2.61	005.95	268	? ? 0.74% ??
MN DIABETES MELLITUS	2500-2509	W/M	7	2.29	007.87	306	? ? 0.25% ??

CAUSE OF DEATH GROUP OF: ICD-9 CODES OF: RACE & SEX OBSERVED DEATHS EXPECTED DEATHS MHS CHI-SQ AGE-STD PMR EXCEEDANCE PROBABILITY

OCCUPATIONAL GROUP OF RECORDS PROCESSING OCCS (EX. FINANCIAL) CENSUS CODES=325-336

MN OF LYMPHATIC & HEMATOPOIETIC TISSUE 2000-2089 W/F 12 5.58 006.47 215 0.55%

OCCUPATIONAL GROUP OF FINANCIAL RECORDS PROCESSING OCCUPATIONS CENSUS CODES=305,337-344

MN COLON 1530-1539 W/F 76 55.93 007.16 136 0.37%  
 MN BREAST 1740-1759 W/F 121 92.91 009.02 130 0.13%  
 MN OF GENITOURINARY ORGANS 1790-1899 W/F 86 63.68 007.92 135 0.24%  
 MN GENITAL ORGANS 1790-1879 W/F 69 50.17 007.04 138 0.40%  
 MN OVARY 1830 W/F 41 25.73 008.77 159 0.15%  
 MN OF LYMPHATIC & HEMATOPOIETIC TISSUE 2000-2089 W/F 60 42.41 007.17 141 0.37%  
 DISEASES OF LIVER (EX. ALCOHOL RELATED) 5700-5709,5714-5739 W/F 30 19.15 005.76 157 0.82%  
 DISEASES OF SKIN & SUBCUTANEOUS TISSUE 6800-7099 W/F 9 3.79 005.99 237 ?? 0.72% ??

OCCUPATIONAL GROUP OF COMMUNICATIONS EQUIP. OPERATORS CENSUS CODES=306,348-353

NUTRITIONAL, METABOLIC & IMMUNE DISORDER 2600-2799 W/F 14 6.74 006.86 208 0.44%  
 METABOLIC DISEASES 2700-2788 W/F 13 4.75 012.74 274 ?? 0.02% ??  
 OTHER & UNSPECIFIED C.O.P.D. 4940-4969 W/F 32 19.92 006.95 161 0.42%

OCCUPATIONAL GROUP OF DISTRIBUTING, SCHEDULING, ADJUSTING CLERKS CENSUS CODES=307,354-378

MN COLON 1530-1539 W/M 147 116.51 008.16 126 0.21%  
 MN OF LYMPHATIC & HEMATOPOIETIC TISSUE 2000-2089 B/M 16 7.24 009.85 221 0.08%  
 MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE 2030-2038 B/M 8 2.90 007.53 276 ?? 0.30% ??  
 ACUTE MYOCARDIAL INFARCTION 4100 B/M 54 39.25 005.87 138 0.77%  
 TRANSPORT ACCIDENTS 8000-8489,9290-9291 W/F 20 10.43 009.60 192 0.10%  
 MOTOR VEHICLE ACCIDENTS 8100-8259,9290 W/F 18 10.06 006.67 179 0.49%

OCCUPATIONAL GROUP OF MAIL CLERKS & MESSENGERS (EX. P.O.) CENSUS CODES=356-357

ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY 7970-7999 W/M 9 3.19 009.05 282 ?? 0.13% ??

OCCUPATIONAL GROUP OF MATERIAL RECORDING, SCHEDULING, & DIST. CENSUS CODES=359-374

MN OF LYMPHATIC & HEMATOPOIETIC TISSUE 2000-2089 R/M 7 2.48 006.65 282 ?? 0.49% ??  
 COAGULATION DEFECTS 2860-2869 W/M 6 1.72 008.40 349 ?? 0.19% ??  
 ACUTE MYOCARDIAL INFARCTION 4100 R/M 23 13.02 007.68 177 0.28%  
 TRANSPORT ACCIDENTS 8000-8489,9290-9291 W/F 11 4.62 008.83 238 ?? 0.15% ??  
 MOTOR VEHICLE ACCIDENTS 8100-8259,9290 W/F 10 4.46 006.72 224 ?? 0.47% ??

OCCUPATIONAL GROUP OF STOCK AND INVENTORY CLERKS CENSUS CODES=365

MN RECTUM, RECTOSIGMOID JUCT. & ANUS 1540-1549 W/M 8 3.24 005.63 247 ?? 0.88% ??  
 MENTAL DISORDER EX. ALCOHOL/DRUG RELATED 2900-2909,2930-3029,3060-3190 W/M 6 1.62 009.37 370 ?? 0.11% ??  
 TRANSPORT ACCIDENTS 8000-8489,9290-9291 W/F 6 2.17 006.35 276 ?? 0.58% ??  
 MOTOR VEHICLE ACCIDENTS 8100-8259,9290 W/F 6 2.11 006.79 284 ?? 0.46% ??

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF: ICD-9 CODES OF: RACE & SEX OBSERVED DEATHS EXPECTED DEATHS MHS CHI-SQ AGE-STD PMR AGE-STD PMR EXCEEDANCE PROBABILITY

OCCUPATIONAL GROUP OF EXPEDITORS, SCHED. & DIST. CLERKS N.E.C. CENSUS CODES=373-374

MN RESPIRATORY & INTRATHORACIC ORGANS 1600-1659 W/M 29 18.84 005.52 154 0.94%  
 MN TRACHEA, BRONCHUS AND LUNG 1620-1629 W/M 28 18.03 005.52 155 0.94%

OCCUPATIONAL GROUP OF ADJUSTERS & INVESTIGATORS CENSUS CODES=375-378

MN DIGESTIVE ORGANS AND PERITONEUM 1500-1599 W/M 29 17.81 006.88 163 0.43%  
 MN PANCREAS 1570-1579 W/M 8 2.98 006.87 268 ?? 0.44% ??

OCCUPATIONAL GROUP OF MISC. ADMINISTRATIVE SUPPORT OCCUPATIONS CENSUS CODES=303,345-347,379-389

MN DIGESTIVE ORGANS AND PERITONEUM 1500-1599 W/F 273 229.38 008.94 119 0.14%  
 MN COLON 1530-1539 W/F 143 107.09 012.43 134 0.02%  
 MN LIVER AND INTRAHEPATIC BILE DUCTS 1550-1552 W/M 13 6.10 006.82 213 0.45%  
 MN BREAST 1740-1759 W/F 221 190.16 005.45 116 0.98%  
 MN BREAST 1740-1759 B/F 27 15.68 008.33 172 0.19%  
 MN URINARY ORGANS 1880-1899 W/M 39 25.45 006.87 153 0.44%  
 MN BLADDER 1880-1889 W/M 24 14.45 005.78 166 0.81%  
 MN OTHER LYMPHOID & HISTIOCYTIC TISSUE 2020-2029 W/F 35 23.14 005.77 151 0.81%  
 DISEASES OF NERVOUS SYSTEM & SENSE ORGAN3200-3899 W/M 38 22.51 010.23 169 0.07%  
 HEREDITARY & DEGENERATIVE DISEASE OF CNS3300-3379 W/M 27 14.10 011.12 191 0.04%  
 DISEASES OF PULMONARY CIRCULATION 4150-4179 R/M 6 1.63 009.32 368 ?? 0.11% ??  
 DISEASES OF ARTERY/ARTERIOLE/CAPILLARY 4400-4489 B/F 8 3.25 005.79 246 ?? 0.80% ??  
 CHRONIC OBSTRUCTIVE PULMONARY DISEASES 4900-4969 W/F 112 89.08 005.96 126 0.73%  
 DISEASES OF THE MUSCULOSKELETAL SYSTEM 7100-7399 W/F 24 13.50 007.62 178 0.29%  
 ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY7970-7999 W/F 56 39.69 006.53 141 0.53%

OCCUPATIONAL GROUP OF GEN. OFFICE CLERKS & OFFICE MACH. OPRS. CENSUS CODES=345-347,379

MN DIGESTIVE ORGANS AND PERITONEUM 1500-1599 W/F 207 172.34 007.42 120 0.32%  
 MN COLON 1530-1539 W/F 112 80.35 012.72 139 0.02%  
 MN LIVER AND INTRAHEPATIC BILE DUCTS 1550-1552 W/M 11 4.63 007.55 238 ?? 0.30% ??  
 MN BREAST 1740-1759 B/F 22 10.13 014.00 217 0.01%  
 MN URINARY ORGANS 1880-1899 W/M 34 19.44 010.39 175 0.06%  
 MN BLADDER 1880-1889 W/M 21 11.15 007.99 188 0.24%  
 DISEASES OF BLOOD & BLOOD FORMING ORGANS2800-2899 W/F 20 10.69 007.44 187 0.32%  
 DISEASES OF NERVOUS SYSTEM & SENSE ORGAN3200-3899 W/M 31 17.06 010.79 182 0.05%  
 HEREDITARY & DEGENERATIVE DISEASE OF CNS3300-3379 W/M 22 10.86 010.61 203 0.06%  
 ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY7970-7999 W/F 44 29.69 006.61 148 0.51%

OCCUPATIONAL GROUP OF BANK TELLERS CENSUS CODES=383

CHRONIC OBSTRUCTIVE PULMONARY DISEASES 4900-4969 W/F 13 6.09 006.95 213 0.42%

OCCUPATIONAL GROUP OF PROOFREADERS CENSUS CODES=384

OTHER & ILL-DEFINED HEART DISEASE 4200-4299 W/F 13 6.81 005.47 191 0.96%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF DATA-ENTRY KEYERS							
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/F	9	3.75	006.24	240	?? 0.62% ??
OCCUPATIONAL GROUP OF OTHER & N.E.C. ADMIN. SUPPORT OCCS.							
MN OF GENITOURINARY ORGANS	1790-1899	W/F	29	16.73	008.73	173	0.16%
MN GENITAL ORGANS	1790-1879	B/F	7	2.16	009.11	324	?? 0.13% ??
MN URINARY ORGANS	1880-1899	W/F	8	3.14	006.11	255	?? 0.67% ??
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	W/M	173	149.68	006.00	116	0.71%
ISCHEMIC HEART DISEASE	4100-4149	W/M	133	106.75	008.88	125	0.14%
ACUTE MYOCARDIAL INFARCTION	4100	W/M	91	65.67	011.60	139	0.03%
OCCUPATIONAL GROUP OF PRIVATE HOUSEHOLD WORKERS							
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	232	198.80	006.41	117	0.57%
CHRONIC LIVER DISEASE (ALCOHOL RELATED)	5710-5713	B/F	14	7.31	005.93	192	0.74%
DISEASES OF PANCREAS	5770-5779	B/F	7	2.70	006.27	259	?? 0.61% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/F	26	15.47	006.62	168	0.50%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/F	154	125.82	007.72	122	0.27%
OCCUPATIONAL GROUP OF FIREFIGHTING & FIRE PREVENTION OCCS.							
MN OTHER LYMPHOID & HISTIOCYTIC TISSUE	2020-2029	W/M	7	2.58	006.04	271	?? 0.70% ??
OCCUPATIONAL GROUP OF LAW ENFORCEMENT OFFICERS, PUBLIC SVC.							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	9	3.73	006.56	241	?? 0.52% ??
ISCHEMIC HEART DISEASE	4100-4149	B/M	19	10.86	006.36	175	0.58%
ACUTE MYOCARDIAL INFARCTION	4100	B/M	14	6.52	008.26	215	0.20%
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	12	4.18	013.28	287	?? 0.01% ??
OCCUPATIONAL GROUP OF POLICE & DETECTIVES							
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	12	3.28	021.34	366	?? < 0.01% ??
OCCUPATIONAL GROUP OF SHERIFFS, BAILIFFS, & OTHER LAW OFFICER							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	6	1.65	009.62	364	?? 0.10% ??
OCCUPATIONAL GROUP OF SECURITY GUARDS & PRIVATE INVESTIGATORS							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	R/M	14	5.84	010.44	240	0.06%
SEPTICEMIA	0380-0389	W/M	23	13.39	006.31	172	0.60%
SEPTICEMIA	0380-0389	R/M	10	3.84	008.63	260	?? 0.17% ??
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	160	129.63	007.72	123	0.27%
MN LARYNX	1610-1619	W/M	13	4.45	014.75	292	?? 0.01% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	43	24.31	013.98	177	0.01%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF OTHER & N.E.C. PROTECTIVE SERVICE OCCS. CENSUS CODES=425,427							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	12	4.91	009.59	244	?? 0.10% ??
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	12	4.78	010.17	251	?? 0.07% ??
OCCUPATIONAL GROUP OF FOOD PREPARATION & SERVICE OCCUPATIONS CENSUS CODES=433-444							
INFECTIOUS AND PARASITIC DISEASES							
MN LIP, ORAL CAVITY AND PHARYNX	0010-1399	W/M	36	20.09	012.11	179	0.03%
MN LIP, ORAL CAVITY AND PHARYNX	1400-1499	W/M	24	9.72	019.95	247	<.01%
MN LIP, ORAL CAVITY AND PHARYNX	1400-1499	B/M	10	4.62	005.40	216	?? 1.00% ??
MN OTHER & ILL-DEFINED DIGESTIVE ORGAN	1580-1599	W/F	17	9.22	005.91	184	0.75%
MN OF GENITOURINARY ORGANS	1790-1899	B/M	35	23.43	005.73	149	0.83%
MN GENITAL ORGANS	1790-1879	B/M	30	19.57	005.49	153	0.95%
MN PROSTATE	1850	B/M	30	19.25	005.94	156	0.74%
DISORDERS INVOLVING THE IMMUNE MECHANISM 2790-2799							
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	W/M	7	1.77	013.09	395	?? 0.01% ??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	10	4.05	007.50	247	?? 0.31% ??
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	205	167.05	009.46	123	0.10%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/F	131	104.15	007.09	126	0.39%
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/F	102	77.36	007.95	132	0.24%
DISEASES OF LIVER (EX. ALCOHOL RELATED)	5700-5709, 5714-5739	W/M	93	61.96	015.85	150	<.01%
CHRONIC LIVER DISEASE (ALCOHOL RELATED)	5710-5713	W/M	43	25.29	012.10	170	0.33%
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/M	18	9.32	007.35	193	?? 0.71% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY 7970-7999		B/M	10	4.44	006.01	225	0.03%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY 7970-7999		W/M	61	28.65	036.52	213	<.01%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY 7970-7999		W/M	8	3.20	007.70	250	?? 0.28% ??
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	101	64.30	027.27	157	<.01%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	97	62.52	024.58	155	<.01%
UNKNOWN IF ACC. OR PURPOSELY INFLICTED	9800-9890	W/M	12	5.22	007.83	230	0.26%
OCCUPATIONAL GROUP OF BARTENDERS CENSUS CODES=434							
INFECTIOUS AND PARASITIC DISEASES							
MN LIP, ORAL CAVITY AND PHARYNX	0010-1399	B/M	6	2.09	005.74	287	?? 0.83% ??
MN LIP, ORAL CAVITY AND PHARYNX	1400-1499	W/M	17	4.35	034.39	391	?? <.01% ??
MN LARYNX	1610-1619	W/M	8	2.23	012.51	359	?? 0.02% ??
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	49	26.17	019.98	187	<.01%
DISEASES OF LIVER (EX. ALCOHOL RELATED)	5700-5709, 5714-5739	W/M	24	11.07	014.33	217	0.01%
CHRONIC LIVER DISEASE (ALCOHOL RELATED)	5710-5713	W/M	12	4.12	013.45	291	?? 0.01% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY 7970-7999		W/M	28	12.28	019.34	228	<.01%
OCCUPATIONAL GROUP OF WAITERS AND WAITRESSES CENSUS CODES=443,435							
INFECTIOUS AND PARASITIC DISEASES							
MN RESPIRATORY & INTRATHORACIC ORGANS	0010-1399	W/M	6	1.85	007.18	324	?? 0.37% ??
MN TRACHEA, BRONCHUS AND LUNG	1600-1659	W/F	124	88.73	014.93	140	0.01%
DISEASES OF THE RESPIRATORY SYSTEM	1620-1629	W/F	119	86.32	013.13	138	0.01%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4600-5199	W/F	121	89.10	011.89	136	0.03%
OTHER & UNSPECIFIED C.O.P.D.	4900-4969	W/F	73	45.54	016.73	160	<.01%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY 7970-7999	4940-4969	W/F	58	33.51	017.87	173	<.01%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	34	19.07	011.22	178	0.04%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	62	41.65	012.90	149	0.02%
UNKNOWN IF ACC. OR PURPOSELY INFLICTED	9800-9890	W/F	60	40.50	012.10	148	0.03%
UNKNOWN IF ACC. OR PURPOSELY INFLICTED	9800-9890	W/F	9	3.33	008.44	270	?? 0.18% ??

CAUSE OF DEATH GROUP OF: ICD-9 CODES OF: RACE OBSERVED EXPECTED MHS AGE-STD EXCEEDANCE  
& SEX DEATHS DEATHS CHI-SQ PMR PROBABILITY

OCCUPATIONAL GROUP OF COOKS CENSUS CODES=436

INFECTIOUS AND PARASITIC DISEASES 0010-1399 W/M 11 4.46 008.35 247 ?? 0.19% ??  
ISCHEMIC HEART DISEASE 4100-4149 W/F 397 349.39 009.00 114 0.13%  
ACUTE MYOCARDIAL INFARCTION 4100 W/F 230 184.93 012.78 124 0.02%  
OTHER & ILL-DEFINED HEART DISEASE 4200-4299 W/M 52 35.28 008.33 147 0.19%  
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY 4400-4489 W/M 15 7.07 008.05 212 0.23%  
OTHER DISEASES OF THE URINARY SYSTEM 5900-5999 W/M 7 2.22 008.53 315 ?? 0.17% ??  
TRANSPORT ACCIDENTS 8000-8489,9290-9291 W/F 19 10.96 006.18 173 0.64%  
MOTOR VEHICLE ACCIDENTS 8100-8259,9290 W/F 19 10.66 006.83 178 0.45%

OCCUPATIONAL GROUP OF OTHER FOOD PREPARATION OCCUPATIONS CENSUS CODES=437-439,444

SEPTICEMIA 0380-0389 W/M 6 1.71 008.61 351 ?? 0.17% ??  
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY 7970-7999 W/M 9 3.50 007.29 257 ?? 0.35% ??  
MEDICAL MISADVENTURES & ADVERSE EFFECTS 8700-8799,9300-9499 W/F 6 1.69 008.61 355 ?? 0.17% ??

OCCUPATIONAL GROUP OF HEALTH SERVICE AIDES & ASSISTANTS CENSUS CODES=445-447

HEART DISEASE 3900-3989,4020-4029,4040-4299 B/M 31 18.87 009.62 164 0.10%  
ISCHEMIC HEART DISEASE 4100-4149 R/M 18 9.69 007.34 186 0.34%  
ACUTE MYOCARDIAL INFARCTION 4100 B/M 12 6.03 005.47 199 0.97%

OCCUPATIONAL GROUP OF CLEANING & BLDG SVC. OCCS (EX. HSHLD.) CENSUS CODES=448-455

HYPERTENSION 4010-4019,4030-4039 W/F 12 5.55 006.44 216 0.56%  
OTHER & ILL-DEFINED HEART DISEASE 4200-4299 W/M 607 550.52 006.58 110 0.51%  
CHRONIC OBSTRUCTIVE PULMONARY DISEASES 4900-4969 W/M 262 224.06 006.78 117 0.46%  
OTHER & UNSPECIFIED C.O.P.D. 4940-4969 W/M 206 173.99 006.12 118 0.67%  
ACCIDENTAL IMPACT WITH OBJECTS 9160-9180 W/M 11 4.63 007.68 238 ?? 0.28% ??

OCCUPATIONAL GROUP OF MAIDS AND HOUSEMEN CENSUS CODES=449

TRANSPORT ACCIDENTS 8000-8489,9290-9291 W/F 12 5.30 008.28 226 0.20%  
MOTOR VEHICLE ACCIDENTS 8100-8259,9290 W/F 12 5.13 009.01 234 0.13%

OCCUPATIONAL GROUP OF JANITORS AND CLEANERS CENSUS CODES=453

DIABETES MELLITUS 2500-2509 W/F 35 23.03 005.91 152 0.75%  
DISEASES OF NERVOUS SYSTEM & SENSE ORGAN 3200-3899 R/F 7 2.22 008.58 315 ?? 0.17% ??  
CHRONIC ISCHEMIC HEART DISEASE 4120-4149 R/F 21 12.29 006.06 171 0.69%  
OTHER & ILL-DEFINED HEART DISEASE 4200-4299 W/M 572 516.69 006.71 111 0.48%  
CHRONIC OBSTRUCTIVE PULMONARY DISEASES 4900-4969 W/M 247 210.84 006.53 117 0.53%  
OTHER & UNSPECIFIED C.O.P.D. 4940-4969 W/M 195 163.75 006.18 119 0.64%  
ACCIDENTAL IMPACT WITH OBJECTS 9160-9180 W/M 11 4.31 009.13 255 ?? 0.13% ??

OCCUPATIONAL GROUP OF ELEVATOR OPERATORS CENSUS CODES=454

ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY 7970-7999 W/M 6 1.17 016.54 513 ?? <.01% ??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF PERSONAL SVC. OCCUPATIONS							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	80	61.68	005.54	130	0.93%
MN COLON	1530-1539	W/M	39	25.51	006.83	153	0.45%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	99	74.25	008.73	133	0.16%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	96	71.14	009.17	135	0.12%
DISEASES OF URINARY SYSTEM	5800-5999	W/M	32	17.91	010.60	179	0.06%
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	W/M	22	11.98	007.75	184	0.27%
CENSUS CODES=456-469							
OCCUPATIONAL GROUP OF BARBERS							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	66	45.07	010.17	146	0.07%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	64	43.21	010.42	148	0.06%
DISEASES OF URINARY SYSTEM	5800-5999	W/M	28	12.55	018.34	223	<.01%
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	W/M	18	8.30	010.41	217	0.06%
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/M	10	4.24	006.59	236	?? 0.51% ??
CENSUS CODES=457							
OCCUPATIONAL GROUP OF HAIRDRESSERS AND COSMETOLOGISTS							
MN COLON	1530-1539	W/M	8	2.35	011.66	340	?? 0.03% ??
CENSUS CODES=458							
OCCUPATIONAL GROUP OF ATTENDANTS: AMUSEMENT, LODGING & TRANS.							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	6	1.59	010.24	377	?? 0.07% ??
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	6	1.55	010.79	387	?? 0.05% ??
CENSUS CODES=459-466							
OCCUPATIONAL GROUP OF WELFARE SERVICE & CHILD CARE AIDES							
MN BREAST	1740-1759	W/F	18	9.66	006.95	186	0.42%
CENSUS CODES=467-468							
OCCUPATIONAL GROUP OF PERSONAL SERVICE OCCUPATIONS, N.E.C.							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	16	8.02	007.49	200	0.31%
MN COLON	1530-1539	W/M	9	3.27	008.68	275	?? 0.16% ??
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	23	12.10	009.56	190	0.10%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	22	11.78	008.59	187	0.17%
CENSUS CODES=469							
OCCUPATIONAL GROUP OF AGRICULTURAL & RELATED OCCUPATIONS							
MYCOSES	1100-1180	W/M	7	2.26	008.33	310	?? 0.19% ??
MN GENITAL ORGANS	1790-1879	W/M	188	155.18	007.31	121	0.34%
MN PROSTATE	1850	W/M	184	152.09	007.05	121	0.40%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	136	107.27	007.89	127	0.25%
LEUKEMIAS (ALL)	2040-2089	W/M	66	47.84	006.86	138	0.44%
LYMPHOID LEUKEMIA	2040-2049	W/M	26	15.26	007.22	170	0.36%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	759	690.19	008.19	110	0.21%
CEREBROVASCULAR DISEASE	4300-4380	W/M	419	374.32	005.93	112	0.74%
DISEASES OF THE MUSCULOSKELETAL SYSTEM	7100-7399	W/M	15	7.45	006.99	201	0.41%
MEDICAL MISADVENTURES & ADVERSE EFFECTS	8700-8799, 9300-9499	W/M	18	10.05	005.80	179	0.80%
ACCIDENTS CAUSED BY FIRE & FLAMES	8900-8990, 9294	W/M	16	8.18	006.84	196	0.44%
ACCIDENTS DUE TO NATURAL & ENV. FACTORS	9000-9090, 9295	W/M	15	3.35	038.70	448	?? <.01% ??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
AGRICULTURAL & RELATED OCCUPATIONS (CONTINUED)							
ACC.S DUE TO OTHER ENVIRONMENTAL FACTORS 9020-9090, 9295							
ACCIDENTAL DROWNING & SUBMERSION	9100-9109	W/M	11	1.42	059.49	775	?? < 0.01% ??
ACCIDENTAL IMPACT WITH OBJECTS	9160-9180	W/M	16	5.60	018.48	286	< 0.01%
ACCIDENTS CAUSED BY MACHINERY	9190-9199	W/M	9	3.63	006.73	248	?? 0.47% ??
CENSUS CODES=473-476							
OCCUPATIONAL GROUP OF FARM OPERATORS & MANAGERS							
MYCOSES	1100-1180	W/M	6	1.71	008.69	351	?? 0.16% ??
MN BONE, CONNECTIVE TISSUE, AND SKIN	1700-1739	W/M	31	19.78	006.03	157	0.70%
MN CONNECTIVE AND OTHER SOFT TISSUE	1710-1719	W/M	9	3.84	005.80	234	?? 0.80% ??
MN GENITAL ORGANS	1790-1879	W/M	165	130.97	009.28	126	0.12%
MN PROSTATE	1850	W/M	162	128.97	008.86	126	0.15%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	123	83.76	018.94	147	< 0.01%
LEUKEMIAS (ALL)	2040-2089	W/M	60	37.57	013.39	160	0.01%
LYMPHOID LEUKEMIA	2040-2049	W/M	23	12.09	009.37	190	0.11%
LEUKEMIA OF UNSPECIFIED CELL TYPE	2080-2089	W/M	18	9.61	006.74	187	0.47%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	38	26.14	005.87	145	0.77%
DISEASES OF THE MUSCULOSKELETAL SYSTEM	7100-7399	W/M	13	6.11	006.95	213	0.42%
MEDICAL MISADVENTURES & ADVERSE EFFECTS	8700-8799, 9300-9499	W/M	17	8.07	009.16	211	0.12%
ACCIDENTS CAUSED BY FIRE & FLAMES	8900-8990, 9294	W/M	12	5.43	007.07	221	0.39%
ACCIDENTS DUE TO NATURAL & ENV. FACTORS	9000-9090, 9295	W/M	13	2.29	007.06	568	?? < 0.01% ??
ACC.S DUE TO OTHER ENVIRONMENTAL FACTORS	9020-9090, 9295	W/M	11	0.96	097.49	1146	?? < 0.01% ??
ACCIDENTAL DROWNING & SUBMERSION	9100-9109	W/M	11	2.52	026.13	437	?? < 0.01% ??
ACCIDENTAL IMPACT WITH OBJECTS	9160-9180	W/M	9	1.85	024.43	486	?? < 0.01% ??
ACCIDENTS CAUSED BY MACHINERY	9190-9199	W/M	35	1.70	646.05	2059	?? < 0.01% ??
CENSUS CODES=477-484							
OCCUPATIONAL GROUP OF FARM OCCUPATIONS, EXCEPT MANAGERIAL							
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	26	15.76	006.33	165	0.59%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	21	12.35	005.61	170	0.89%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	32	22.26	005.90	144	0.76%
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	9	2.76	012.49	326	?? 0.02% ??
CENSUS CODES=485-489							
OCCUPATIONAL GROUP OF RELATED AGRICULTURAL OCCUPATIONS							
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	36	21.86	008.87	165	0.14%
GASTROINTESTINAL HEMORRHAGE	5780-5789	W/M	7	2.13	009.05	329	?? 0.13% ??
CENSUS CODES=494-496							
OCCUPATIONAL GROUP OF FORESTRY & LOGGING OCCUPATIONS							
ACCIDENTAL IMPACT WITH OBJECTS	9160-9190	W/M	16	0.29	781.57	5517	?? < 0.01% ??
CENSUS CODES=864, 503-549							
OCCUPATIONAL GROUP OF MECHANICS & REPAIRERS							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	685	613.20	009.65	112	0.09%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	661	586.83	010.71	113	0.05%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	12	5.97	005.42	201	0.99%
MN BLADDER	1880-1889	W/M	70	51.86	006.32	135	0.59%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/M	185	156.08	005.54	119	0.93%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF VEHICLE & MOBILE EQUIP. MECHANICS							
MN ESOPHAGUS	1500-1509	W/M	30	19.18	005.68	156	0.85%
OCCUPATIONAL GROUP OF AUTOMOBILE MECHANICS							
MN BLADDER SUICIDE & SELF-INFLICTED INJURY	1880-1889 9500-9590	W/M W/M	23 67	12.44 51.04	008.27 005.41	185 131	0.20% 1.00%
OCCUPATIONAL GROUP OF AUTOMOBILE BODY AND RELATED REPAIRERS							
DISEASES OF LIVER (EX. ALCOHOL RELATED)	5700-5709, 5714-5739	W/M	9	3.34	008.13	259	?? 0.22% ??
OCCUPATIONAL GROUP OF ENGINE MECHANICS, EXCEPT AUTOMOBILE							
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	29	15.59	014.13	186	0.01%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	24	14.73	006.81	163	0.45%
OCCUPATIONAL GROUP OF INDUSTRIAL MACHINERY MAINT. & REPAIR							
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/M	7	1.87	011.44	374	?? 0.04% ??
OCCUPATIONAL GROUP OF ELECTRICAL & ELECTRONIC REPAIRERS							
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/M	29	14.17	014.90	205	0.01%
OCCUPATIONAL GROUP OF HEATING, A/C, AND REFRIGERATION MECH.							
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	12	5.74	005.98	209	0.72%
OCCUPATIONAL GROUP OF MISCELLANEOUS MECHANICS & REPAIRERS							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	228	194.03	006.51	118	0.54%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	221	185.69	007.31	119	0.34%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	R/M	11	3.79	012.35	290	?? 0.02% ??
OCCUPATIONAL GROUP OF CONSTRUCTION OCCUPATIONS							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	1328	1136.37	038.94	117	< 0.1%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	1273	1087.66	037.87	117	< 0.1%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	654	585.54	009.04	112	0.13%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	514	456.82	007.98	113	0.24%
ASBESTOSIS	5010	W/M	8	2.60	010.11	308	?? 0.07% ??
DISEASES OF LIVER (EX. ALCOHOL RELATED)	5700-5709, 5714-5739	W/M	214	182.90	005.71	117	0.84%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	368	326.69	007.29	113	0.34%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	352	308.47	008.50	114	0.18%
ACCIDENTAL POISONINGS	8500-8699, 9292	R/M	16	8.00	007.98	200	0.24%
ACCIDENTAL FALLS	8800-8880, 9293	W/M	126	80.15	028.36	157	< 0.1%
ACCIDENTS CAUSED BY ELECTRIC CURRENT	9250-9259	W/M	16	6.79	012.36	236	0.02%
HOMICIDE & LEGAL INTERVENTION	9600-9780	R/M	71	52.63	008.40	135	0.19%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF MASONS & TILE FITTERS CENSUS CODES=553,563-565							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	85	64.79	006.67	131	0.49%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	82	62.04	006.76	132	0.47%
MN URINARY ORGANS	1880-1899	W/M	19	10.55	006.11	180	0.67%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/M	30	17.00	009.43	176	0.11%
ACCIDENTAL FALLS	8800-8880, 9293	W/M	11	4.75	007.03	232	?? 0.40% ??
OCCUPATIONAL GROUP OF CARPENTERS & RELATED WORKERS CENSUS CODES=554,567-573							
MENTAL DISORDERS	2900-3199	B/M	7	1.98	010.61	354	?? 0.06% ??
DISEASES OF PANCREAS	5770-5779	W/M	9	3.75	006.11	240	?? 0.67% ??
ACCIDENTAL SUFFOCATION	9110-9139	W/M	12	5.57	006.45	215	0.55%
ACCIDENTAL IMPACT WITH OBJECTS	9160-9180	W/M	8	2.92	007.30	274	?? 0.34% ??
ACCIDENTS CAUSED BY FIREARM MISSILE	9220-9229	W/M	6	1.47	011.39	408	?? 0.04% ??
OCCUPATIONAL GROUP OF ELECTRICIANS & POWER INSTALLERS CENSUS CODES=555,575-577							
PEPTIC ULCERS	5310-5339	W/M	13	6.46	005.71	201	0.84%
OCCUPATIONAL GROUP OF PAINTERS, PAPER HANGERS AND PLASTERERS CENSUS CODES=556,579-584							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	154	124.49	007.53	124	0.30%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	148	119.20	007.46	124	0.31%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	97	68.83	011.80	141	0.03%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	74	53.98	007.42	137	0.32%
ACCIDENTAL FALLS	8800-8880, 9293	W/M	23	9.07	020.22	254	< 0.1%
OCCUPATIONAL GROUP OF PAINTERS, CONSTRUCTION AND MAINTENANCE CENSUS CODES=579							
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	111	89.27	005.59	124	0.90%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	72	49.92	009.85	144	0.08%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	55	39.03	006.41	141	0.57%
ACCIDENTAL FALLS	8800-8880, 9293	W/M	17	6.70	014.53	254	0.01%
OCCUPATIONAL GROUP OF PLASTERERS CENSUS CODES=584							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	23	13.82	006.00	166	0.71%
OCCUPATIONAL GROUP OF PLUMBERS, PIPEFITTERS & STEAMFITTERS CENSUS CODES=557,585-587							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	198	147.77	018.74	134	< 0.1%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	189	141.51	017.38	134	< 0.1%
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	6	1.49	011.02	403	?? 0.05% ??
OCCUPATIONAL GROUP OF ROOFERS CENSUS CODES=595							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	42	26.68	009.17	157	0.12%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	16	8.61	005.71	186	0.84%
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	8	3.05	006.76	262	?? 0.46% ??

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983-1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF STRUCTURAL METAL WORKERS CENSUS CODES=597							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	37	23.69	007.74	156	0.27%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	36	22.69	008.05	159	0.23%
OCCUPATIONAL GROUP OF GLAZIERS & INSULATION WORKERS CENSUS CODES=589-593							
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/M	7	1.78	012.78	393	?? 0.02% ??
OCCUPATIONAL GROUP OF CONSTRUCTION LABORERS & HELPERS CENSUS CODES=865,869							
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	115	94.12	006.31	122	0.60%
ACCIDENTAL POISONINGS	8500-8699, 9292	B/M	11	4.24	010.03	259	?? 0.08% ??
ACCIDENTAL FALLS	8800-8880, 9293	W/M	26	12.91	012.56	201	0.02%
HOMICIDE & LEGAL INTERVENTION	9600-9780	B/M	42	29.24	006.87	144	0.44%
OCCUPATIONAL GROUP OF EXTRACTIVE OCCUPATIONS CENSUS CODES=867,613-617							
TUBERCULOSIS	0100-0189, 1370-1374	W/M	14	6.01	009.85	233	0.08%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	B/M	35	23.73	005.77	147	0.81%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	B/M	26	16.12	> 1000	161	< 0.01%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	419	354.76	012.75	118	0.02%
EMPHYSEMA	4920-4929	W/M	85	58.09	012.80	146	0.02%
COALWORKERS PNEUMOCONIOSIS	5000	W/M	1195	91.09	> 1000	1312	< 0.01%
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	16	6.69	012.28	239	0.02%
PNEUMOCONIOSIS DUE TO OTHER SILICATES	5020	W/M	11	2.69	023.90	409	?? < 0.01% ??
ACCIDENTS CAUSED BY EXPLOSIVES	9230-9239	W/M	6	0.54	047.05	1111	?? < 0.01% ??
OCCUPATIONAL GROUP OF PRECISION PRODUCTION OCCUPATIONS CENSUS CODES=633-699							
MN STOMACH	1510-1519	B/M	15	7.18	007.86	209	0.25%
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/F	13	5.50	009.06	236	0.13%
MN BREAST	1740-1759	B/F	18	8.61	009.92	209	0.08%
PNEUMONIA & INFLUENZA	4800-4879	W/F	72	53.95	005.98	133	0.72%
NONINFECTIVE ENTERITIS & COLITIS	5550-5580	W/M	61	43.35	007.53	141	0.30%
OCCUPATIONAL GROUP OF SUPERVISORS, PRODUCTION OCCUPATIONS CENSUS CODES=633							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	286	241.97	008.59	118	0.17%
MN STOMACH	1510-1519	W/M	49	34.25	006.12	143	0.66%
MN STOMACH	1510-1519	B/M	6	1.06	018.56	566	?? < 0.01% ??
DISEASES OF PULMONARY CIRCULATION	4150-4179	W/M	37	24.73	005.77	150	0.81%
OCCUPATIONAL GROUP OF PRECISION METAL WORKING OCCUPATIONS CENSUS CODES=634-655							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	13	4.99	012.07	261	?? 0.03% ??
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	13	4.87	012.85	267	?? 0.02% ??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF MACHINISTS							
MN TRACHEA, BRONCHUS AND LUNG ANEMIAS	1620-1629 2800-2859	B/M W/M	21 12	12.10 5.74	006.58 005.94	174 209	0.51% 0.74%
OCCUPATIONAL GROUP OF PRECISION GRINDERS, FITTERS & SHARPENERS CENSUS CODES=637-638							
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	W/M	44	30.51	009.51	144	0.10%
ISCHEMIC HEART DISEASE	4100-4149	W/M	37	22.08	013.51	168	0.01%
ACUTE MYOCARDIAL INFARCTION	4100	W/M	28	14.12	015.81	198	<.01%
OCCUPATIONAL GROUP OF JEWELERS & ENGRAVERS CENSUS CODES=647,649							
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	13	4.46	014.99	291	?? 0.01% ??
OCCUPATIONAL GROUP OF SHEET METAL WORKERS CENSUS CODES=653-654							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	67	47.56	008.41	141	0.19%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	66	45.54	009.72	145	0.09%
MN KIDNEY	1890	W/M	8	3.05	006.56	262	?? 0.52% ??
OCCUPATIONAL GROUP OF PRECISION WOODWORKING OCCUPATIONS CENSUS CODES=656-659							
CEREBROVASCULAR DISEASE	4300-4380	W/M	28	17.92	005.50	156	0.95%
OCCUPATIONAL GROUP OF PRECISION TEXTILE, APPAREL MACHINE WORKERS CENSUS CODES=666-674							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	25	13.74	008.61	182	0.17%
SEPTICEMIA	0380-0389	W/M	22	10.89	010.56	202	0.06%
PNEUMONIA & INFLUENZA	4800-4879	W/F	46	31.04	007.04	148	0.40%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	33	14.72	021.91	224	<.01%
OCCUPATIONAL GROUP OF DRESSMAKERS CENSUS CODES=666							
MN BREAST	1740-1759	R/F	11	4.87	006.98	226	?? 0.41% ??
PNEUMONIA & INFLUENZA	4800-4879	W/F	38	25.18	006.31	151	0.60%
DISEASES OF URINARY SYSTEM	5800-5999	W/F	29	16.61	008.74	175	0.15%
NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	W/F	18	10.01	005.71	180	0.84%
OCCUPATIONAL GROUP OF TAILORS CENSUS CODES=667							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	15	7.67	006.20	196	0.64%
SEPTICEMIA	0380-0389	W/M	14	6.09	009.10	230	0.13%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/M	21	11.18	007.95	188	0.24%
MYELOID LEUKEMIA	2050-2059	W/M	7	1.93	010.93	363	?? 0.05% ??
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/F	7	2.68	005.61	261	?? 0.89% ??
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/F	6	2.02	006.18	297	?? 0.64% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	18	8.12	011.05	222	0.04%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

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CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF SHOE REPAIRERS							
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	8	3.26	005.61	245	?? 0.89% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/M	7	2.20	009.52	318	?? 0.10% ??
OCCUPATIONAL GROUP OF PRECISION WORKERS, ASSORTED MATERIALS							
CENSUS CODES=669							
GASTROINTESTINAL HEMORRHAGE	5780-5789	W/M	6	2.12	005.41	283	?? 1.00% ??
OCCUPATIONAL GROUP OF OPTICAL GOODS WORKERS							
CENSUS CODES=677							
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	9	2.34	016.81	385	?? <.01% ??
OCCUPATIONAL GROUP OF PRECISION FOOD PRODUCTION OCCUPATIONS							
CENSUS CODES=686-688							
MN LIP, ORAL CAVITY AND PHARYNX	1400-1499	B/M	6	1.34	013.35	448	?? 0.01% ??
MN STOMACH	1510-1519	B/M	6	1.54	010.36	390	?? 0.06% ??
MN OTHER & ILL-DEFINED DIGESTIVE ORGAN	1580-1599	W/M	10	3.25	012.16	308	?? 0.02% ??
OCCUPATIONAL GROUP OF BUTCHERS AND MEAT CUTTERS							
CENSUS CODES=686							
MN STOMACH	1510-1519	W/M	15	7.83	005.76	192	0.82%
MN OTHER & ILL-DEFINED DIGESTIVE ORGAN	1580-1599	W/M	9	1.86	024.00	484	?? <.01% ??
OCCUPATIONAL GROUP OF FOOD BATCHMAKERS							
CENSUS CODES=688							
MN GENITAL ORGANS	1790-1879	W/M	6	1.89	007.07	317	?? 0.39% ??
OCCUPATIONAL GROUP OF PRECISION INSPECTORS & RELATED WORKERS							
CENSUS CODES=689-693							
ACCIDENTAL FALLS	8800-8880, 9293	W/M	6	1.91	006.81	314	?? 0.45% ??
OCCUPATIONAL GROUP OF PLANT & SYSTEM OPERATORS							
CENSUS CODES=694-699							
MENTAL DISORDERS	2900-3199	W/M	14	7.11	005.80	197	0.80%
NONINFECTIVE ENTERITIS & COLITIS	5550-5580	W/M	10	4.29	006.44	233	?? 0.56% ??
OCCUPATIONAL GROUP OF WATER & SEWAGE TREATMENT PLANT OPERATORS							
CENSUS CODES=694							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	12	4.87	010.02	246	?? 0.08% ??
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	11	4.68	008.08	235	?? 0.22% ??
OCCUPATIONAL GROUP OF STATIONARY ENGINEERS							
CENSUS CODES=696							
MENTAL DISORDERS	2900-3199	W/M	13	6.11	006.80	213	0.46%
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	B/M	28	18.64	006.10	150	0.68%
NONINFECTIVE ENTERITIS & COLITIS	5550-5580	W/M	9	3.64	006.58	247	?? 0.51% ??
ACCIDENTAL SUFFOCATION	9110 9139	W/M	6	1.95	006.53	308	?? 0.53% ??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF MACHINE OPERS & TENDERS (EX. PRECISION) CENSUS CODES=703-779							
MYCOSES	1100-1180	W/F	10	2.68	018.34	373	?? <.01% ??
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	604	527.15	012.61	115	0.02%
MN STOMACH	1510-1519	W/F	84	51.80	020.72	162	<.01%
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/F	38	22.90	009.91	166	0.08%
MN PANCREAS	1570-1579	B/M	27	15.21	009.21	178	0.12%
MN OTHER & ILL-DEFINED DIGESTIVE ORGAN	1580-1599	B/M	6	1.39	013.30	432	?? 0.01% ??
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	1305	1176.14	017.04	111	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	1248	1126.39	015.77	111	<.01%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	313	271.34	006.92	115	0.42%
MN GENITAL ORGANS	1790-1879	W/F	256	212.25	009.71	121	0.09%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/F	225	186.98	008.20	120	0.21%
HYPERTENSIVE DISEASE	4010-4059	W/F	151	123.16	006.51	123	0.54%
HYPERTENSION	4010-4019, 4030-4039	W/F	52	30.01	016.31	173	<.01%
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	R/M	10R	79.14	011.92	136	0.03%
DISEASES OF PULMONARY CIRCULATION	4150-4179	W/F	81	62.20	005.75	130	0.82%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	526	476.43	005.76	110	0.82%
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	24	11.68	013.14	205	0.01%
PNEUMOCONIOSIS DUE TO OTHER SILICATES	5020	W/M	13	4.74	013.90	274	?? 0.01% ??
DISEASES OF PANCREAS	5770-5779	W/M	27	16.42	006.76	164	0.47%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/F	67	45.20	011.35	148	0.04%
OCCUPATIONAL GROUP OF LATHE AND TURNING MACHINE OPERATORS CENSUS CODES=703,704							
MN OF GENITOURINARY ORGANS	1790-1899	W/M	12	5.64	006.32	213	0.60%
OCCUPATIONAL GROUP OF ROLLING MACHINE OPERATORS CENSUS CODES=707							
PNEUMONIA & INFLUENZA	4800-4879	W/M	13	5.43	009.55	239	0.10%
OCCUPATIONAL GROUP OF DRILLING AND BORING MACHINE OPERATORS CENSUS CODES=708							
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	9	3.60	006.91	250	?? 0.43% ??
OCCUPATIONAL GROUP OF FORGING MACHINE OPERATORS CENSUS CODES=713							
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	W/M	32	19.83	007.85	161	0.25%
OCCUPATIONAL GROUP OF MISC. METAL, PLASTIC, GLASS MACH. OPERS. CENSUS CODES=705,715							
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	4400-4489	W/M	6	1.75	008.23	343	?? 0.21% ??
OCCUPATIONAL GROUP OF FABRICATING MACHINE OPERATORS, N.F.C. CENSUS CODES=717							
ISCHEMIC HEART DISEASE	4100-4149	W/M	46	31.95	008.22	144	0.21%
OCCUPATIONAL GROUP OF METAL & PLASTIC PROCESSING MACHINE OPERS CENSUS CODES=719-725							
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	94	74.46	005.42	126	0.99%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	61	36.53	016.59	167	<.01%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
METAL & PLASTIC PROCESSING MACHINE OPRS (CONTINUED)							
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	52	28.57	019.23	182	<.01%
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	6	0.70	032.69	857	?.?.<.01%??
OCCUPATIONAL GROUP OF MOLDING AND CASTING MACHINE OPERATORS							
CENSUS CODES=719							
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	66	44.81	010.64	147	0.06%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	41	21.59	017.45	190	<.01%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	32	16.95	013.02	189	0.02%
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	6	0.42	062.34	1429	?.?.<.01%??
OCCUPATIONAL GROUP OF WOODWORKING MACHINE OPERATORS							
CENSUS CODES=726-733							
ACUTE MYOCARDIAL INFARCTION	4100	W/M	47	33.68	005.96	140	0.73%
OCCUPATIONAL GROUP OF PRINTING MACHINE OCCUPATIONS							
CENSUS CODES=734-737							
SEPTICEMIA	0380-0389	W/M	19	10.48	006.23	181	0.63%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/F	9	3.12	009.55	288	?.?.0.10%??
GASTROINTESTINAL HEMORRHAGE	5780-5789	W/M	9	3.80	005.89	237	?.?.0.76%??
OCCUPATIONAL GROUP OF PRINTING MACHINE OPERATORS							
CENSUS CODES=734							
MN BONE, CONNECTIVE TISSUE, AND SKIN HEART DISEASE	1700-1739	W/M	11	5.10	005.77	216	0.81%
DISEASES OF ARTERY/ARTERIOLE/CAPILLARY	3900-3989, 4020-4029, 4040-4299	B/M	21	11.79	008.96	178	0.14%
	4400-4489	W/M	30	19.35	005.48	155	0.96%
OCCUPATIONAL GROUP OF PHOTOENGRAVERS AND LITHOGRAPHERS							
CENSUS CODES=735							
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	20	11.53	006.21	173	0.64%
OCCUPATIONAL GROUP OF TEXTILE, APPAREL & FURNISHING MACH OPRS							
CENSUS CODES=738-749							
MYCOSES	1100-1180	W/F	8	1.92	016.89	417	?.?.<.01%??
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	428	384.14	005.48	111	0.96%
MN STOMACH	1510-1519	W/F	53	37.84	005.96	140	0.73%
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/F	28	16.58	007.53	169	0.30%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/F	177	135.04	013.63	131	0.01%
HYPERTENSIVE DISEASE	4010-4059	W/F	116	92.50	006.04	125	0.70%
OTHER & ILL-DEFINED HEART DISEASE	4010-4019, 4030-4039	W/F	40	22.45	013.51	178	0.01%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	203	163.86	010.42	124	0.06%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	4200-4299	W/F	814	714.43	016.47	114	<.01%
	7970-7999	B/F	49	29.53	013.53	166	0.01%
OCCUPATIONAL GROUP OF KNITTING, TAPING, & WEAVING MACH. OPRS.							
CENSUS CODES=739							
MN STOMACH	1510-1519	W/F	8	3.00	006.83	267	?.?.0.45%??
HYPERTENSION	4010-4019, 4030-4039	W/F	6	2.09	005.61	287	?.?.0.89%??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	84	60.42	010.10	139	0.07%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF TEXTILE SEWING MACHINE OPERATORS CENSUS CODES=744							
MYCOSES	1100-1180	W/F	7	1.36	019.79	515	?? <.01% ??
MN LIVER AND INTRAHEPATIC BILE DUCTS	1550-1552	W/F	24	11.86	011.80	202	0.03%
MN GENITAL ORGANS	1790-1879	W/F	134	109.72	005.51	122	0.95%
HYPERTENSIVE DISEASE	4010-4059	W/M	6	2.11	005.57	284	?? 0.91% ??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	543	488.25	007.12	111	0.38%
OCCUPATIONAL GROUP OF PRESSING MACHINE OPERATORS CENSUS CODES=747							
MN OF GENITOURINARY ORGANS	1790-1899	W/F	19	10.94	005.51	174	0.94%
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	W/F	14	7.19	005.70	195	0.85%
DISEASES OF LIVER (EX. ALCOHOL RELATED)	5700-5709, 5714-5739	W/M	8	2.48	010.36	323	?? 0.06% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/F	16	7.36	009.79	217	0.09%
OCCUPATIONAL GROUP OF LAUNDERING AND DRY CLEANING MACH. OPRS. CENSUS CODES=748							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	6	1.98	006.44	303	?? 0.56% ??
MN ILL-DEFINED AND UNSPECIFIED SITE	1950-1959, 1990-1999	B/F	8	3.15	006.25	254	?? 0.62% ??
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3200-3899	W/M	6	1.92	006.75	313	?? 0.47% ??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	43	29.34	006.84	147	0.44%
OCCUPATIONAL GROUP OF MACHINE OPERATORS - ASSORTED MATERIALS CENSUS CODES=753-779							
MN STOMACH	1510-1519	W/F	26	12.28	014.55	212	0.01%
MN PANCREAS	1570-1579	B/M	20	10.92	007.24	183	0.35%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	870	762.32	017.75	114	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	836	730.05	017.86	115	<.01%
DISEASES OF BLOOD & BLOOD FORMING ORGANS	2800-2899	B/M	8	3.06	006.78	261	?? 0.46% ??
PNEUMOCONIOSIS (EXCEPT COAL)	5010-5050	W/M	15	7.43	007.15	202	0.37%
DISEASES OF PANCREAS	5770-5779	W/M	19	10.58	006.28	180	0.61%
OCCUPATIONAL GROUP OF PACKAGING AND FILLING MACHINE OPERATORS CENSUS CODES=754							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	11	3.54	013.92	311	?? 0.01% ??
SEPTICEMIA	0380-0389	W/M	9	2.57	013.87	350	?? 0.01% ??
MN URINARY ORGANS	1880-1899	W/M	11	3.86	011.57	285	?? 0.03% ??
MN KIDNEY	1890	W/M	6	1.65	009.00	364	?? 0.13% ??
OCCUPATIONAL GROUP OF PAINTING AND PAINT SPRAYING MACH. OPRS. CENSUS CODES=759							
MN BLADDER	1880-1889	W/M	6	1.98	006.23	303	?? 0.63% ??
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	44	28.22	009.29	156	0.11%
OCCUPATIONAL GROUP OF FURNACE, KILN & OVEN OPERATOR (EX. FOOD) CENSUS CODES=766							
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	35	22.62	006.50	155	0.54%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF OTHER & N.E.C. MACHINE OPERATORS CENSUS CODES=753,755,758,763-765,777							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	B/M	19	8.78	011.82	216	0.03%
MN STOMACH	1510-1519	W/F	11	4.04	010.43	272	?? 0.06% ??
DISEASES OF BLOOD & BLOOD FORMING ORGANS	2800-2899	W/M	12	5.65	006.16	212	0.65%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	790-7999	B/F	9	3.89	005.82	231	?? 0.79% ??
OCCUPATIONAL GROUP OF MACHINE OPERATORS, NOT SPECIFIED CENSUS CODES=779							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/F	54	39.41	005.45	137	0.98%
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	B/F	13	6.65	005.58	195	0.90%
MN STOMACH	1510-1519	W/F	11	3.88	011.48	284	?? 0.04% ??
MN PANCREAS	1570-1579	B/M	13	6.56	005.62	198	0.88%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	505	433.64	013.29	116	0.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	485	415.32	013.16	117	0.01%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	36	21.75	009.15	166	0.12%
MN GENITAL ORGANS	1790-1879	W/F	33	17.31	013.98	191	0.01%
MN OVARY	1830	W/F	17	8.93	006.60	190	0.51%
CHRONIC ISCHEMIC HEART DISEASE	4120-4149	W/M	696	612.57	013.32	114	0.01%
DISEASES OF PANCREAS	5770-5779	W/M	13	5.93	007.51	219	0.31%
OCCUPATIONAL GROUP OF FABRICATORS, ASSEMBLERS, & HAND WORKING CENSUS CODES=783-795							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	342	299.05	006.86	114	0.44%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	327	286.30	006.39	114	0.57%
MN OF GENITOURINARY ORGANS	1790-1899	W/F	46	30.83	007.36	149	0.33%
OCCUPATIONAL GROUP OF WELDERS AND CUTTERS CENSUS CODES=783							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	214	176.80	008.61	121	0.17%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	203	169.22	007.36	120	0.33%
OCCUPATIONAL GROUP OF ASSEMBLERS CENSUS CODES=785							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	B/M	8	3.16	006.51	253	?? 0.53% ??
MN OF GENITOURINARY ORGANS	1790-1899	W/F	37	24.14	006.66	153	0.49%
MN UTERUS (EXCEPT CERVIX)	1790-1799, 1820-1828	W/F	12	5.32	007.30	226	0.34%
DIABETES MELLITUS	2500-2509	W/M	33	19.77	008.42	167	0.19%
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	57	40.98	006.14	139	0.66%
DISEASES OF LIVER (EX. ALCOHOL RELATED)	5700 5709, 5714-5739	W/M	31	15.47	014.95	200	0.01%
OCCUPATIONAL GROUP OF MISCELLANEOUS HAND WORKING OCCUPATIONS CENSUS CODES=784,786,793-795							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	7	2.42	007.47	289	?? 0.31% ??
OCCUPATIONAL GROUP OF PROD. INSPECTORS, SAMPLERS & WEIGHERS CENSUS CODES=796-799							
MN DIGESTIVE ORGANS AND PERITONEUM	1500-1599	W/M	114	87.79	008.16	130	0.21%
MN BREAST	1740-1759	B/F	9	2.55	015.04	353	?? 0.01% ??
LEUKEMIA OF UNSPECIFIED CELL TYPE	2080-2089	W/M	10	3.08	013.46	325	?? 0.01% ??
ACUTE MYOCARDIAL INFARCTION	4100	B/M	8	3.17	006.55	252	?? 0.52% ??

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF TRANSPORTATION & MATERIAL MOVING OCCS. CENSUS CODES=803-859							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	1217	1070.90	024.00	114	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	1172	1024.78	025.34	114	<.01%
HEART DISEASE	3900-3989, 4020-4029, 4040-4299	O/M	8	3.46	007.35	231	?? 0.33% ??
ISCHEMIC HEART DISEASE	4100-4149	W/F	59	42.83	007.83	138	0.26%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	592	492.47	022.54	120	<.01%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	464	381.00	020.00	122	<.01%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	327	233.48	048.96	140	<.01%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	34	13.47	033.59	252	<.01%
RAILWAY ACCIDENTS	8000-8079	W/M	8	2.81	008.55	285	?? 0.17% ??
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	315	218.97	054.60	144	<.01%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	31	12.23	030.71	253	<.01%

OCCUPATIONAL GROUP OF MOTOR VEHICLE OPERATORS CENSUS CODES=803-814

MN PANCREAS	1570-1579	B/M	23	12.01	009.91	192	0.08%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	770	659.86	021.41	117	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	743	631.27	022.92	118	<.01%
MN PROSTATE	1850	B/M	44	30.97	005.63	142	0.88%
ISCHEMIC HEART DISEASE	4100-4149	W/F	32	19.40	009.94	165	0.08%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	350	288.16	014.33	121	0.01%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	279	222.09	015.55	126	<.01%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	250	167.36	052.78	149	<.01%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/F	7	2.34	008.22	299	?? 0.21% ??
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	B/M	28	10.59	029.97	264	<.01%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	245	157.02	063.26	156	<.01%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/F	7	2.25	008.93	311	?? 0.14% ??
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	B/M	26	9.61	029.02	271	<.01%
OTHER & UNSPECIFIED ACCIDENTAL CAUSES	9260-9289, 9298, 9299, 9200-9219, 9140, 9150	W/M	24	14.01	006.78	171	0.46%

OCCUPATIONAL GROUP OF TRUCK DRIVERS, HEAVY CENSUS CODES=804

MN PANCREAS	1570-1579	B/M	21	9.21	014.78	228	0.01%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	570	484.00	017.55	118	<.01%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	551	462.86	019.18	119	<.01%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	234	200.04	006.06	117	0.69%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	183	153.53	005.85	119	0.77%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	219	128.34	081.44	171	<.01%
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	B/M	21	7.03	028.03	299	<.01%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	215	120.26	094.19	179	<.01%
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	B/M	19	6.40	024.76	297	<.01%
OTHER & UNSPECIFIED ACCIDENTAL CAUSES	9260-9289, 9298, 9299, 9200-9219, 9140, 9150	W/M	19	10.21	007.01	186	0.40%

OCCUPATIONAL GROUP OF TRUCK DRIVERS, LIGHT CENSUS CODES=805

CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	22	12.17	007.50	181	0.31%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	20	9.40	011.27	213	0.04%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

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CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF DRIVER-SALES WORKERS							
CENSUS CODES=806							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	67	46.71	009.34	143	0.11%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	63	44.73	007.81	141	0.26%
OCCUPATIONAL GROUP OF BUS DRIVERS							
CENSUS CODES=808							
ISCHEMIC HEART DISEASE	4100-4149	R/M	13	6.30	007.14	206	0.38%
OCCUPATIONAL GROUP OF TAXI CAB DRIVERS AND CHAUFFEURS							
CENSUS CODES=809							
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	34	20.25	009.13	168	0.13%
EMPHYSEMA	4920-4929	W/M	10	3.44	010.82	291	?? 0.05% ??
OCCUPATIONAL GROUP OF RAILROAD CONDUCTORS AND YARDMASTERS							
CENSUS CODES=823							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	70	50.02	008.43	140	0.18%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	68	47.91	008.85	142	0.15%
OCCUPATIONAL GROUP OF LOCOMOTIVE OPERATING OCCUPATIONS							
CENSUS CODES=824							
COALWORKERS PNEUMOCONIOSIS	5000	W/M	18	9.66	006.46	186	0.55%
OCCUPATIONAL GROUP OF WATER TRANSPORTATION OCCUPATIONS							
CENSUS CODES=828-834							
OTHER DISEASES OF RESPIRATORY SYSTEM	5100-5199	W/M	6	1.75	008.06	343	?? 0.23% ??
OCCUPATIONAL GROUP OF MATERIAL MOVING EQUIPMENT OPERATORS							
CENSUS CODES=843-859							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	B/M	36	24.07	006.21	150	0.63%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	B/M	34	22.31	006.34	152	0.59%
MN URINARY ORGANS	1880-1899	B/M	6	1.73	008.38	347	?? 0.19% ??
DISEASES OF PULMONARY CIRCULATION	4150-4179	B/M	7	2.60	006.02	269	?? 0.71% ??
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	141	109.75	009.17	128	0.12%
BRONCHITIS	4900-4919	W/M	9	3.62	006.70	249	?? 0.48% ??
ACCIDENTS CAUSED BY MACHINERY	9190-9199	W/M	11	2.26	030.71	487	?? < 0.01% ??
OCCUPATIONAL GROUP OF OPERATING ENGINEERS							
CENSUS CODES=844							
ACCIDENTS CAUSED BY MACHINERY	9190-9199	W/M	8	0.68	068.89	1176	?? < 0.01% ??
OCCUPATIONAL GROUP OF CRANE AND TOWER OPERATORS							
CENSUS CODES=849							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	119	96.23	005.75	124	0.82%
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	B/M	17	7.74	011.18	220	0.04%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	114	92.16	005.49	124	0.96%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	B/M	15	7.18	008.33	209	0.19%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	66	49.33	005.60	134	0.89%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF EXCAVATING, LOADER, GRADER & DOZER OPERS. CENSUS CODES=853-854							
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	25	14.43	007.78	173	0.26%
COALWORKERS PNEUMONOSIS	5000	W/M	11	1.67	046.97	659	? ? < 0.1% ??
OCCUPATIONAL GROUP OF INDUSTRIAL TRUCK & TRACTOR EQUIP. OPERS. CENSUS CODES=856							
LEUKEMIAS (ALL)	2040-2089	W/M	10	3.83	008.48	261	? ? 0.18% ??
OCCUPATIONAL GROUP OF MISC. MATERIAL MOVING EQUIP. OPERATORS. CENSUS CODES=843,845,848,859							
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/M	6	1.58	009.82	380	? ? 0.09% ??
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	41	27.19	007.24	151	0.36%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	23	12.90	007.48	178	0.31%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	19	10.04	007.38	189	0.33%
OCCUPATIONAL GROUP OF FREIGHT, STOCK, & MATERIAL HANDLERS. CENSUS CODES=875-883							
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	32	20.32	006.32	157	0.59%
OCCUPATIONAL GROUP OF GARBAGE COLLECTORS. CENSUS CODES=875							
TRANSPORT ACCIDENTS	8000-8489, 9290-9291	W/M	6	2.28	006.11	263	? ? 0.67% ??
MOTOR VEHICLE ACCIDENTS	8100-8259, 9290	W/M	6	2.15	006.94	279	? ? 0.42% ??
OCCUPATIONAL GROUP OF STEVEDORES. CENSUS CODES=876							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	6	1.57	010.01	382	? ? 0.08% ??
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	12	4.46	011.53	269	? ? 0.03% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	12	2.00	045.63	600	? ? < 0.1% ??
OCCUPATIONAL GROUP OF MACHINE FEEDERS AND OFFBEARERS. CENSUS CODES=878							
ISCHEMIC HEART DISEASE	4100-4149	W/M	132	109.20	006.53	121	0.53%
OCCUPATIONAL GROUP OF EQUIP. CLEANERS, PROD. HELPER & LABORER. CENSUS CODES=863,873,885-889							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	B/F	23	11.93	010.22	193	0.07%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	B/F	23	11.39	011.78	202	0.03%
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	B/F	9	3.66	006.65	246	? ? 0.50% ??
MENTAL DISORDERS	2900-3199	W/M	80	53.29	013.90	150	0.01%
MENTAL DISORDERS	2900-3199	B/M	59	38.44	013.08	153	0.01%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	W/M	40	20.55	018.89	195	< 0.1%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	B/M	44	27.82	011.03	158	0.04%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	381	316.04	015.31	121	< 0.1%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	1059	936.44	018.84	113	< 0.1%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	569	450.86	034.44	126	< 0.1%
BRONCHITIS	4900-4919	W/M	25	15.32	005.91	163	0.75%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	450	350.99	030.71	128	< 0.1%
PNEUMONITIS DUE TO OTHER SILICATES	5020	W/M	9	3.55	007.41	254	? ? 0.32% ??
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	B/M	149	119.97	008.74	124	0.16%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
EQUIP. CLEANERS, PROD. HELPER & LABORER (CONTINUED)							
DISEASES OF LIVER (EX. ALCOHOL RELATED)	5700-5709, 5714-5739	B/M	68	46.05	012.51	148	0.02%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/M	315	268.97	010.47	117	0.06%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/F	25	14.99	006.57	167	0.52%
OCCUPATIONAL GROUP OF PRODUCTION HELPERS							
CENSUS CODES=873							
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	12	4.72	010.22	254	?? 0.07% ??
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	10	3.67	009.62	272	?? 0.10% ??
OCCUPATIONAL GROUP OF LABORERS, EXCEPT CONSTRUCTION							
CENSUS CODES=889							
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	B/F	22	11.40	009.75	193	0.09%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	B/F	22	10.89	011.24	202	0.04%
LYMPHOSARCOMA AND RETICULOSARCOMA	2000-2008	B/M	7	2.89	005.46	242	?? 0.97% ??
LEUKEMIAS (ALL)	2040-2089	W/F	35	22.53	006.56	155	0.52%
DIABETES MELLITUS	2500-2509	W/F	92	71.46	005.89	129	0.76%
MENTAL DISORDERS	2900-3199	W/M	80	51.36	016.59	156	<.01%
MENTAL DISORDERS	2900-3199	B/M	59	37.63	014.42	157	0.01%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	W/M	40	19.68	021.48	203	<.01%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	R/M	44	27.20	012.13	162	0.02%
UTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	343	284.28	013.86	121	0.01%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	1022	904.99	017.72	113	<.01%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	543	435.53	029.41	125	<.01%
BRONCHITIS	4900-4919	W/M	25	14.81	006.78	169	0.46%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	429	339.10	026.12	127	<.01%
PNEUMOCONIOSIS DUE TO OTHER SILICATES	5020	W/M	9	3.43	008.02	262	?? 0.23% ??
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	B/M	146	116.87	008.99	125	0.14%
DISEASES OF LIVER (EX. ALCOHOL RELATED)	5700-5709, 5714-5739	R/M	67	44.85	013.03	149	0.02%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/M	310	260.86	012.24	119	0.02%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/F	24	14.18	006.67	169	0.49%
OCCUPATIONAL GROUP OF ARMED FORCES							
CENSUS CODES=905							
DISEASES OF LIVER (EX. ALCOHOL RELATED)	5700-5709, 5714-5739	W/M	28	17.68	005.63	158	0.88%
AIR TRANSPORT ACCIDENTS	8400-8459	W/M	6	0.93	022.77	645	?? <.01% ??
OCCUPATIONAL GROUP OF HOUSEWIFE							
CENSUS CODES=914							
DIABETES MELLITUS	2500-2509	W/F	2688	2413.83	077.20	111	<.01%
DIABETES MELLITUS	2500-2509	R/F	233	200.65	009.95	116	0.08%
CHRONIC ISCHEMIC HFART DISEASE	4120-4149	R/F	569	516.89	011.37	110	0.04%
COMPLICATIONS OF PREGNANCY & CHILDBIRTH	6300-6769	W/F	10	4.64	007.02	216	?? 0.40% ??
ACCIDENTAL POISONINGS	8500-8699, 9292	W/F	83	68.69	005.69	121	0.85%
OCCUPATIONAL GROUP OF STUDENT							
CENSUS CODES=915							
MN BONE, CONNECTIVE TISSUE, AND SKIN	1700-1739	W/M	23	11.29	015.11	204	0.01%
MN BONE AND ARTICULAR CARTILAGE	1700-1709	W/F	6	2.35	006.19	255	?? 0.64% ??
MN CONNECTIVE AND OTHER SOFT TISSUE	1710-1719	W/M	13	5.98	009.85	217	0.08%

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
(CONTINUED)							
NEOPLASMS (ALL) OF NERVOUS SYSTEM	1910-1929, 2250-2259, 2375-2379	W/M	15	6.80	011.49	221	0.03%
MN BRAIN	1910-1919	W/M	13	6.13	008.64	212	0.16%
NEOPLASM OF UNCERTAIN BEHAVIOR OR BENIGN	2100-2399	W/M	8	3.21	007.60	249	? ? 0.29% ? ?
METABOLIC DISEASES	2700-2788	W/F	13	6.83	006.95	190	0.42%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3000-3899	W/M	35	24.35	005.95	144	0.74%
DISEASES OF PERIPHERAL NERVOUS SYSTEM	3500-3599	W/M	18	10.53	006.54	171	0.53%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	20	10.87	009.19	184	0.12%
CONGENITAL ANOMALIES	7400-7599	W/F	17	8.85	010.00	192	0.08%
CENSUS CODES=917							
OCCUPATIONAL GROUP OF CHILD, DISABLED, NEVER WORKED, INMATE							
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	51	26.40	023.04	193	<.01%
SEPTICEMIA	0380-0389	W/M	30	14.66	015.46	205	<.01%
ENDOCRINE DISORDERS (EX. DIABETES)	2510-2599, 2400-2499	W/F	6	2.11	005.62	284	? ? 0.89% ? ?
NUTRITIONAL, METABOLIC & IMMUNE DISORDER	2600-2799	W/F	26	13.25	011.77	196	0.03%
METABOLIC DISEASES	2700-2788	W/M	18	9.41	007.31	191	0.34%
METABOLIC DISEASES	2700-2788	W/F	20	10.27	008.69	195	0.16%
MENTAL DISORDERS	2900-3199	W/M	40	13.05	056.36	307	<.01%
MENTAL DISORDERS	2900-3199	W/F	25	9.83	022.54	254	<.01%
MENTAL DISORDERS	2900-3199	B/F	10	2.60	019.94	385	? ? <.01% ? ?
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	2900-2909, 2930-3029, 3060-3190	W/M	20	4.75	047.48	421	? ? <.01% ? ?
MENTAL DISORDER EX. ALCOHOL/DRUG RELATED	2900-2909, 2930-3029, 3060-3190	W/F	23	8.43	024.13	273	<.01%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	W/M	20	8.30	015.97	241	<.01%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3000-3899	W/M	109	34.00	174.42	321	<.01%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3000-3899	W/F	57	25.49	039.38	224	<.01%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3000-3899	B/M	14	6.06	009.95	231	0.08%
DISEASES OF NERVOUS SYSTEM & SENSE ORGANS	3000-3899	B/F	12	5.19	008.53	231	0.17%
OTHER DISORDERS OF THE CNS	3400-3499	W/M	71	15.23	214.75	466	<.01%
OTHER DISORDERS OF THE CNS	3400-3499	W/F	34	10.82	050.28	314	<.01%
OTHER DISORDERS OF THE CNS	3400-3499	B/F	11	3.80	013.18	289	? ? 0.01% ? ?
DISORDERS OF PERIPHERAL NERVOUS SYSTEM	3500-3599	W/M	22	4.92	061.16	447	? ? <.01% ? ?
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	276	187.98	046.04	147	<.01%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/F	231	189.79	010.18	122	0.07%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	203	125.98	051.36	161	<.01%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/F	146	92.75	032.28	157	<.01%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	106	34.89	149.56	304	<.01%
PNEUMONIA & INFLUENZA	4800-4879	W/F	82	38.09	051.69	215	<.01%
PNEUMONIA & INFLUENZA	4800-4879	B/M	17	8.10	009.34	210	0.11%
PNEUMONIA & INFLUENZA	4800-4879	W/M	17	3.89	041.99	437	? ? <.01% ? ?
PNEUMONITIS DUE TO SOLIDS & LIQUIDS	5070-5078	W/F	13	4.01	018.38	324	? ? <.01% ? ?
PNEUMONITIS DUE TO SOLIDS & LIQUIDS	5070-5078	W/M	109	86.88	005.81	125	0.79%
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	15	4.60	021.68	326	? ? <.01% ? ?
PEPTIC ULCERS	5310-5339	W/F	19	9.65	008.29	197	0.20%
OTHER DISEASES OF THE DIGESTIVE SYSTEM	5600-5699	W/M	44	22.14	021.30	199	<.01%
DISEASES OF URINARY SYSTEM	5800-5909	R/M	13	6.43	006.10	202	0.67%
NEPHRITIS, NEPHROTIC SYNDROME & NEPHROSIS	5800-5899	W/M	23	6.47	040.42	355	<.01%
OTHER DISEASES OF THE URINARY SYSTEM	5900-5999	W/F	15	7.29	007.32	206	0.34%
DISEASES OF THE MUSCULOSKELETAL SYSTEM	7100-7399	W/M	30	8.46	057.01	355	<.01%
CONGENITAL ANOMALIES	7400-7599	W/F	25	5.78	065.66	433	<.01%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
CHILD, DISABLED, NEVER WORKED, INMATE (CONTINUED)							
CONGENITAL ANOMALIES	7400-7599	B/M	7	1.93	0.12.40	363	?? 0.02% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	79	37.92	0.45.55	208	<.01%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/F	36	19.54	0.13.43	184	0.01%
ACCIDENTS DUE TO NATURAL & ENV. FACTORS	9000-9090, 9295	W/M	12	3.87	0.16.08	310	?? <.01% ??
ACCIDENTS DUE TO EXCESSIVE COLD	9010-9019	W/M	8	1.61	0.23.01	497	?? <.01% ??
ACCIDENTAL DROWNING & SUBMERSION	9100-9109	W/F	7	2.06	0.10.44	340	?? 0.06% ??
ACCIDENTAL SUFFOCATION	9110-9139	W/M	19	6.22	0.25.85	305	<.01%
ACCIDENTAL SUFFOCATION	9110-9139	W/F	13	3.20	0.27.89	406	?? <.01% ??

OCCUPATIONAL GROUP OF INFORMATION INSUFFICIENT TO ALLOCATE OCC. CENSUS CODES=911,913,989,999

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
INFECTIOUS AND PARASITIC DISEASES	0010-1399	W/M	129	101.29	0.07.80	127	0.26%
SEPTICEMIA	0380-0389	W/M	101	74.56	0.09.60	135	0.10%
MN ESOPHAGUS	1500-1509	W/F	15	7.03	0.08.14	213	0.22%
MENTAL DISORDERS	2900-3199	W/M	57	40.01	0.07.20	142	0.36%
MENTAL DISORDER DUE TO DRUG/ALCOHOL USE	2910-2919, 2920-2929, 3030-3059	W/M	27	14.82	0.09.74	182	0.09%
OTHER & ILL-DEFINED OF THE CNS	3400-3499	W/M	42	28.13	0.06.72	149	0.48%
DISEASES OF THE RESPIRATORY SYSTEM	4200-4299	W/F	448	400.58	0.06.48	112	0.54%
PNEUMONIA & INFLUENZA	4600-5199	B/M	166	140.49	0.05.53	118	0.93%
DISEASES OF GALLBLADDER & BILIARY TRACT	5740-5769	W/M	246	202.65	0.09.87	121	0.08%
DISEASES OF PANCREAS	5770-5779	W/M	24	14.41	0.06.04	167	0.70%
DISEASES OF URINARY SYSTEM	5800-5999	B/M	9	3.85	0.06.49	234	?? 0.54% ??
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	155	127.83	0.05.97	121	0.73%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	W/M	229	130.75	0.78.34	175	<.01%
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY	7970-7999	B/M	254	200.49	0.18.03	127	<.01%
HOMICIDE & LEGAL INTERVENTION	9600-9780	W/M	46	28.25	0.11.45	163	0.04%

OCCUPATIONAL GROUP OF DATA PROCESSING RELATED OCCUPATIONS CENSUS CODES=064,229,385,525,304,308,309

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
MN OF LYMPHATIC & HEMATOPOIETIC TISSUE	2000-2089	W/F	14	6.95	0.06.43	201	0.56%
MN OTHER LYMPHATIC & HISTIOCYTIC TISSUE	2020-2029	W/F	7	1.82	0.12.27	385	?? 0.02% ??
HEREDITARY & DEGENERATIVE DISEASE OF CNS	3300-3379	W/M	6	1.12	0.17.55	536	?? <.01% ??

OCCUPATIONAL GROUP OF PHOTOGRAPHY RELATED OCCUPATIONS CENSUS CODES=189,735,774

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/F	7	2.58	0.06.42	271	?? 0.56% ??
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/F	7	2.50	0.06.84	280	?? 0.45% ??
MN OF GENITOURINARY ORGANS	1790-1899	W/M	18	9.74	0.06.44	185	0.56%
OTHER & ILL-DEFINED HEART DISEASE	4200-4299	W/M	44	28.55	0.08.80	154	0.15%

OCCUPATIONAL GROUP OF PAINTING OCCUPATIONS CENSUS CODES=579,759,789

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
MN RESPIRATORY & INTRATHORACIC ORGANS	1600-1659	W/M	154	124.52	0.07.52	124	0.30%
MN TRACHEA, BRONCHUS AND LUNG	1620-1629	W/M	148	119.22	0.07.45	124	0.32%
DISEASES OF THE RESPIRATORY SYSTEM	4600-5199	W/M	171	139.16	0.07.90	123	0.25%
CHRONIC OBSTRUCTIVE PULMONARY DISEASES	4900-4969	W/M	96	66.67	0.13.20	144	0.01%
OTHER & UNSPECIFIED C.O.P.D.	4940-4969	W/M	73	52.13	0.08.34	140	0.19%
ACCIDENTAL FALLS	8800-8880, 9293	W/M	17	8.68	0.07.19	196	0.37%

RACE-SEX SPECIFIC ASSOCIATIONS BETWEEN OCCUPATION AND UNDERLYING CAUSE OF DEATH  
(PROBABILITY 1.0% OR LESS) PENNSYLVANIA 1983 - 1985

CAUSE OF DEATH GROUP OF:	ICD-9 CODES OF:	RACE & SEX	OBSERVED DEATHS	EXPECTED DEATHS	MHS CHI-SQ	AGE-STD PMR	EXCEEDANCE PROBABILITY
OCCUPATIONAL GROUP OF GLASS WORKERS							
DISEASES OF THE DIGESTIVE SYSTEM	5200-5799	W/M	10	3.44	011.12	291	? ? 0.04% ??
OCCUPATIONAL GROUP OF WOODWORKING OCCUPATIONS							
MN RECTUM, RECTOSIGMOID JUCT. & ANUS	1540-1548	W/M	30	18.77	006.30	160	0.60%
MENTAL DISORDERS	2900-3199	B/M	7	2.11	009.37	332	? ? 0.11% ??
DISEASES OF PANCREAS	5770-5779	W/M	11	4.20	009.71	262	? ? 0.09% ??
ACCIDENTAL IMPACT WITH OBJECTS	9160-9180	W/M	8	3.12	006.31	256	? ? 0.60% ??
ACCIDENTS CAUSED BY FIREARM MISSILE	9220-9229	W/M	6	1.53	010.60	392	? ? 0.06% ??
ACCIDENTS CAUSED BY ELECTRIC CURRENT	9250-9259	W/M	6	1.48	011.32	405	? ? 0.04% ??

CFNSUS CODES=589.677

CFNSUS CODES=554.567.569.656-659.726-733

A P P E N D I C E S



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF HEALTH  
VITAL RECORDS  
CERTIFICATE OF DEATH  
(Physician)

H106 143 REV. 12/81

STATE FILE NO

Name of Decedent (First, Middle, Last)		Sex	Date of death (Mo., Day, Yr.)
Age last birth (Mo., Day, Yr.)		7	3
Race - (e.g. White, Black, American Indian, etc.)		County of birth	City, Boro, or Twp. of birth
5A. City, Boro, or Twp. of death		6C	6D
5B. Date of death (Mo., Day, Yr.)		If hosp or inst. indicate DOA, O.P.E.R. or inpatient (Specify)	
7A. Decedent's Mailing Address (Street or RFD No.) (City or Town) (State) (Zip Code)		Surviving Spouse (If wife, give maiden name)	
9. Citizen of what country? (If dual citizenship, list all)		Marital Status	
10. Social Security Number		10	
11. Where did decedent actually live? (City, Boro, or Twp.) (State) (Zip Code)		11A. Kind of business or industry	
12. Was decedent ever in U.S. Armed Forces? (Yes <input type="checkbox"/> No <input type="checkbox"/> )		11B. (If dual citizenship, list all)	
13. Decedent has been declared dead in actual life? (Yes <input type="checkbox"/> No <input type="checkbox"/> )		11C. (If dual citizenship, list all)	
14. Father's name (First, Middle, Last)		11D. Mother's maiden name (First, Middle, Last)	
15. Informant's name (Type or Print) (First, Middle, Last)		11E. (City or Town) (State) (Zip Code)	
16. Informant's Mailing Address (Street or RFD No.) (City, Boro, or Twp.) (State) (Zip Code)		11F. Location (City, Boro, or Twp.) (State)	
17. Name of cemetery or crematory		11G. Name and address of funeral establishment	
18. Burial <input type="checkbox"/> Removal <input type="checkbox"/> Other <input type="checkbox"/>		11H. Date received by regular	
19. Signature of funeral director and license number		11I. Date of death (Mo., Day, Yr.)	
20. Registrar's Signature		11J. Hour of death (AM or PM)	
21. To the best of my knowledge, death occurred at the time, date and place and due to the cause(s) stated		11K. Name and Address of Certifier (Physician, Medical Examiner or Coroner) (Print or Type)	
22. Signature and Date Signed (Mo., Day, Yr.)		11L. IMMEDIATE CAUSE:	
23. Name and Address of Certifier (Physician, Medical Examiner or Coroner) (Print or Type)		11M. (A) Due to, or as a consequence of	
24. (A) Due to, or as a consequence of		11N. (B) Due to, or as a consequence of	
25. (B) Due to, or as a consequence of		11O. (C) Other Significant Conditions - Conditions contributing to death but not related to cause given in Part I (a)	
26. (C) Other Significant Conditions - Conditions contributing to death but not related to cause given in Part I (a)		11P. Interval between onset and death	
27. (D) Interval between onset and death		11Q. Interval between onset and death	
28. (E) Interval between onset and death		11R. Interval between onset and death	
29. (F) Interval between onset and death		11S. Autopsy (Yes <input type="checkbox"/> No <input type="checkbox"/> )	
30. (G) Interval between onset and death		11T. Was case referred to Medical Examiner or Coroner? (Yes <input type="checkbox"/> No <input type="checkbox"/> )	
31. (H) Interval between onset and death		11U. Describe how injury occurred	
32. (I) Interval between onset and death		11V. Date of Injury (Mo., Day, Yr.)	
33. (J) Interval between onset and death		11W. Hour of Injury (AM or PM)	
34. (K) Interval between onset and death		11X. Place of Injury (At home, farm, street, etc.)	
35. (L) Interval between onset and death		11Y. Location (Street or RFD No.) (City, Boro, or Twp.) (State)	
36. (M) Interval between onset and death		11Z. (State)	

Type or Print in Permanent Blue or Black Ink

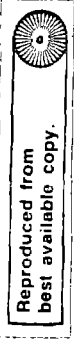
DECEDENT

PARENTS

DISPOSITION

CERTIFIER

Conditions If Any Which Gave Rise To Immediate Cause Setting The Underlying Cause Last CAUSE OF DEATH



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## AUTOMATED CLASSIFICATION OF MEDICAL ENTITIES

Description

The Automated Classification of Medical Entities, commonly known as ACME, or all condition coding, has proved to be an effective alternative to the traditional clerical process previously employed in classifying the underlying cause of death. Input preparation provides codes for every entity in the cause of death certification, thereby providing data on multiple causes of death. By utilizing the capabilities of the computer, this system has opened up new avenues for studying causal relationships not previously available to statisticians and other health professionals.

The International Classification of Diseases (ICD), used in the ACME system, is both a standardized nomenclature for the statistical classification of disease entities and a set of rules for the assignment of diagnostic expressions to specific categories within that nomenclature. ACME's approach in adapting the ICD to multicause use is to retain the nomenclature, while modifying its code assignment rules.

The ACME system applies the same rules for selecting the underlying cause of death, developed by the National Center for Health Statistics, as applied manually by a nosologist; however, under this system, the computer consistently applies the same criteria, thus eliminating human error in this step of the process. Through reference to stored "decision tables" containing data on ICD codes as they relate to specific rules, the computer will consistently arrive at the same conclusion given the same set of circumstances.

Basically, ACME checks the condition codes on death certificates for validity and automatically assigns the correct underlying cause of death.

Usefulness and Advantages

The applications of multiple cause data can be very useful to both the producers and users of mortality data. Examples for the potential use include facilitating research work on death causes, enabling States to prepare tabular data, and indexing deaths from the multiple cause perspective.

Establishment of the ACME system provides several achievements in the collection of multiple cause data which include:

- 1) an Automated Classification of Diseases Manual which standardizes the statistical coding of diseases.
- 2) an automatic method of selecting the underlying cause of death.
- 3) a foundation for a multiple cause program by codifying all conditions reported on the record.

ACME also allows for the coding of injury conditions (i.e. fracture ribs) when in the underlying cause of death coding system, the injury conditions were not noted.

The ACME rules for coding multiple causes by and large constitute a complete general system for assuring the retention of all relevant multicause information originally furnished by the certifier.

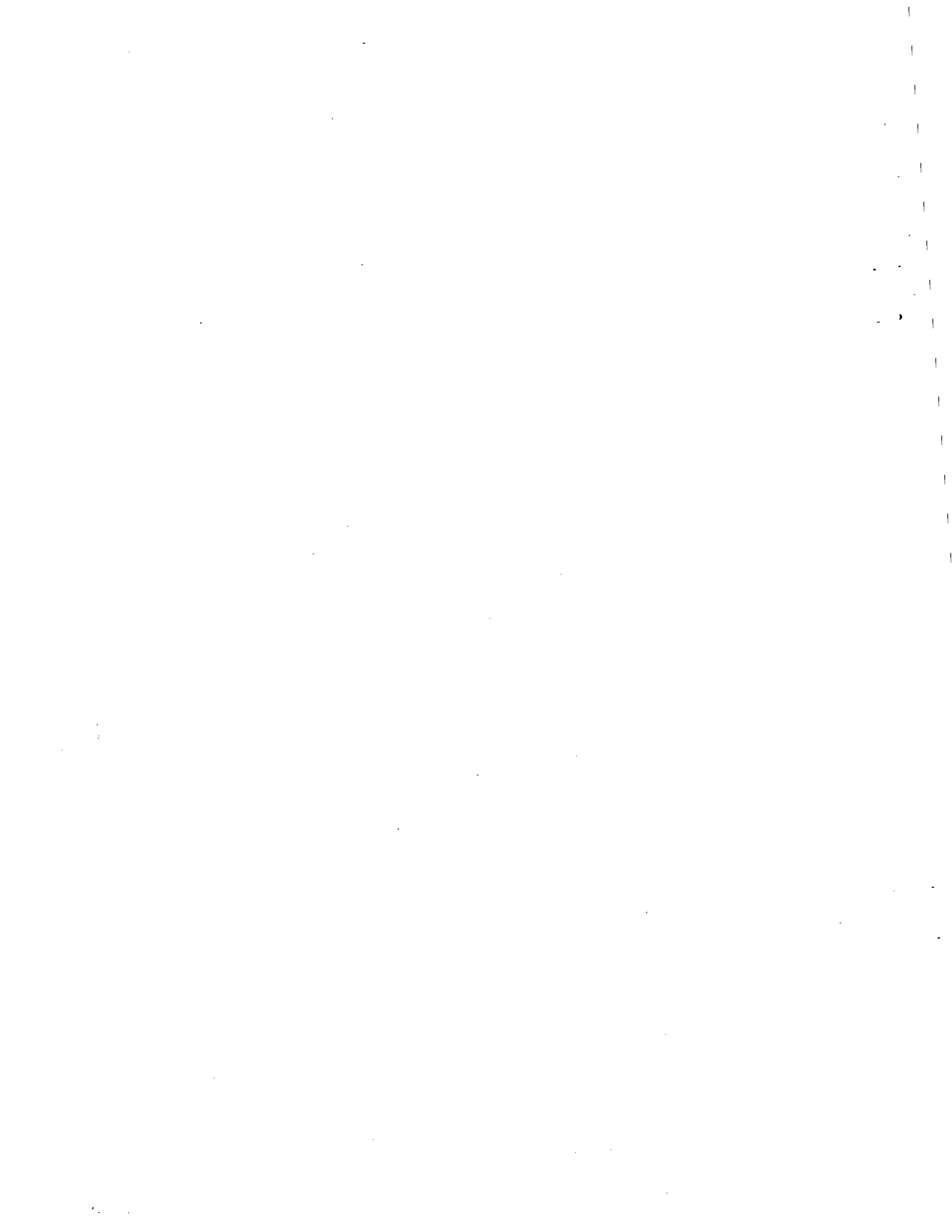
## APPENDIX A.

Some advantages of the ACME/multiple cause of death coding system are listed below:

- 1) provides information on condition prevalence as opposed to condition selection as the underlying cause of death.
- 2) provides more information on the patterns of death conditions listed on a death record that show the association among conditions, the etiological relationships and correlations and causality.
- 3) allows replication of full medical certification and provides for evaluation of certification process.
- 4) provides a mechanism for consistent selection of underlying cause codes, and helps evaluate the rules for assigning the underlying cause of death.

This system will also be helpful in studying chronic diseases such as diabetes, bronchitis and alcoholism, which are frequently ignored in current mortality reporting systems.

In conclusion, ACME standardizes the method of determining the underlying cause of death, while allowing replication of the full medical certification. Additionally, ACME provides greater control over the process of coding the underlying cause of death.



## APPENDIX B.

## Industrial Classification System

Equivalent numeric codes follow the alphabetic codes. Either code may be used, depending on the processing method. Numbers in parentheses following the industry categories are the SIC definitions. The abbreviation "pt" means "part" and "n.e.c." means "not elsewhere classified."

Industry code	Industry category	Industry code	Industry category
<b>AGRICULTURE, FORESTRY, AND FISHERIES</b>		<b>MANUFACTURING—Con.</b>	
A (010)	Agricultural production, crops (01)	<b>Nondurable Goods—Con.</b>	
011	Agricultural production, livestock (02)	<b>Paper and allied products</b>	
020	Agricultural services, except horticultural (07, except 078)	160	Pulp, paper, and paperboard mills (261-263, 266)
021	Horticultural services (078)	161	Miscellaneous paper and pulp products (264)
030	Forestry (08)	162	Paperboard containers and boxes (265)
031	Fishing, hunting, and trapping (09)	<b>Printing, publishing, and allied industries</b>	
<b>MINING</b>		C (171)	Newspaper publishing and printing (271)
040	Metal mining (10)	172	Printing, publishing, and allied industries, except newspapers (272-279)
041	Coal mining (11, 12)	<b>Chemicals and allied products</b>	
042	Crude petroleum and natural gas extraction (13)	180	Plastics, synthetics, and resins (282)
050	Nonmetallic mining and quarrying, except fuel (14)	181	Drugs (283)
<b>B (060) CONSTRUCTION (15, 16, 17)</b>		182	Soaps and cosmetics (284)
<b>MANUFACTURING</b>		190	Paints, varnishes, and related products (285)
<b>Nondurable Goods</b>		191	Agricultural chemicals (287)
<b>Food and kindred products</b>		192	Industrial and miscellaneous chemicals (281, 286, 289)
100	Meat products (201)	<b>Petroleum and coal products</b>	
101	Dairy products (202)	200	Petroleum refining (291)
102	Canned and preserved fruits and vegetables (203)	201	Miscellaneous petroleum and coal products (295, 299)
110	Grain mill products (204)	<b>Rubber and miscellaneous plastics products</b>	
111	Bakery products (205)	210	Tires and inner tubes (301)
112	Sugar and confectionery products (206)	211	Other rubber products, and plastics footwear and belting (302-304, 306)
120	Beverage industries (208)	212	Miscellaneous plastics products (307)
121	Miscellaneous food preparations and kindred products (207, 209)	<b>Leather and leather products</b>	
122	Not specified food industries	220	Leather tanning and finishing (311)
130	Tobacco manufactures (21)	221	Footwear, except rubber and plastic (313, 314)
<b>Textile mill products</b>		222	Leather products, except footwear (315-317, 319)
132	Knitting mills (225)	<b>Durable Goods</b>	
140	Dyeing and finishing textiles, except wool and knit goods (226)	<b>Lumber and wood products, except furniture</b>	
141	Floor coverings, except hard surface (227)	230	Logging (241)
142	Yarn, thread, and fabric mills (228, 221-224)	231	Sawmills, planing mills, and millwork (242, 243)
150	Miscellaneous textile mill products (229)	232	Wood buildings and mobile homes (245)
<b>Apparel and other finished textile products</b>		241	Miscellaneous wood products (244, 249)
151	Apparel and accessories, except knit (231-238)	242	Furniture and fixtures (25)
152	Miscellaneous fabricated textile products (239)	<b>Stone, clay, glass, and concrete products</b>	
		250	Glass and glass products (321-323)
		251	Cement, concrete, gypsum, and plaster products (324, 327)
		252	Structural clay products (325)
		261	Pottery and related products (326)
		262	Miscellaneous nonmetallic mineral and stone products (328, 329)

## Industrial Classification System

Industry code	Industry category	Industry code	Industry category
	<b>MANUFACTURING—Con. Durable Goods—Con.</b>		<b>TRANSPORTATION, COMMUNICATIONS, AND OTHER PUBLIC UTILITIES</b>
	<b>Metal industries</b>		<b>Transportation</b>
270	Blast furnaces, steelworks, rolling and finishing mills (331)	400	Railroads (40)
271	Iron and steel foundries (332)	401	Bus service and urban transit (41, except 412)
272	Primary aluminum industries (3334, pt 334, 3353, 3355, 3361)	402	Taxicab service (412)
280	Other primary metal industries (3331-3333, 3339, pt 334, 3351, 3356, 3357, 3362, 3369, 339)	410	Trucking service (421, 423)
281	Cutlery, hand tools, and other hardware (342)	411	Warehousing and storage (422)
282	Fabricated structural metal products (344)	412	U.S. Postal Service (43)
290	Screw machine products (345)	420	Water transportation (44)
291	Metal forgings and stampings (346)	421	Air transportation (45)
292	Ordnance (348)	422	Pipe lines, except natural gas (46)
300	Miscellaneous fabricated metal products (341, 343, 347, 349)	432	Services incidental to transportation (47)
301	Not specified metal industries		<b>Communications</b>
	<b>Machinery, except electrical</b>	440	Radio and television broadcasting (483)
310	Engines and turbines (351)	441	Telephone (wire and radio) (481)
311	Farm machinery and equipment (352)	442	Telegraph and miscellaneous communication services (482, 489)
312	Construction and material handling machines (353)		<b>Utilities and sanitary services</b>
320	Metalworking machinery (354)	460	Electric light and power (491)
321	Office and accounting machines (357, except 3573)	461	Gas and steam supply systems (492, 496)
322	Electronic computing equipment (3573)	462	Electric and gas, and other combinations (493)
331	Machinery, except electrical, n.e.c. (355, 356, 358, 359)	470	Water supply and irrigation (494, 497)
332	Not specified machinery	471	Sanitary services (495)
	<b>Electrical machinery, equipment, and supplies</b>	472	Not specified utilities
340	Household appliances (363)		<b>WHOLESALE TRADE</b>
341	Radio, TV, and communication equipment (365, 366)	500	<b>Durable Goods</b>
342	Electrical machinery, equipment, and supplies, n.e.c. (361, 362, 364, 367, 369)	501	Motor vehicles and equipment (501)
350	Not specified electrical machinery, equipment, and supplies	502	Furniture and home furnishings (502)
	<b>Transportation equipment</b>	502	Lumber and construction materials (503)
351	Motor vehicles and motor vehicle equipment (371)	510	Sporting goods, toys, and hobby goods (504)
352	Aircraft and parts (372)	511	Metals and minerals, except petroleum (505)
360	Ship and boat building and repairing (373)	512	Electrical goods (506)
361	Railroad locomotives and equipment (374)	521	Hardware, plumbing and heating supplies (507)
362	Guided missiles, space vehicles, and parts (376)	522	Not specified electrical and hardware products
370	Cycles and miscellaneous transportation equipment (375, 379)	530	Machinery, equipment, and supplies (508)
	<b>Professional and photographic equipment, and watches</b>	531	Scrap and waste materials (5093)
371	Scientific and controlling instruments (381, 382)	532	Miscellaneous wholesale, durable goods (5094-5099)
372	Optical and health services supplies (383, 384, 385)		<b>Nondurable Goods</b>
380	Photographic equipment and supplies (386)	540	Paper and paper products (511)
381	Watches, clocks, and clockwork operated devices (387)	541	Drugs, chemicals, and allied products (512, 516)
382	Not specified professional equipment	542	Apparel, fabrics, and notions (513)
390	Toys, amusement, and sporting goods (394)	550	Groceries and related products (514)
391	Miscellaneous manufacturing industries (39 exc. 394)	551	Farm products—raw materials (515)
392	Not specified manufacturing industries	552	Petroleum products (517)
		560	Alcoholic beverages (518)
		561	Farm supplies (5191)
		562	Miscellaneous wholesale, nondurable goods (5194, 5198-5199)
		571	Not specified wholesale trade



## APPENDIX B.

## Industrial Classification System

Industry code	Industry category	Industry code	Industry category
<b>RETAIL TRADE</b>		<b>BUSINESS AND REPAIR SERVICES—Con.</b>	
580	Lumber and building material retailing (521, 523)	730	Commercial research, development, and testing labs (7391, 7397)
581	Hardware stores (525)	731	Personnel supply services (736)
582	Retail nurseries and garden stores (526)	732	Business management and consulting services (7392)
590	Mobile home dealers (527)	740	Computer and data processing services (737)
D (591)	Department stores (531)	741	Detective and protective services (7393)
592	Variety stores (533)	742	Business services, n.e.c. (732, 733, 735, 7394, 7395, 7396, 7399)
600	Miscellaneous general merchandise stores (539)	750	Automotive services, except repair (751, 752, 754)
E (601)	Grocery stores (541)	751	Automotive repair shops (753)
602	Dairy products stores (545)	752	Electrical repair shops (762, 7694)
610	Retail bakeries (546)	760	Miscellaneous repair services (763, 764, 7692, 7699)
611	Food stores, n.e.c. (542, 543, 544, 549)		
612	Motor vehicle dealers (551, 552)		
620	Auto and home supply stores (553)		
621	Gasoline service stations (554)		
622	Miscellaneous vehicle dealers (555, 556, 557, 559)		
630	Apparel and accessory stores, except shoe (56, except 566)	J (761)	Private households (88)
631	Shoe stores (566)	762	Hotels and motels (701)
632	Furniture and home furnishings stores (571)	770	Lodging places, except hotels and motels (702, 703, 704)
640	Household appliances, TV, and radio stores (572, 573)	771	Laundry, cleaning, and garment services (721)
F (641)	Eating and drinking places (58)	772	Beauty shops (723)
642	Drug stores (591)	780	Barber shops (724)
650	Liquor stores (592)	781	Funeral service and crematories (726)
651	Sporting goods, bicycles, and hobby stores (5941, 5945, 5946)	782	Shoe repair shops (725)
652	Book and stationery stores (5942, 5943)	790	Dressmaking shops (pt 729)
660	Jewelry stores (5944)	791	Miscellaneous personal services (722, pt 729)
661	Sewing, needlework, and piece goods stores (5949)		
662	Mail order houses (5961)		
670	Vending machine operators (5962)		
671	Direct selling establishments (5963)		
672	Fuel and ice dealers (598)	800	Theaters and motion pictures (78, 792)
681	Retail florists (5992)	801	Bowling alleys, billiard and pool parlors (793)
682	Miscellaneous retail stores (593, 5947, 5948, 5993, 5994, 5999)	802	Miscellaneous entertainment and recreation services (791, 794, 799)
691	Not specified retail trade		
<b>FINANCE, INSURANCE, AND REAL ESTATE</b>		<b>ENTERTAINMENT AND RECREATION SERVICES</b>	
G (700)	Banking (60)		
701	Savings and loan associations (612)		
702	Credit agencies, n.e.c. (61, except 612)		
710	Security, commodity brokerage, and investment companies (62, 67)		
H (711)	Insurance (63, 64)		
712	Real estate, including real estate-insurance-law offices (65, 66)		
<b>BUSINESS AND REPAIR SERVICES</b>		<b>PROFESSIONAL AND RELATED SERVICES</b>	
721	Advertising (731)	812	Offices of physicians (801, 803)
722	Services to dwellings and other buildings (734)	820	Offices of dentists (802)
		821	Offices of chiropractors (8041)
		822	Offices of optometrists (8042)
		830	Offices of health practitioners, n.e.c. (8049)
		K (831)	Hospitals (806)
		832	Nursing and personal care facilities (805)
		840	Health services, n.e.c. (807, 808, 809)
		841	Legal services (81)
		L (842)	Elementary and secondary schools (821)
		M (850)	Colleges and universities (822)
		851	Business, trade, and vocational schools (824)
		852	Libraries (823)
		860	Educational services, n.e.c. (829)
		861	Job training and vocational rehabilitation services (833)
		862	Child day care services (835)

## Industrial Classification System

Industry code	Industry category	Industry code	Industry category
<b>PROFESSIONAL AND RELATED SERVICES—Con.</b>		<b>PUBLIC ADMINISTRATION—Con.</b>	
870	Residential care facilities, without nursing (836)	910	Justice, public order, and safety (92)
871	Social services, n.e.c. (832, 839)	921	Public finance, taxation, and monetary policy (93)
872	Museums, art galleries, and zoos (84)	922	Administration of human resources programs (94)
880	Religious organizations (866)	930	Administration of environmental quality and housing programs (95)
881	Membership organizations (861-865, 869)	931	Administration of economic programs (96)
882	Engineering, architectural, and surveying services (891)	932	National security and international affairs (97)
890	Accounting, auditing, and bookkeeping services (893)		
891	Noncommercial educational and scientific research (892)		
892	Miscellaneous professional and related services (899)		
<b>PUBLIC ADMINISTRATION</b>		990	<b>INDUSTRY NOT REPORTED<sup>1</sup></b>
900	Executive and legislative offices (911-913)		
901	General government, n.e.c. (919)		

<sup>1</sup> Code used when not-reported cases are not allocated.

## APPENDIX B.

## Occupational Classification System

Equivalent numeric codes follow the alphabetic code. Either code may be used, depending on the processing method. Numbers in parentheses following the occupation categories are the 1980 Standard Occupational Classification code equivalents. The abbreviation "pt" means "part" and "n.e.c." means "not elsewhere classified."

Occupation code	Occupation category	Occupation code	Occupation category
	<b>MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS</b>		<b>MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS—Con.</b>
	<b>Executive, Administrative, and Managerial Occupations</b>		<b>Professional Specialty Occupations—Con.</b>
003	Legislators (111)	048	Chemical engineers (1626)
004	Chief executives and general administrators, public administration (112)	049	Nuclear engineers (1627)
005	Administrators and officials, public administration (1132-1139)	053	Civil engineers (1628)
006	Administrators, protective services (1131)	054	Agricultural engineers (1632)
007	Financial managers (122)	055	Electrical and electronic engineers (1633, 1636)
008	Personnel and labor relations managers (123)	056	Industrial engineers (1634)
009	Purchasing managers (124)	057	Mechanical engineers (1635)
013	Managers, marketing, advertising, and public relations (125)	058	Marine engineers and naval architects (1637)
014	Administrators, education and related fields (128)	059	Engineers, n.e.c. (1639)
015	Managers, medicine and health (131)	063	Surveyors and mapping scientists (164)
016	Managers, properties and real estate (1353)		Mathematical and computer scientists
017	Postmasters and mail superintendents (1344)	064	Computer systems analysts and scientists (171)
018	Funeral directors (pt 1359)	065	Operations and systems researchers and analysts (172)
019	Managers and administrators, n.e.c. (121, 126, 127, 132-139, except 1344, 1353, pt 1359)	066	Actuaries (1732)
	Management related occupations	067	Statisticians (1733)
023	Accountants and auditors (1412)	068	Mathematical scientists, n.e.c. (1739)
024	Underwriters (1414)		Natural scientists
025	Other financial officers (1415, 1419)	069	Physicists and astronomers (1842, 1843)
026	Management analysts (142)	073	Chemists, except biochemists (1845)
027	Personnel, training, and labor relations specialists (143)	074	Atmospheric and space scientists (1846)
028	Purchasing agents and buyers, farm products (1443)	075	Geologists and geodesists (1847)
029	Buyers, wholesale and retail trade, except farm products (1442)	076	Physical scientists, n.e.c. (1849)
033	Purchasing agents and buyers, n.e.c. (1449)	077	Agricultural and food scientists (1853)
034	Business and promotion agents (145)	078	Biological and life scientists (1854)
035	Construction inspectors (1472)	079	Forestry and conservation scientists (1852)
036	Inspectors and compliance officers, exc. construction (1473)	083	Medical scientists (1855)
037	Management related occupations, n.e.c. (149)		Health diagnosing occupations
	<b>Professional Specialty Occupations</b>	084	Physicians (261)
	<b>Engineers, architects, and surveyors</b>	085	Dentists (262)
043	Architects (161)	086	Veterinarians (27)
	Engineers	087	Optometrists (281)
044	Aerospace engineers (1622)	088	Podiatrists (283)
045	Metallurgical and materials engineers (1623)	089	Health diagnosing practitioners, n.e.c. (289)
046	Mining engineers (1624)		Health assessment and treating occupations
047	Petroleum engineers (1625)	095	Registered nurses (29)
		096	Pharmacists (301)
		097	Dietitians (302)
			Therapists
		098	Inhalation therapists (3031)
		099	Occupational therapists (3032)
		103	Physical therapists (3033)
		104	Speech therapists (3034)
		105	Therapists, n.e.c. (3039)



## Occupational Classification System

Occupation code	Occupation category	Occupation code	Occupation category
<b>MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS—Con.</b>		<b>MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS—Con.</b>	
Professional Specialty Occupations—Con.		Professional Specialty Occupations—Con.	
Health assessment and treating occupations—Con.		Social, recreation, and religious workers	
106	Physicians' assistants (304)	174	Social workers (2032)
Teachers, postsecondary		175	Recreation workers (2033)
113	Earth, environmental, and marine science teachers (2212)	176	Clergy (2042)
114	Biological science teachers (2213)	177	Religious workers, n.e.c. (2049)
115	Chemistry teachers (2214)	178	Lawyers and judges
116	Physics teachers (2215)	179	Lawyers (211)
117	Natural science teachers, n.e.c. (2216)		Judges (212)
118	Psychology teachers (2217)	183	Writers, artists, entertainers, and athletes
119	Economics teachers (2218)	184	Authors (321)
123	History teachers (2222)	185	Technical writers (398)
124	Political science teachers (2223)	186	Designers (322)
125	Sociology teachers (2224)	187	Musicians and composers (323)
126	Social science teachers, n.e.c. (2225)	188	Actors and directors (324)
127	Engineering teachers (2226)		Painters, sculptors, craft-artists, and artist printmakers (325)
128	Mathematical science teachers (2227)	189	Photographers (326)
129	Computer science teachers (2228)	193	Dancers (327)
133	Medical science teachers (2231)	194	Artists, performers, and related workers, n.e.c. (328, 329)
134	Health specialties teachers (2232)	195	Editors and reporters (331)
135	Business, commerce, and marketing teachers (2233)	197	Public relations specialists (332)
136	Agriculture and forestry teachers (2234)	198	Announcers (333)
137	Art, drama, and music teachers (2235)	199	Athletes (34)
138	Physical education teachers (2236)		
139	Education teachers (2237)		
143	English teachers (2238)		
144	Foreign language teachers (2242)		
145	Law teachers (2243)		
146	Social work teachers (2244)		
147	Theology teachers (2245)		
148	Trade and industrial teachers (2246)		
149	Home economics teachers (2247)		
153	Teachers, postsecondary, n.e.c. (2249)	203	<b>TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS</b>
151	Postsecondary teachers, subject not specified	204	Technicians and Related Support Occupations
Teachers, except postsecondary		205	Health technologists and technicians
155	Teachers, prekindergarten and kindergarten (231)	206	Clinical laboratory technologists and technicians (362)
N (156)	Teachers, elementary school (232)	207	Dental hygienists (363)
P (157)	Teachers, secondary school (233)	208	Health record technologists and technicians (364)
158	Teachers, special education (235)		Radiologic technicians (365)
159	Teachers, n.e.c. (236, 239)		Licensed practical nurses (366)
163	Counselors, educational and vocational (24)		Health technologists and technicians, n.e.c. (369)
Librarians, archivists, and curators			Technologists and technicians, except health
164	Librarians (251)	213	Engineering and related technologists and technicians
165	Archivists and curators (252)	214	Electrical and electronic technicians (3711)
Social scientists and urban planners		215	Industrial engineering technicians (3712)
166	Economists (1912)	216	Mechanical engineering technicians (3713)
167	Psychologists (1915)	217	Engineering technicians, n.e.c. (3719)
168	Sociologists (1916)	218	Drafting occupations (372)
169	Social scientists, n.e.c. (1913, 1914, 1919)		Surveying and mapping technicians (373)
173	Urban planners (192)	223	Science technicians
		224	Biological technicians (382)
		225	Chemical technicians (3831)
			Science technicians, n.e.c. (3832, 3833, 384, 389)

## APPENDIX B.

## Occupational Classification System

Occupation code	Occupation category	Occupation code	Occupation category
<b>TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.</b>		<b>TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.</b>	
<b>Technicians and Related Support Occupations—Con.</b>		<b>Administrative Support Occupations, Including Clerical—Con.</b>	
	Technicians, except health, engineering, and science		Supervisors, administrative support occupations—Con.
226	Airplane pilots and navigators (825)		Supervisors; distribution, scheduling, and adjusting clerks (4522, 4524-4528)
227	Air traffic controllers (392)	307	Computer equipment operators
228	Broadcast equipment operators (393)		Computer operators (4612)
229	Computer programmers (3971, 3972)		Peripheral equipment operators (4613)
233	Tool programmers, numerical control (3974)		Secretaries, stenographers, and typists
234	Legal assistants (396)	308	Secretaries (4622)
235	Technicians, n.e.c. (399)	309	Stenographers (4623)
			Typists (4624)
	<b>Sales Occupations</b>	R (313)	Information clerks
		314	Interviewers (4642)
243	Supervisors and proprietors, sales occupations (40)	315	Hotel clerks (4643)
	Sales representatives, finance and business services		Transportation ticket and reservation agents (4644)
253	Insurance sales occupations (4122)	316	Receptionists (4645)
254	Real estate sales occupations (4123)	317	Information clerks, n.e.c. (4649)
255	Securities and financial services sales occupations (4124)	318	Records processing occupations, except financial
256	Advertising and related sales occupations (4153)	319	Classified-ad clerks (4662)
257	Sales occupations, other business services (4152)	323	Correspondence clerks (4663)
	Sales representatives, commodities except retail	325	Order clerks (4664)
258	Sales engineers (421)	326	Personnel clerks, except payroll and timekeeping (4692)
259	Sales representatives, mining, manufacturing, and wholesale (423, 424)	327	Library clerks (4694)
	Sales workers, retail and personal services	328	File clerks (4696)
263	Sales workers, motor vehicles and boats (4342, 4344)	329	Records clerks (4699)
264	Sales workers, apparel (4346)		Financial records processing occupations
265	Sales workers, shoes (4351)	335	Bookkeepers, accounting, and auditing clerks (4712)
266	Sales workers, furniture and home furnishings (4348)	336	Payroll and timekeeping clerks (4713)
267	Sales workers; radio, television, hi-fi, and appliances (4343, 4352)	S (337)	Billing clerks (4715)
268	Sales workers, hardware and building supplies (4353)	338	Cost and rate clerks (4716)
269	Sales workers, parts (4367)	339	Billing, posting, and calculating machine operators (4718)
274	Sales workers, other commodities (4345, 4347, 4354, 4356, 4359, 4362, 4369)	343	Duplicating, mail and other office machine operators
275	Sales counter clerks (4363)	344	Duplicating machine operators (4722)
Q (276)	Cashiers (4364)		Mail preparing and paper handling machine operators (4723)
277	Street and door-to-door sales workers (4366)	345	Office machine operators, n.e.c. (4729)
278	News vendors (4365)	346	Communications equipment operators
	Sales related occupations	347	Telephone operators (4732)
283	Demonstrators, promoters and models, sales (445)		Telegraphers (4733)
284	Auctioneers (447)	348	Communications equipment operators, n.e.c. (4739)
285	Sales support occupations, n.e.c. (444, 446, 449)	349	Mail and message distributing occupations
		353	Postal clerks, exc. mail carriers (4742)
	<b>Administrative Support Occupations, Including Clerical</b>	354	Mail carriers, postal service (4743)
	Supervisors, administrative support occupations	355	Mail clerks, exc. postal service (4744)
303	Supervisors, general office (4511, 4513-4519, 4529)	356	Messengers (4745)
304	Supervisors, computer equipment operators (4512)	357	Material recording, scheduling, and distributing clerks, n.e.c.
305	Supervisors, financial records processing (4521)		Dispatchers (4751)
306	Chief communications operators (4523)	359	Production coordinators (4752)
		363	

## Occupational Classification System

Occupation code	Occupation category	Occupation code	Occupation category
<b>TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.</b>		<b>SERVICE OCCUPATIONS—Con.</b>	
<b>Administrative Support Occupations, Including Clerical—Con.</b>		<b>Protective Service Occupations—Con.</b>	
	Material recording, scheduling, and distributing clerks, n.e.c.—Con.	425	Guards
364	Traffic, shipping, and receiving clerks (4753)	426	Crossing guards (5142)
365	Stock and inventory clerks (4754)	427	Guards and police, exc. public service (5144)
366	Meter readers (4755)		Protective service occupations, n.e.c. (5149)
368	Weighers, measurers, and checkers (4756)	<b>Service Occupations, Except Protective and Household</b>	
369	Samplers (4757)	433	Food preparation and service occupations
373	Expediteurs (4758)		Supervisors, food preparation and service occupations (5211)
374	Material recording, scheduling, and distributing clerks, n.e.c. (4759)	434	Bartenders (5212)
	Adjusters and investigators	U (435)	Waiters and waitresses (5213)
375	Insurance adjusters, examiners, and investigators (4782)	436	Cooks, except short order (5214)
376	Investigators and adjusters, except insurance (4783)	437	Short-order cooks (5215)
377	Eligibility clerks, social welfare (4784)	438	Food counter, fountain and related occupations (5216)
378	Bill and account collectors (4786)	439	Kitchen workers, food preparation (5217)
	Miscellaneous administrative support occupations	443	Waiters'/waitresses' assistants (5218)
379	General office clerks (463)	444	Miscellaneous food preparation occupations (5219)
383	Bank tellers (4791)		Health service occupations
384	Proofreaders (4792)	445	Dental assistants (5232)
385	Data-entry keyers (4793)	446	Health aides, except nursing (5233)
386	Statistical clerks (4794)	447	Nursing aides, orderlies, and attendants (5236)
387	Teachers' aides (4795)		Cleaning and building service occupations, except household
389	Administrative support occupations, n.e.c. (4787, 4799)	448	Supervisors, cleaning and building service workers (5241)
		449	Maids and housemen (5242, 5249)
		V (453)	Janitors and cleaners (5244)
		454	Elevator operators (5245)
		455	Pest control occupations (5246)
			Personal service occupations
403	Launderers and ironers (503)	456	Supervisors, personal service occupations (5251)
404	Cooks, private household (504)	457	Barbers (5252)
405	Housekeepers and butlers (505)	458	Hairdressers and cosmetologists (5253)
406	Child care workers, private household (506)	459	Attendants, amusement and recreation facilities (5254)
T (407)	Private household cleaners and servants (502, 507, 509)	463	Guides (5255)
		464	Ushers (5256)
		465	Public transportation attendants (5257)
		466	Baggage porters and bellhops (5262)
		467	Welfare service aides (5263)
		468	Child care workers, except private household (5264)
		469	Personal service occupations, n.e.c. (5258, 5269)
			<b>FARMING, FORESTRY, AND FISHING OCCUPATIONS</b>
			Farm operators and managers
		W (473)	Farmers, except horticultural (5512-5514)
		474	Horticultural specialty farmers (5515)
		475	Managers, farms, except horticultural (5522-5524)
		476	Managers, horticultural specialty farms (5525)

## Occupational Classification System

Occupation code	Occupation category	Occupation code	Occupation category
<b>FARMING, FORESTRY, AND FISHING OCCUPATIONS—Con.</b>		<b>PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS—Con.</b>	
Other agricultural and related occupations		Mechanics and repairers—Con.	
Farm occupations, except managerial		Mechanics and repairers, except supervisors—Con.	
477	Supervisors, farm workers (5611)		Miscellaneous mechanics and repairers
479	Farm workers (5612-5617)		Camera, watch, and musical instrument repairers (6171, 6172)
483	Marine life cultivation workers (5618)	535	Locksmiths and safe repairers (6173)
484	Nursery workers (5619)		Office machine repairers (6174)
	Related agricultural occupations	536	Mechanical controls and valve repairers (6175)
485	Supervisors, related agricultural occupations (5621)	538	Elevator installers and repairers (6176)
486	Groundskeepers and gardeners, except farm (5622)	539	Millwrights (6178)
487	Animal caretakers, except farm (5624)	543	Specified mechanics and repairers, n.e.c. (6177, 6179)
488	Graders and sorters, agricultural products (5625)	544	Not specified mechanics and repairers
489	Inspectors, agricultural products (5627)	547	
	Forestry and logging occupations	549	
494	Supervisors, forestry and logging workers (571)		Construction trades
495	Forestry workers, except logging (572)		Supervisors, construction occupations
496	Timber cutting and logging occupations (573, 579)	553	Supervisors; brickmasons, stonemasons, and tile setters (6312)
	Fishers, hunters, and trappers		Supervisors, carpenters and related workers (6313)
497	Captains and other officers, fishing vessels (pt 8241)	554	Supervisors, electricians and power transmission installers (6314)
498	Fishers (583)	555	Supervisors; painters, paperhangers, and plasterers (6315)
499	Hunters and trappers (584)	556	Supervisors; plumbers, pipefitters, and steamfitters (6316)
	<b>PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS</b>	557	Supervisors, n.e.c. (6311, 6318)
	Mechanics and repairers	558	Construction trades, except supervisors
503	Supervisors, mechanics and repairers (60)		Brickmasons and stonemasons (pt 6412, pt 6413)
	Mechanics and repairers, except supervisors	563	Brickmason and stonemason apprentices (pt 6412, pt 6413)
	Vehicle and mobile equipment mechanics and repairers	564	Tile setters, hard and soft (6414, pt 6462)
X (505)	Automobile mechanics (pt 6111)	565	Carpet installers (pt 6462)
506	Automobile mechanic apprentices (pt 6111)	566	Carpenters (pt 6422)
507	Bus, truck, and stationary engine mechanics (6112)	Y (567)	Carpenter apprentices (pt 6422)
508	Aircraft engine mechanics (6113)	569	Drywall installers (6424)
509	Small engine repairers (6114)	573	Electricians (pt 6432)
514	Automobile body and related repairers (6115)	575	Electrician apprentices (pt 6432)
515	Aircraft mechanics, exc. engine (6116)	576	Electrical power installers and repairers (6433)
516	Heavy equipment mechanics (6117)	577	Painters, construction and maintenance (6442)
517	Farm equipment mechanics (6118)	579	Paperhangers (6443)
518	Industrial machinery repairers (613)	583	Plasterers (6444)
519	Machinery maintenance occupations (614)	584	Plumbers, pipefitters, and steamfitters (pt 645)
	Electrical and electronic equipment repairers	585	Plumber, pipefitter, and steamfitter apprentices (pt 645)
523	Electronic repairers, communications and industrial equipment (6151, 6153, 6155)	587	Concrete and terrazzo finishers (6463)
525	Data processing equipment repairers (6154)	588	Glaziers (6464)
526	Household appliance and power tool repairers (6156)	589	Insulation workers (6465)
527	Telephone line installers and repairers (6157)	593	Paving, surfacing, and tamping equipment operators (6466)
529	Telephone installers and repairers (6158)	594	Roofers (6468)
533	Miscellaneous electrical and electronic equipment repairers (6152, 6159)	595	Sheetmetal duct installers (6472)
534	Heating, air conditioning, and refrigeration mechanics (616)	596	Structural metal workers (6473)
		597	Drillers, earth (6474)
		598	

## Occupational Classification System

Occupation code	Occupation category	Occupation code	Occupation category
<b>PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS—Con.</b>		<b>PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS—Con.</b>	
Construction trades—Con.		Precision production occupations—Con.	
Construction trades, except supervisors—Con.		Precision workers, assorted materials—Con.	
599	Construction trades, n.e.c. (6467, 6475, 6476, 6479)	684	Miscellaneous precision workers, n.e.c. (6869)
Extractive occupations		Precision food production occupations	
613	Supervisors, extractive occupations (632)	686	Butchers and meat cutters (6871)
614	Drillers, oil well (652)	687	Bakers (6872)
615	Explosives workers (653)	688	Food batchmakers (6873, 6879)
616	Mining machine operators (654)	Precision inspectors, testers, and related workers	
617	Mining occupations, n.e.c. (656)	689	Inspectors, testers, and graders (6881, 828)
Precision production occupations		693	Adjusters and calibrators (6882)
623	Supervisors, production occupations (67, 71)	Plant and system operators	
Precision metal working occupations		694	Water and sewage treatment plant operators (691)
634	Tool and die makers (pt 6811)	695	Power plant operators (pt 693)
635	Tool and die maker apprentices (pt 6811)	696	Stationary engineers (pt 693, 7668)
636	Precision assemblers, metal (6812)	699	Miscellaneous plant and system operators (692, 694, 695, 696)
637	Machinists (pt 6813)	<b>OPERATORS, FABRICATORS, AND LABORERS</b>	
639	Machinist apprentices (pt 6813)	<b>Machine Operators, Assemblers, and Inspectors</b>	
643	Boilermakers (6814)	Machine operators and tenders, except precision	
644	Precision grinders, fitters, and tool sharpeners (6816)	Metalworking and plastic working machine operators	
645	Patternmakers and model makers, metal (6817)	703	Lathe and turning machine set-up operators (7312)
646	Lay-out workers (6821)	704	Lathe and turning machine operators (7512)
647	Precious stones and metals workers (jewelers) (6822, 6866)	705	Milling and planing machine operators (7313, 7513)
649	Engravers, metal (6823)	706	Punching and stamping press machine operators (7314, 7317, 7514, 7517)
653	Sheet metal workers (pt 6824)	707	Rolling machine operators (7316, 7516)
654	Sheet metal worker apprentices (pt 6824)	708	Drilling and boring machine operators (7318, 7518)
655	Miscellaneous precision metal workers (6829)	709	Grinding, abrading, buffing, and polishing machine operators (7322, 7324, 7522)
Precision woodworking occupations		713	Forging machine operators (7319, 7519)
656	Patternmakers and model makers, wood (6831)	714	Numerical control machine operators (7326)
657	Cabinet makers and bench carpenters (6832)	715	Miscellaneous metal, plastic, stone, and glass working machine operators (7329, 7529)
658	Furniture and wood finishers (6835)	717	Fabricating machine operators, n.e.c. (7339, 7539)
659	Miscellaneous precision woodworkers (6839)	Metal and plastic processing machine operators	
Precision textile, apparel, and furnishings machine workers		719	Molding and casting machine operators (7315, 7342, 7515, 7542)
666	Dressmakers (pt 6852, pt 7752)	723	Metal plating machine operators (7343, 7543)
667	Tailors (pt 6852)	724	Heat treating equipment operators (7344, 7544)
668	Upholsterers (6853)	725	Miscellaneous metal and plastic processing machine operators (7349, 7549)
669	Shoe repairers (6854)	Woodworking machine operators	
673	Apparel and fabric patternmakers (6856)	726	Wood lathe, routing, and planing machine operators (7431, 7432, 7631, 7632)
674	Miscellaneous precision apparel and fabric workers (6859, pt 7752)	727	Sawing machine operators (7433, 7633)
Precision workers, assorted materials		728	Shaping and joining machine operators (7435, 7635)
675	Hand molders and shapers, except jewelers (6861)		
676	Patternmakers, lay-out workers, and cutters (6862)		
677	Optical goods workers (6864, pt 7477, pt 7677)		
678	Dental laboratory and medical appliance technicians (6865)		
679	Bookbinders (6844)		
683	Electrical and electronic equipment assemblers (6867)		

## Occupational Classification System

Occupation code	Occupation category	Occupation code	Occupation category
	<b>OPERATORS, FABRICATORS, AND LABORERS—Con.</b>		<b>OPERATORS, FABRICATORS, AND LABORERS—Con.</b>
	<b>Machine Operators, Assemblers, and Inspectors—Con.</b>		<b>Machine operators, Assemblers, and Inspectors—Con.</b>
	<b>Machine operators and tenders, except precision—Con.</b>		<b>Machine operators and tenders, except precision—Con.</b>
	Woodworking machine operators—Con.		Machine operators, assorted materials—Con.
729	Nailing and tacking machine operators (7636)	777	Miscellaneous machine operators, n.e.c. (pt 7479, 7665, 7679)
733	Miscellaneous woodworking machine operators (7434, 7439, 7634, 7639)	779	Machine operators, not specified
	Printing machine operators		Fabricators, assemblers, and hand working occupations
734	Printing machine operators (7443, 7643)	783	Welders and cutters (7332, 7532, 7714)
735	Photoengravers and lithographers (6842, 7444, 7644)	784	Solderers and brazers (7333, 7533, 7717)
736	Typesetters and compositors (6841, 7642)	785	Assemblers (772, 774)
737	Miscellaneous printing machine operators (6849, 7449, 7649)	786	Hand cutting and trimming occupations (7753)
	Textile, apparel, and furnishings machine operators	787	Hand molding, casting, and forming occupations (7754, 7755)
738	Winding and twisting machine operators (7451, 7651)	789	Hand painting, coating, and decorating occupations (7756)
739	Knitting, looping, taping, and weaving machine operators (7452, 7652)	793	Hand engraving and printing occupations (7757)
743	Textile cutting machine operators (7654)	794	Hand grinding and polishing occupations (7758)
744	Textile sewing machine operators (7655)	795	Miscellaneous hand working occupations (7759)
745	Shoe machine operators (7656)	796	Production inspectors, testers, samplers, and weighers
747	Pressing machine operators (7657)	797	Production inspectors, checkers, and examiners (782, 787)
748	Laundering and dry cleaning machine operators (6855, 7658)	798	Production testers (783)
749	Miscellaneous textile machine operators (7459, 7659)	799	Production samplers and weighers (784)
	Machine operators, assorted materials:		Graders and sorters, except agricultural (785)
753	Cementing and gluing machine operators (7661)		<b>Transportation and Material Moving Occupations</b>
754	Packaging and filling machine operators (7462, 7662)		Motor vehicle operators
755	Extruding and forming machine operators (7463, 7663)	803	Supervisors, motor vehicle operators (8111)
756	Mixing and blending machine operators (7664)	Z (804)	Truck drivers, heavy (8212, 8213)
757	Separating, filtering, and clarifying machine operators (7476, 7666, 7676)	805	Truck drivers, light (8214)
758	Compressing and compacting machine operators (7467, 7667)	806	Driver-sales workers (8218)
759	Painting and paint spraying machine operators (7669)	808	Bus drivers (8215)
763	Roasting and baking machine operators, food (7472, 7672)	809	Taxicab drivers and chauffeurs (8216)
764	Washing, cleaning, and pickling machine operators (7673)	813	Parking lot attendants (874)
765	Folding machine operators (7474, 7674)	814	Motor transportation occupations, n.e.c. (8219)
766	Furnace, kiln, and oven operators, exc. food (7675)		Transportation occupations, except motor vehicles
768	Crushing and grinding machine operators (pt 7477, pt 7677)	823	Rail transportation occupations
769	Slicing and cutting machine operators (7478, 7678)	824	Railroad conductors and yardmasters (8113)
773	Motion picture projectionists (pt 7479)	825	Locomotive operating occupations (8232)
774	Photographic process machine operators (6863, 6868, 7671)	826	Railroad brake, signal, and switch operators (8233)
		828	Rail vehicle operators, n.e.c. (8239)
			Water transportation occupations
		829	Ship captains and mates, except fishing boats (pt 8241, 8242)
		833	Sailors and deckhands (8243)
		834	Marine engineers (8244)
			Bridge, lock, and lighthouse tenders (8245)
			Material moving equipment operators
		843	Supervisors, material moving equipment operators (812)
		844	Operating engineers (8312)



## Occupational Classification System

Occupation code	Occupation category	Occupation code	Occupation category
	<b>OPERATORS, FABRICATORS, AND LABORERS—Con.</b>		<b>OPERATORS, FABRICATORS, AND LABORERS—Con.</b>
	<b>Transportation and Material Moving Occupations—Con.</b>		<b>Handlers, Equipment Cleaners, Helpers, and Laborers—Con.</b>
	<b>Material moving equipment operators—Con.</b>	869	Construction laborers (871)
845	Longshore equipment operators (8313)	873	Production helpers (861, 862)
848	Hoist and winch operators (8314)		Freight, stock, and material handlers
849	Crane and tower operators (8315)	875	Garbage collectors (8722)
853	Excavating and loading machine operators (8316)	876	Stevedores (8723)
855	Grader, dozer, and scraper operators (8317)	877	Stock handlers and baggers (8724)
856	Industrial truck and tractor equipment operators (8318)	878	Machine feeders and offbearers (8725)
859	Miscellaneous material moving equipment operators (8319)	883	Freight, stock, and material handlers, n.e.c. (8726)
	<b>Handlers, Equipment Cleaners, Helpers, and Laborers</b>	885	Garage and service station related occupations (873)
863	Supervisors; handlers, equipment cleaners, and laborers, n.e.c. (85)	887	Vehicle washers and equipment cleaners (875)
864	Helpers, mechanics and repairers (863)	888	Hand packers and packagers (8761)
	<b>Helpers, construction and extractive occupations</b>	889	Laborers, except construction (8769)
865	Helpers, construction trades (8641-8645, 8648)	999	<b>OCCUPATION NOT REPORTED<sup>1</sup></b>
866	Helpers, surveyor (8646)		
867	Helpers, extractive occupations (865)		

<sup>1</sup> Code used when not-reported cases are not allocated.

CAUSE OF DEATH GROUPINGS FOR PMR ANALYSIS

INTERNATIONAL CLASSIFICATION OF DISEASES CODES (ICD-9)	LITERAL UNDERLYING CAUSE OF DEATH GROUP
0010-1399	INFECTIOUS AND PARASITIC DISEASES
0010-0099	INTESTINAL INFECTIOUS DISEASES
0100-0189, 1370-1374	TUBERCULOSIS
0380-0389	SEPTICEMIA
0200-0370, 0390-0419	OTHER BACTERIAL DISEASES
0450-0799, 1380-1389, 1390, 1391	OTHER VIRAL DISEASES
1100-1180	MYCOSES
1350	SARCOIDOSIS
0800-0889	RICKETSIOSES/OTHER ARTHOPOD-BORN DISEASES
0900-1049, 1200-1349, 1360-1369, 1398	OTHER & UNSPECIFIED INFECTIOUS/PARASITIC
1400-1499	MN LIP, ORAL CAVITY AND PHARYNX
1500-1599	MN DIGESTIVE ORGANS AND PERITONEUM
1500-1509	MN ESOPHAGUS
1510-1519	MN STOMACH
1520-1529	MN SMALL INTESTINE
1530-1539	MN COLON
1540-1548	MN RECTUM, RECTOSIGMOID JUCT. & ANUS
1550-1552	MN LIVER AND INTRAHEPATIC BILE DUCTS
1560-1569	MN GALLBLADDER & EXTRAHEPATIC BILE DUCT
1570-1579	MN PANCREAS
1580-1599	MN OTHER & ILL-DEFINED DIGESTIVE ORGAN
1600-1659	MN RESPIRATORY & INTRATHORACIC ORGANS
1600-1609	MN NASAL CAVITIES, MIDDLE EAR & SINUSES
1610-1619	MN LARYNX
1620-1629	MN TRACHEA, BRONCHUS AND LUNG
1630-1659	MN OTHER RESPIRATORY&INTRATHORACIC SITES
1580-1589, 1630-1639	MN PLEURA AND PERITONEUM
1700-1739	MN BONE, CONNECTIVE TISSUE, AND SKIN
1700-1709	MN BONE AND ARTICULAR CARTILAGE
1710-1719	MN CONNECTIVE AND OTHER SOFT TISSUE
1720-1739	MN SKIN
1740-1759	MN BREAST
1790-1899	MN OF GENITOURINARY ORGANS
1790-1879	MN GENITAL ORGANS
1790-1799, 1820-1828	MN UTERUS (EXCEPT CERVIX)
1800-1809	MN CERVIX
1830	MN OVARY
1850	MN PROSTATE
1810, 1832-1849, 1860-1879	MN OTHER & UNSPECIFIED GENITAL ORGANS
1880-1899	MN URINARY ORGANS
1880-1889	MN BLADDER
1890	MN KIDNEY
1891-1899	MN OTHER & UNSPECIFIED URINARY ORGANS
1900-1909	MN EYE

INTERNATIONAL CLASSIFICATION  
OF DISEASES CODES (ICD-9)

LITERAL UNDERLYING CAUSE OF DEATH GROUP

1910-1929, 2250-2259, 2375-2379	NEOPLASMS (ALL) OF NERVOUS SYSTEM
1910-1919	MN BRAIN
1920-1929	MN OTHER & UNSPECIFIED NERVOUS SYSTEM
1930-1949	MN ENDOCRINE GLANDS & RELATED STRUCTURES
1930	MN OF THYROID GLAND
1940	MN SUPRARENAL GLAND
1941-1949	MN OTHER ENDOCRINE GLANDS & STRUCTURES
1950-1959, 1990-1999	MN ILL-DEFINED AND UNSPECIFIED SITE
2000-2089	MN OF LYMPHATIC & HEMATOPOIETIC TISSUE
2000-2008	LYMPHOSARCOMA AND RETICULOSARCOMA
2010-2019	HODGKINS DISEASE
2020-2029	MN OTHER LYMPHOID & HISTIOCYTIC TISSUE
2030-2038	MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE
2040-2089	LEUKEMIAS (ALL)
2040-2049	LYMPHOID LEUKEMIA
2050-2059	MYELOID LEUKEMIA
2060-2078	ALL OTHER SPECIFIED LEUKEMIAS
2080-2089	LEUKEMIA OF UNSPECIFIED CELL TYPE
2100-2399	NEOPLASM OF UNCERTAIN BEHAVIOR OR BENIGN
2510-2599, 2400-2499	ENDOCRINE DISORDERS (EX. DIABETES)
2400-2469	DISORDERS OF THYROID GLAND
2500-2509	DIABETES MELLITUS
2510-2599	OTHER ENDOCRINE DISORDERS
2600-2799	NUTRITIONAL, METABOLIC & IMMUNE DISORDER
2600-2699	NUTRITIONAL DEFICIENCIES
2700-2788	METABOLIC DISEASES
2790-2799	DISORDERS INVOLVING THE IMMUNE MECHANISM
2800-2899	DISEASES OF BLOOD & BLOOD FORMING ORGANS
2800-2859	ANEMIAS
2860-2869	COAGULATION DEFECTS
2870-2879	PURPURA AND OTHER HEMORRHAGIC CONDITIONS
2880-2889	DISEASES OF WHITE BLOOD CELLS
2890-2899	OTHER BLOOD DISEASES
2900-3199	MENTAL DISORDERS
2900-2909, 2930-3029, 3060-3190	MENTAL DISORDER EX. ALCOHOL/DRUG RELATED
2910-2919, 2920-2929, 3030-3059	MENTAL DISORDER DUE TO DRUG/ALCOHOL USE
3200-3899	DISEASES OF NERVOUS SYSTEM & SENSE ORGAN
3200-3260	INFLAMMATORY DISEASES OF THE CNS
3300-3379	HEREDITARY & DEGENERATIVE DISEASE OF CNS
3400-3499	OTHER DISORDERS OF THE CNS
3500-3599	DISORDERS OF PERIPHERAL NERVOUS SYSTEM
3600-3899	DISORDERS OF EYE & EAR
3900-3989	RHEUMATIC FEVER & RHEUMATIC HEART DISEASE
4010-4059	HYPERTENSIVE DISEASE
4010-4019, 4030-4039	HYPERTENSION

INTERNATIONAL CLASSIFICATION  
OF DISEASES CODES (ICD-9)

LITERAL UNDERLYING CAUSE OF DEATH GROUP

INTERNATIONAL CLASSIFICATION OF DISEASES CODES (ICD-9)	LITERAL UNDERLYING CAUSE OF DEATH GROUP
3900-3989, 4020-4029, 4040-4299	HEART DISEASE
4100-4149	ISCHEMIC HEART DISEASE
4100	ACUTE MYOCARDIAL INFARCTION
4110	OTHER ACUTE/SUBACUTE ISCHEMIC HEART DIS.
4120-4149	CHRONIC ISCHEMIC HEART DISEASE
4150-4179	DISEASES OF PULMONARY CIRCULATION
4200-4299	OTHER & ILL-DEFINED HEART DISEASE
4300-4380	CEREBROVASCULAR DISEASE
4400-4489	DISEASES OF ARTERY/ARTERIOLE/CAPILLARY
4510-4599	OTHER DISORDERS CIR. SYSTEM/VEINS&LYMPH
4600-5199	DISEASES OF THE RESPIRATORY SYSTEM
4600-4789	DISEASES OF UPPER RESPIRATORY TRACT
4800-4879	PNEUMONIA & INFLUENZA
4900-4969	CHRONIC OBSTRUCTIVE PULMONARY DISEASES
4900-4919	BRONCHITIS
4920-4929	EMPHYSEMA
4930-4939	ASTHMA
4940-4969	OTHER & UNSPECIFIED C.O.P.D.
5000	COALWORKERS PNEUMOCONIOSIS
5010-5050	PNEUMOCONIOSIS (EXCEPT COAL)
5010	ASBESTOSIS
5020	PNEUMOCONIOSIS DUE TO OTHER SILICATES
5030-5050	OTHER & UNSPECIFIED PNEUMOCONIOSIS
5070-5078	PNEUMONITIS DUE TO SOLIDS & LIQUIDS
5060-5069, 5080-5889	LUNG DIS. DUE TO OTHER & UNSPEC. AGENTS
5100-5199	OTHER DISEASES OF RESPIRATORY SYSTEM
5200-5799	DISEASES OF THE DIGESTIVE SYSTEM
5200-5299	DISEASES OF ORAL CAVITY & JAWS
5300-5309	DISEASES OF ESOPHAGUS
5310-5339	PEPTIC ULCERS
5340-5379	OTHER DISORDERS OF STOMACH & DUODENUM
5400-5430	APPENDICITIS
5500-5539	HERNIA OF ABDOMINAL CAVITY
5550-5580	NONINFECTIVE ENTERITIS & COLITIS
5600-5699	OTHER DISEASES INTESTINES & PERITONEUM
5700-5709, 5714-5739	DISEASES OF LIVER (EX. ALCOHOL RELATED)
5710-5713	CHRONIC LIVER DISEASE (ALCOHOL RELATED)
5740-5769	DISORDERS OF GALLEBLADDER & BILIARY TRACT
5770-5779	DISEASES OF PANCREAS
5780-5789	GASTROINTESTINAL HEMORRHAGE
5790-5799	INTESTINAL MALABSORPTION
5800-5999	DISEASES OF URINARY SYSTEM
5800-5899	NEPHRITIS NEPHROTIC SYNDROME & NEPHROSIS
5900-5999	OTHER DISEASES OF THE URINARY SYSTEM
6000-6299	DISORDERS OF GENITAL ORGANS

INTERNATIONAL CLASSIFICATION  
OF DISEASES CODES (ICD-9)

LITERAL UNDERLYING CAUSE OF DEATH GROUP

6300-6769  
6800-7099  
6800-6869  
6900-6989  
7000-7099  
7100-7399  
7400-7599  
7800-7969  
7970-7999  
8000-8489, 9290-9291  
8000-8079  
8100-8259, 9290  
8300-8389  
8400-8459  
8500-8699, 9292  
8700-8799, 9300-9499  
8800-8880, 9293  
8900-8990, 9294  
9000-9090, 9295  
9000-9009  
9010-9019  
9020-9090, 9295  
9100-9109  
9110-9139  
9160-9180  
9190-9199  
9220-9229  
9230-9239  
9240-9249  
9250-9259  
9260-9289, 9298, 9299,  
9200-9219, 9140, 9150  
9500-9590  
9600-9780  
9800-9890

COMPLICATIONS OF PREGNANCY & CHILDBIRTH  
DISEASES OF SKIN & SUBCUTANEOUS TISSUE  
INFECTIONS OF SKIN & SUBCUTANEOUS TISSUE  
INFLAMMATION OF SKIN/SUBCUTANEOUS TISSUE  
OTHER DISEASES SKIN/SUBCUTANEOUS TISSUE  
DISEASES OF THE MUSCULOSKELETAL SYSTEM  
CONGENITAL ANOMALIES  
SYMPTOMS/SIGNS/NONSPEC. ABNORMAL FINDING  
ILL-DEFINED & UNKNOWN CAUSE OF MORTALITY  
TRANSPORT ACCIDENTS  
RAILWAY ACCIDENTS  
MOTOR VEHICLE ACCIDENTS  
WATER TRANSPORT ACCIDENTS  
AIR TRANSPORT ACCIDENTS  
ACCIDENTAL POISONINGS  
MEDICAL MISADVENTURES & ADVERSE EFFECTS  
ACCIDENTAL FALLS  
ACCIDENTS CAUSED BY FIRE & FLAMES  
ACCIDENTS DUE TO NATURAL & ENV. FACTORS  
ACCIDENTS DUE TO EXCESSIVE HEAT  
ACCIDENTS DUE TO EXCESSIVE COLD  
ACC.S DUE TO OTHER ENVIRONMENTAL FACTORS  
ACCIDENTAL DROWNING & SUBMERSION  
ACCIDENTAL SUFFOCATION  
ACCIDENTAL IMPACT WITH OBJECTS  
ACCIDENTS CAUSED BY MACHINERY  
ACCIDENTS CAUSED BY FIREARM MISSILE  
ACCIDENTS CAUSED BY EXPLOSIVES  
ACC. DUE TO HOT OR CORROSIVE MATERIAL  
ACCIDENTS CAUSED BY ELECTRIC CURRENT  
  
OTHER & UNSPECIFIED ACCIDENTAL CAUSES  
SUICIDE & SELF-INFLICTED INJURY  
HOMICIDE & LEGAL INTERVENTION  
UNKNOWN IF ACC. OR PURPOSELY INFLICTED

OCCUPATIONAL GROUPINGS FOR PMR ANALYSIS

BUREAU OF CENSUS  
OCCUPATION CODES

LITERAL OCCUPATION GROUP

BUREAU OF CENSUS OCCUPATION CODES	LITERAL OCCUPATION GROUP
003-037	EXEC., ADMIN., & MANAGERIAL OCCUPATIONS
003-005	GOV. EXEC., OFFICIALS & ADMINISTRATORS
006-019	ADMIN. OCC.S (EX. PUBLIC OFFICIALS)
006	ADMINISTRATORS-PROTECTIVE SERVICES
007	FINANCIAL MANAGERS
008	PERSONNEL AND LABOR RELATIONS MGR.S
009	PURCHASING MANAGERS
013	MANAGERS-MKT.ING, ADVERTISING, PUB.REL.
014	ADMINISTRATORS-EDUCATION
015	MANAGERS, MEDICINE AND HEALTH
016	MANAGERS PROPERTY AND REAL ESTATE
017	POSTMASTERS AND MAIL SUPERINTENDENTS
018	FUNERAL DIRECTORS
019	MANAGERS AND ADMINISTRATORS N.E.C.
023-037	MANAGEMENT RELATED OCCUPATIONS
023	ACCOUNTANTS AND AUDITORS
024-025	UNDERWRITERS & OTHER FINIANCIAL OFFICERS
026	MANAGEMENT ANALYSTS
027	PERSONNEL, TRAINING, LABOR REL. OFFICERS
028-033	BUYERS AND PURCHASING AGENTS
034	BUSINESS AND PROMOTION AGENTS
035	CONSTRUCTION INSPECTORS
036	INSPECTORS & COMPLIANCE OFFICERS
037	MGMNT. RELATED OCCUPATIONS, N.E.C.
043-059	ENGINEERS & ARCHITECTS
043	ARCHITECTS
045	METALLURGICAL AND MATERIALS ENGINEERS
046-047	MINING & PETROLEUM ENGINEERS
048	CHEMICAL ENGINEERS
053	CIVIL ENGINEERS
055	ELECTRICAL AND ELECTRONIC ENGINEERS
056	INDUSTRIAL ENGINEERS
057	MECHANICAL ENGINEERS
044, 049, 054, 058, 059	OTHER ENGINEERS & ENGINEERS N.E.C.
064-068	MATHEMATICAL AND COMPUTER SCIENTISTS
069-083	NATURAL SCIENTISTS
073	CHEMISTS
069, 074, 075	EARTH & SPACE SCIENTISTS
077-083	BIOLOGICAL & RELATED SCIENTISTS
084-094	HEALTH DIAGNOSING OCCUPATIONS
084	PHYSICIANS
085	DENTISTS
086-089	OTHER & N.E.C. HEATH DIAGNOSING OCCS.
095-106	HEALTH ASSESSMENT & TREATING OCCUPATIONS
095	REGISTERED NURSES
096	PHARMACISTS

BUREAU OF CENSUS  
OCCUPATION CODES

LITERAL OCCUPATION GROUP

097	DIETITIANS
084-106,203-208,445-447	HEALTH CARE OCCUPATIONS
113-163	INSTRUCTORS, TEACHERS & COUNSELORS (ALL)
113-154	POSTSECONDARY TEACHERS
156	ELEMENTARY SCHOOL TEACHERS
157	SECONDARY SCHOOL TEACHERS
155,158-159,163	OTHER & N.E.C. TEACHERS AND COUNSELORS
164-165	LIBRARIANS, ARCHIVISTS & CURATORS
166-173	SOCIAL SCIENTISTS & URBAN PLANNERS
174-177	SOCIAL, RECREATION, & RELIGIOUS WORKERS
174	SOCIAL WORKERS
176	CLERGY
177	RELIGIOUS WORKERS, N.E.C.
178-179	LAWYERS & JUDGES
183-199	WRITERS, ARTISTS, ENTERTAINERS & ATHLETES
183-184	TECHNICAL WRITERS & AUTHORS
185	DESIGNERS
186	MUSICIANS AND COMPOSERS
187,193,198	ACTORS, DIRECTORS, DANCERS & ANNOUNCERS
188	PAINTERS, SCULPTORS, CRAFT-ARTISTS
189	PHOTOGRAPHERS
194	ARTISTS, PERFORMERS & REL. OCCS. N.E.C.
195	EDITORS AND REPORTERS
197	PUBLIC RELATIONS SPECIALISTS
199	ATHLETES
203-208	HEALTH TECHNOLOGISTS & TECHNICIANS
203-206,208	HEALTH TECHNOLOGISTS & TECH. (EX. LPN)
207	LICENSED PRACTICAL NURSES
213-216	ENGINEERING TECHNICIANS
217	DRAFTING OCCUPATIONS
063,218,866	SURVEYING AND MAPPING OCCUPATIONS
223-225	SCIENCE TECHNICIANS
223	BIOLOGICAL TECHNICIANS
224	CHEMICAL TECHNICIANS
225	SCIENCE TECHNICIANS, N.E.C.
226-235	TECH.S (EX. HEALTH, ENGINEERING, & SCI.)
243-285	SALES OCCUPATIONS
243	SUPERV. AND PROPRIETORS, SALES OCCS.
253-257	SALES REPS, FINANCE & BUSINESS SERVICES
253	INSURANCE SALES OCCUPATIONS
254	REAL ESTATE SALES OCCUPATIONS
255	SECURITIES & FINANCIAL SVC. SALES OCCS.
256	ADVERTISING & RELATED SALES OCCUPATIONS
257	SALES OCCUPATIONS, OTHER BUSINESS SVCS
258-259	SALES REPS, COMMODITIES EXCEPT RETAIL
263-278	SALES WORKERS; RETAIL & PERSONAL SERVICE

BUREAU OF CENSUS  
OCCUPATION CODES

LITERAL OCCUPATION GROUP

263	SALES WORKERS; MOTOR VEHICLES AND BOATS
264-265	SALES WORKERS; APPAREL & SHOE
266-267	SALES WORKERS; FURNITURE & APPLIANCES
268-269	SALES WKRS.; PARTS & BUILDING SUPPLIES
274	SALES WORKERS; OTHER COMMODITIES
275-276	CASHIERS & COUNTER CLERKS
277-278	STREET & DOOR-TO-DOOR SALES WORKERS
283-285	SALES RELATED OCCUPATIONS
303-389	ADMINISTRATIVE SUPPORT OCCUPATIONS
304,308-309	COMPUTER EQUIPMENT OPERATORS
313-315	SECRETARIES, STENOGRAPHERS & TYPISTS
316-323	INFORMATION CLERKS
325-336	RECORDS PROCESSING OCCS (EX. FINANCIAL)
305,337-344	FINANCIAL RECORDS PROCESSING OCCUPATIONS
306,348-353	COMMUNICATIONS EQUIP. OPERATORS
307,354-378	DISTRIBUTING, SCHEDULING, ADJUSTING CLERKS
354-357	MAIL & MESSAGE DISTRIBUTING OCCUPATIONS
354	POSTAL CLERKS (EX. MAIL CARRIERS)
355	MAIL CARRIERS, POSTAL SERVICE
356-357	MAIL CLERKS & MESSENGERS (EX. P.O.)
359-374	MATERIAL RECORDING, SCHEDULING, & DIST.
359	DISPATCHERS
363	PRODUCTION COORDINATORS
364	TRAFFIC, SHIPPING, AND RECEIVING CLERKS
365	STOCK AND INVENTORY CLERKS
366	METER READERS
368-369	SAMPLERS, WEIGHERS, AND CHECKERS
373-374	EXPEDITERS, SCHED. & DIST. CLERKS N.E.C.
375-378	ADJUSTERS & INVESTIGATORS
303,345-347,379-389	MISC. ADMINISTRATIVE SUPPORT OCCUPATIONS
345-347,379	GEN. OFFICE CLERKS & OFFICE MACH. CPRS.
383	BANK TELLERS
384	PROOFREADERS
385	DATA-ENTRY KEYERS
303,386-389	OTHER & N.E.C. ADMIN. SUPPORT OCCS.
403-407	PRIVATE HOUSEHOLD WORKERS
416-417,413	FIREFIGHTING & FIRE PREVENTION OCCS.
414,418-424	LAW ENFORCEMENT OFFICERS, PUBLIC SVC.
414,418	POLICE & DETECTIVES
423	SHERIFFS, BAILIFFS, & OTHER LAW OFFICER
424	CORRECTIONAL INSTITUTION OFFICERS
415,426	SECURITY GUARDS & PRIVATE INVESTIGATORS
425,427	OTHER & N.E.C. PROTECTIVE SERVICE OCCS.
433-444	FOOD PREPARATION & SERVICE OCCUPATIONS
433	SUPERVISORS, FOOD PREP. & SERVICE OCCS.

BUREAU OF CENSUS  
OCCUPATION CODES

LITERAL OCCUPATION GROUP

434	BARTENDERS
443, 435	WAITERS AND WAITRESSES
436	COOKS
437-439, 444	OTHER FOOD PREPARATION OCCUPATIONS
445-447	HEALTH SERVICE AIDES & ASSISTANTS
448-455	CLEANING & BLDG SVC. OCCS (EX. HSHLD.)
448	SUP., CLEANING AND BLDG. SVC. WORKERS
449	MAIDS AND HOUSEMEN
453	JANITORS AND CLEANERS
454	ELEVATOR OPERATORS
455	PEST CONTROL OCCUPATIONS
456-469	PERSONAL SVC. OCCUPATIONS
457	BARBERS
458	HAIRDRESSERS AND COSMETOLOGISTS
459-466	ATTENDANTS; AMUSEMENT, LODGING & TRANS.
467-468	WELFARE SERVICE & CHILD CARE AIDES
469	PERSONAL SERVICE OCCUPATIONS, N.E.C.
473-489	AGRICULTURAL & RELATED OCCUPATIONS
473-476	FARM OPERATORS & MANAGERS
477-484	FARM OCCUPATIONS, EXCEPT MANAGERIAL
485-489	RELATED AGRICULTURAL OCCUPATIONS
494-496	FORESTRY & LOGGING OCCUPATIONS
497-499	FISHERS, HUNTERS, & TRAPPERS
864, 503-549	MECHANICS & REPAIRERS
505-517	VEHICLE & MOBILE EQUIP. MECHANICS
505, 506	AUTOMOBILE MECHANICS
514	AUTOMOBILE BODY AND RELATED REPAIRERS
507-509	ENGINE MECHANICS, EXCEPT AUTOMOBILE
515-517	OTHER MOBILE EQUIPMENT MECHANICS
518-519	INDUSTRIAL MACHINERY MAINT. & REPAIR
523-533	ELECTRICAL & ELECTRONIC REPAIRERS
534	HEATING, A/C, AND REFRIGERATION MECH.
535-549	MISCELLANEOUS MECHANICS & REPAIRERS
544	MILLWRIGHTS
865, 869, 553-599	CONSTRUCTION OCCUPATIONS
553, 563-565	MASONS & TILE FITTERS
554, 567-573	CARPENTERS & RELATED WORKERS
555, 575-577	ELECTRICIANS & POWER INSTALLERS
556, 579-584	PAINTERS, PAPER HANGERS AND PLASTERERS
579	PAINTERS, CONSTRUCTION AND MAINTENANCE
583	PAPERHANGERS
584	PLASTERERS
557, 585-587	PLUMBERS, PIPEFITTERS & STEAMFITTERS
588	CONCRETE AND TERRAZZO FINISHERS
595	ROOFERS

BUREAU OF CENSUS  
OCCUPATION CODES

LITERAL OCCUPATION GROUP

597	STRUCTURAL METAL WORKERS
589-593	GLAZIERS & INSULATION WORKERS
865,869	CONSTRUCTION LABORERS & HELPERS
558,594,596,598-599	OTHER & N.E.C CONSTRUCTION TRADES
867,613-617	EXTRACTIVE OCCUPATIONS
633-699	PRECISION PRODUCTION OCCUPATIONS
633	SUPERVISORS, PRODUCTION OCCUPATIONS
634-655	PRECISION METAL WORKING OCCUPATIONS
634-635	TOOL AND DIE MAKERS
637-638	MACHINISTS
643	BOILERMAKERS
644	PRECISION GRINDERS, FITTERS & SHARPENER
636,645-646	PATTERNMAKER, ASSEMBLERS & LAY-OUT WKRS.
647,649	JEWELERS & ENGRAVERS
653-654	SHEET METAL WORKERS
656-659	PRECISION WOODWORKING OCCUPATIONS
666-674	PRECISION TEXTILE, APPAREL MACHINE WKERS
666	DRESSMAKERS
667	TAILORS
668	UPHOLSTERERS
669	SHOE REPAIRERS
673	APPAREL AND FABRIC PATTERNMAKERS
674	MISC. PRECISION APPAREL & FABRIC WORKERS
675-684	PRECISION WORKERS, ASSORTED MATERIALS
675	HAND MOLDERS AND SHAPERS (EX. JEWELERS)
676	PATTERNMAKERS, LAY-OUT WORKERS, CUTTERS
677	OPTICAL GOODS WORKERS
678	DENTAL LAB. & MEDICAL APPLIANCE TECH.
679	BOOKBINDERS
683	ELECT. & ELECTRONIC EQUIP. ASSEMBLERS
684	MISCELLANEOUS PRECISION WORKERS, N.E.C.
686-688	PRECISION FOOD PRODUCTION OCCUPATIONS
686	BUTCHERS AND MEAT CUTTERS
687	BAKERS
688	FOOD BATCHMAKERS
689-693	PRECISION INSPECTORS & RELATED WORKERS
694-699	PLANT & SYSTEM OPERATORS
694	WATER & SEWAGE TREATMENT PLANT OPERATORS
695	POWER PLANT OPERATORS
696	STATIONARY ENGINEERS
699	MISCELLANEOUS PLANT AND SYSTEM OPERATORS
703-779	MACHINE OPRS & TENDERS (EX. PRECISION)
703-715	METAL & PLASTIC WORKING MACHINE OPRS
703,704	LATHE AND TURNING MACHINE OPERATORS
706	PUNCHING AND STAMPING PRESS MACH. OPRS.

BUREAU OF CENSUS  
OCCUPATION CODES

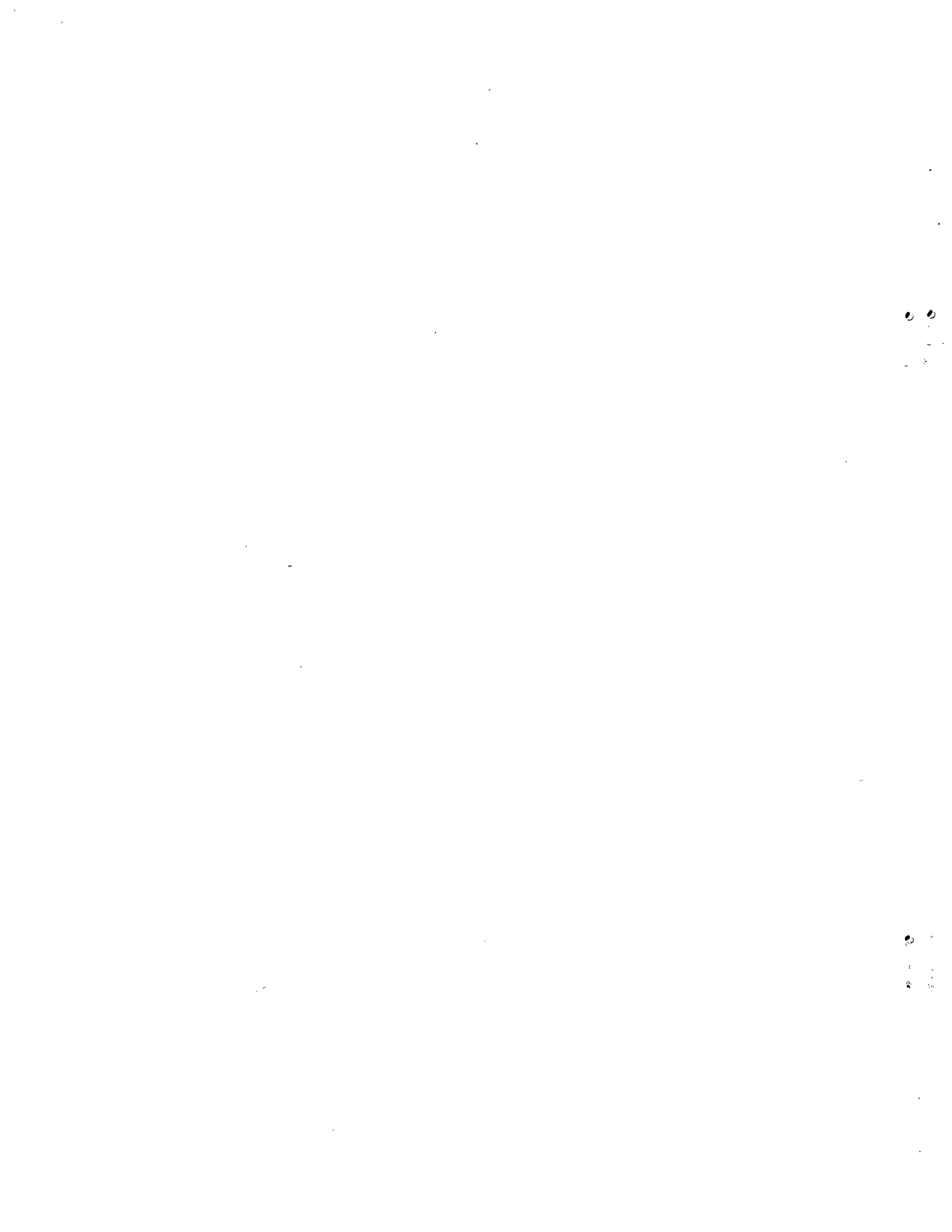
LITERAL OCCUPATION GROUP

707	ROLLING MACHINE OPERATORS
708	DRILLING AND BORING MACHINE OPERATORS
709	GRINDING & POLISHING MACHINE OPERATORS
713	FORGING MACHINE OPERATORS
705,715	MISC. METAL, PLASTIC, GLASS MACH. OPRS.
717	FABRICATING MACHINE OPERATORS, N.E.C.
719-725	METAL & PLASTIC PROCESSING MACHINE OPRS
719	MOLDING AND CASTING MACHINE OPERATORS
723	METAL PLATING MACHINE OPERATORS
724	HEAT TREATING EQUIPMENT OPERATORS
725	MISC. METAL & PLASTIC PROCESSING OPRS.
726-733	WOODWORKING MACHINE OPERATORS
734-737	PRINTING MACHINE OPERATORS
734	PRINTING MACHINE OPERATORS
735	PHOTOENGRAVERS AND LITHOGRAPHERS
736	TYPESETTERS AND COMPOSITORS
737	MISCELLANEOUS PRINTING MACHINE OPERATORS
738-749	TEXTILE, APPAREL & FURNISHING MACH OPRS
738	WINDING AND TWISTING MACHINE OPERATORS
739	KNITTING, TAPING, & WEAVING MACH. OPRS.
744	TEXTILE SEWING MACHINE OPERATORS
745	SHOE MACHINE OPERATORS
747	PRESSING MACHINE OPERATORS
748	LAUNDERING AND DRY CLEANING MACH. OPRS.
743,749	MISCELLANEOUS TEXTILE MACHINE OPERATORS
753-779	MACHINE OPERATORS - ASSORTED MATERIALS
754	PACKAGING AND FILLING MACHINE OPERATORS
756	MIXING AND BLENDING MACHINE OPERATORS
757	SEPARATING & FILTERING MACHINE OPERATORS
759	PAINTING AND PAINT SPRAYING MACH. OPRS.
766	FURNACE, KILN & OVEN OPERATOR (EX. FOOD)
768	CRUSHING AND GRINDING MACHINE OPERATORS
769	SLICING AND CUTTING MACHINE OPERATORS
773	MOTION PICTURE PROJECTIONISTS
774	PHOTOGRAPHIC PROCESS MACHINE OPERATORS
753,755,758,763-765,777	OTHER & N.E.C. MACHINE OPERATORS
779	MACHINE OPERATORS, NOT SPECIFIED
783-795	FABRICATORS, ASSEMBLERS, & HAND WORKING
783	WELDERS AND CUTTERS
785	ASSEMBLERS
787	HAND MOLDING, CASTING, & FORMING OCCS.
789	HAND PAINTING, COATING, DECORATING OCCS.
784,786,793-795	MISCELLANEOUS HAND WORKING OCCUPATIONS
796-799	PROD. INSPECTORS, SAMPLERS & WEIGHERS
803-859	TRANSPORTATION & MATERIAL MOVING OCCS.

BUREAU OF CENSUS  
OCCUPATION CODES

LITERAL OCCUPATION GROUP

803-814	MOTOR VEHICLE OPERATORS
804	TRUCK DRIVERS, HEAVY
805	TRUCK DRIVERS, LIGHT
806	DRIVER-SALES WORKERS
808	BUS DRIVERS
809	TAXI CAB DRIVERS AND CHAUFFEURS
803,813,814	OTHER & N.E.C. MOTOR VEHICLE OPERATORS
823-826	RAIL TRANSPORTATION OCCUPATIONS
823	RAILROAD CONDUCTORS AND YARDMASTERS
824	LOCOMOTIVE OPERATING OCCUPATIONS
825	RAILROAD BRAKE, SIGNAL, AND SWITCH OPRS.
826	RAIL VEHICLE OPERATORS, N.E.C.
828-834	WATER TRANSPORTATION OCCUPATIONS
843-859	MATERIAL MOVING EQUIPMENT OPERATORS
844	OPERATING ENGINEERS
849	CRANE AND TOWER OPERATORS
853-854	EXCAVATING, LOADER, GRADER & DOZER OPRS.
856	INDUSTRIAL TRUCK & TRACTOR EQUIP. OPRS.
843,845,848,859	MISC. MATERIAL MOVING EQUIP. OPERATORS
875-883	FREIGHT, STOCK, & MATERIAL HANDLERS
875	GARBAGE COLLECTORS
876	STEVEDORES
877	STOCK HANDLERS AND BAGGERS
878	MACHINE FEEDERS AND OFFBEARERS
883	FREIGHT, STOCK, & MATERIAL HANDLERS, NEC
863,873,885-889	EQUIP. CLEANERS, PROD. HELPER & LABORER
873	PRODUCTION HELPERS
885	GARAGE AND SERVICE STATION RELATED OCCS.
887	VEHICLE WASHERS AND EQUIPMENT CLEANERS
888	HAND PACKERS AND PACKAGERS
889	LABORERS, EXCEPT CONSTRUCTION
905	ARMED FORCES
914	HOUSEWIFE
915	STUDENT
917	CHILD, DISABLED, NEVER WORKED, INMATE
911,913,989,999	INFORMATION INSUFFICIENT TO ALLOCATE OCC.
064,229,385,525,304,308,309	DATA PROCESSING RELATED OCCUPATIONS
048,073,115,224	CHEMISTRY RELATED OCCUPATIONS
077,078,083,114,223	BIOLOGY RELATED OCCUPATIONS
189,735,774	PHOTOGRAPHY RELATED OCCUPATIONS
579,759,789	PAINTING OCCUPATIONS
589,677	GLASS WORKERS
554,567,569,656-659,726-733	WOODWORKING OCCUPATIONS



INDUSTRY GROUPINGS FOR PMR ANALYSIS

BUREAU OF CENSUS INDUSTRY CODES	LITERAL INDUSTRY GROUPS
010-011	AGRICULTURAL PROD., CROPS & LIVESTOCK
010	AGRICULTURAL PRODUCTION, CROPS
011	AGRICULTURAL PRODUCTION, LIVESTOCK
020-021	AGRICULTURAL & HORTICULTURAL SERVICES
020	AGRICULTURAL SVC.S, EXC. HORTICULTURAL
021	HORTICULTURAL SERVICES
030-031	FORESTRY FISHING, HUNTING, AND TRAPPING
040,042-050	MINERAL EXTRACTION (EX. COAL)
040	METAL MINING
041	COAL MINING
042	CRUDE PETROLEUM & NATURAL GAS EXTRACTION
050	NONMETALLIC MINE & QUARRYING, EXC. FUEL
060	CONSTRUCTION
100-121	FOOD & KINDRED PRODUCTS
100	MEAT PRODUCTS
101	DAIRY PRODUCTS
102	CANNED & PRESERVED FRUITS & VEGETABLES
110	GRAIN MILL PRODUCTS
111	BAKERY PRODUCTS
112	SUGAR AND CONFECTIONERY PRODUCTS
120	BEVERAGE INDUSTRIES
121	MISC. FOOD PREPARATIONS & KINDRED PROD.
122	NOT SPECIFIED FOOD INDUSTRIES
130	TOBACCO MANUFACTURES
132-150	TEXTILE MILL PRODUCTS
132	KNITTING MILLS
140	DYEING & FINISHING TEXTILES, EXC. KNIT
141	FLOOR COVERINGS, EXCEPT HARD SURFACE
142	YARN, THREAD, AND FABRIC MILLS
150	MISCELLANEOUS TEXTILE MILL PRODUCTS
151-152	APPAREL & OTHER FINISHED TEXTILES
151	APPAREL AND ACCESSORIES, EXCEPT KNIT
152	MISC. FABRICATED TEXTILE PRODUCTS
160-162	PAPER & ALLIED PRODUCTS
160	PULP, PAPER, AND PAPERBOARD MILLS
161	MISCELLANEOUS PAPER AND PULP PRODUCTS
162	PAPERBOARD CONTAINERS AND BOXES
171-172	PRINTING, PUBLISHING, & ALLIED IND.
171	NEWSPAPER PUBLISHING AND PRINTING
172	PRINTING, PUBLISHING, EXCEPT NEWSPAPERS
180-192	CHEMICALS & ALLIED PRODUCTS
180	PLASTICS, SYNTHETICS, AND RESINS
181	DRUGS
182	SOAPS AND COSMETICS
190	PAINTS, VARNISHES, AND RELATED PRODUCTS
191,192	INDUSTRIAL AND AGRICULTURAL CHEMICALS
200-201	PETROLEUM & COAL PRODUCTS

BUREAU OF CENSUS  
INDUSTRY CODES

LITERAL INDUSTRY GROUPS

200	PETROLEUM REFINING
201	MISCELLANEOUS PETROLEUM & COAL PRODUCTS
210-212	RUBBER & MISC. PLASTICS PRODUCTS
210	TIRES AND INNER TUBES
211	OTHER RUBBER PROD.S, & FOOTWEAR&BELTING
212	MISCELLANEOUS PLASTICS PRODUCTS
220-222	LEATHER & LEATHER PRODUCTS
220	LEATHER TANNING AND FINISHING
221	FOOTWEAR, EXCEPT RUBBER AND PLASTIC
222	LEATHER PRODUCTS, EXCEPT FOOTWEAR
230-242	LUMBER, WOOD PRODUCTS, AND FURNITURE
230	LOGGING
231	SAWMILLS, PLANING MILLS, AND MILLWORK
232-241	OTHER & MISCELLANEOUS WOOD PRODUCTS
242	FURNITURE AND FIXTURES
250-262	STONE, CLAY, GLASS, & CONCRETE PRODUCTS
250	GLASS AND GLASS PRODUCTS
251	CEMENT, CONCRETE, GYPSUM, PLASTER PROD.
252	STRUCTURAL CLAY PRODUCTS
261	POTTERY AND RELATED PRODUCTS
262	MISC. NONMETALLIC MINERAL & STONE PROD.
270-271	STEELMILLS AND IRON & STEEL FOUNDRIES
270	BLAST FURNACES & STEELMILLS
271	IRON AND STEEL FOUNDRIES
272-280	PRIMARY METAL IND. (EX. IRON & STEEL)
272	PRIMARY ALUMINUM INDUSTRIES
280	OTHER PRIMARY METAL INDUSTRIES
281-301	METAL FABRICATION & N.S. METAL IND.
281	CUTLERY, HAND TOOLS, AND OTHER HARDWARE
282	FABRICATED STRUCTURAL METAL PRODUCTS
290	SCREW MACHINE PRODUCTS
291	METAL FORGINGS AND STAMPINGS
292	ORDNANCE
300	MISCELLANEOUS FABRICATED METAL PRODUCTS
301	NOT SPECIFIED METAL INDUSTRIES
310-332	MACHINERY MFG., (EX. ELECTRICAL)
310	ENGINES AND TURBINES
311	FARM MACHINERY AND EQUIPMENT
312	CONSTRUCTION & MATERIAL HANDLING MACH.
320	METALWORKING MACHINERY
321-322	OFFICE MACHINES & COMPUTING EQUIPMENT
331	MACHINERY, EXCEPT ELECTRICAL, N.E.C.
332	NOT SPECIFIED MACHINERY
340-350	ELECTRICAL MACHINERY, EQUIP. & SUPPLIES
340	HOUSEHOLD APPLIANCES
341	RADIO, TV, AND COMMUNICATION EQUIPMENT
342	ELECT. MACH., EQUIP., & SUPPLIES N.E.C.
350	NOT SPEC. ELECT. MACH., EQUIP., & SPLYS
351-370	TRANSPORTATION EQUIPMENT
351	MOTOR VEHICLES AND MOTOR VEHICLE EQUIP.

BUREAU OF CENSUS  
INDUSTRY CODES

LITERAL INDUSTRY GROUPS

352,362	AIRCRAFT & GUIDED MISSILES AND PARTS
360	SHIP AND BOAT BUILDING AND REPAIRING
361	RAILROAD LOCOMOTIVES AND EQUIPMENT
370	CYCLES AND MISC. TRANSPORTATION EQUIP.
371-382	PROFESSIONAL & PHOTO EQUIPMENT & WATCHES
371	SCIENTIFIC AND CONTROLLING INSTRUMENTS
372	OPTICAL AND HEALTH SERVICES SUPPLIES
380	PHOTOGRAPHIC EQUIPMENT AND SUPPLIES
381	WATCHES, CLOCKS, CLOCKWORK DEVICES
382	NOT SPECIFIED PROFESSIONAL EQUIPMENT
390-392	OTHER & NOT SPECIFIED OR MISC. MFG.
390	TOYS, AMUSEMENT, AND SPORTING GOODS
391	MISCELLANEOUS MANUFACTURING INDUSTRIES
392	NOT SPECIFIED MANUFACTURING INDUSTRIES
400	RAILROADS
401-402,411-432	TRANSPORTATION (EX. RAIL & TRUCKING)
401	BUS SERVICE AND URBAN TRANSIT
402	TAXICAB SERVICE
410	TRUCKING SERVICE
411	WAREHOUSING AND STORAGE
412	U.S. POSTAL SERVICE
420	WATER TRANSPORTATION
421	AIR TRANSPORTATION
422	PIPE LINES, EXCEPT NATURAL GAS
432	SERVICES INCIDENTAL TO TRANSPORTATION
440-442	COMMUNICATIONS
440	RADIO AND TELEVISION BROADCASTING
441	TELEPHONE (WIRE AND RADIO)
442	TELEGRAPH AND MISC. COMMUNICATION SVC.S
460-472	UTILITIES & SANITARY SERVICES
460	ELECTRIC LIGHT AND POWER
461	GAS AND STEAM SUPPLY SYSTEMS
462	ELECTRIC AND GAS, & OTHER COMBINATIONS
470	WATER SUPPLY AND IRRIGATION
471	SANITARY SERVICES
472	NOT SPECIFIED UTILITIES
500-532	WHOLESALE TRADE - DURABLE GOODS
500	MOTOR VEHICLES AND EQUIPMENT
501	FURNITURE AND HOME FURNISHINGS
502	LUMBER AND CONSTRUCTION MATERIALS
511	METALS AND MINERALS, EXCEPT PETROLEUM
512	ELECTRICAL GOODS
521	HARDWARE, PLUMBING AND HEATING SUPPLIES
530	MACHINERY, EQUIPMENT, AND SUPPLIES
531	SCRAP AND WASTE MATERIALS
510,522,532	MISCELLANEOUS WHOLESALE, DURABLE GOODS
540-571	WHOLESALE TRADE - NONDURABLE GOODS
540	PAPER AND PAPER PRODUCTS
541	DRUGS, CHEMICALS, AND ALLIED PRODUCTS
542	APPAREL, FABRICS, AND NOTIONS

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550	GROCERIES AND RELATED PRODUCTS
551	FARM-PRODUCT RAW MATERIALS
552	PETROLEUM PRODUCTS
560	ALCOHOLIC BEVERAGES
561	FARM SUPPLIES
562	MISC. WHOLESALE, NONDURABLE GOODS
571	NOT SPECIFIED WHOLESALE TRADE
580-640, 642-691	RETAIL TRADE
580	LUMBER AND BUILDING MATERIAL RETAILING
581	HARDWARE STORES
582	RETAIL NURSERIES AND GARDEN STORES
591	DEPARTMENT STORES
592	VARIETY STORES
600	MISCELLANEOUS GENERAL MERCHANDISE STORES
601	GROCERY STORES
602	DAIRY PRODUCTS STORES
610	RETAIL BAKERIES
611	FOOD STORES, N.E.C.
612	MOTOR VEHICLE DEALERS
620	AUTO AND HOME SUPPLY STORES
621	GASOLINE SERVICE STATIONS
590, 622	MOBILE HOME & MISC. VEHICLE DEALERS
630	APPAREL & ACCESSORY STORES, EXCEPT SHOE
631	SHOE STORES
632	FURNITURE AND HOME FURNISHINGS STORES
640	HSLD. APPLIANCES, TV, AND RADIO STORES
641	EATING AND DRINKING PLACES
642	DRUG STORES
650	LIQUOR STORES
651	SPORTING GOODS, BICYCLES, & HOBBY STORE
652	BOOK AND STATIONERY STORES
660	JEWELRY STORES
661	SEWING, NEEDLEWORK, & PIECE GOODS STORE
662	MAIL ORDER HOUSES
670	VENDING MACHINE OPERATORS
671	DIRECT SELLING ESTABLISHMENTS
672	FUEL AND ICE DEALERS
681	RETAIL FLORISTS
682	MISCELLANEOUS RETAIL STORES
691	NOT SPECIFIED RETAIL TRADE
700-712	FINANCE, INSURANCE, & REAL ESTATE
700	BANKING
701-702	S & L S AND CREDIT AGENCIES, N.E.C.
710	SECURITY, COMMODITY, INVESTMENT CO.
711	INSURANCE
712	REAL ESTATE, INCLUDE R.E.-INS.-LAW OFF.
721-742, 752-760	BUSINESS & REPAIR SVC. (EX. AUTOMOTIVE)
721	ADVERTISING
722	SERVICES TO DWELLINGS & OTHER BUILDINGS
730	COM. RESEARCH, DEV., & TESTING LABS

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731	PERSONNEL SUPPLY SERVICES
732	BUSINESS MGMT. & CONSULTING SERVICES
740	COMPUTER AND DATA PROCESSING SERVICES
741	DETECTIVE AND PROTECTIVE SERVICES
742	BUSINESS SERVICES, N.E.C.
750-751	AUTOMOTIVE SERVICES & REPAIR
750	AUTOMOTIVE SERVICES, EXCEPT REPAIR
751	AUTOMOTIVE REPAIR SHOPS
752	ELECTRICAL REPAIR SHOPS
760	MISCELLANEOUS REPAIR SERVICES
761	PRIVATE HOUSEHOLDS
762-770	LODGING PLACES
762	HOTELS AND MOTELS
770	LODGING PLACES, EXC. HOTELS AND MOTELS
771	LAUNDRY, CLEANING, AND GARMENT SERVICES
772-780	BEAUTY & BARBER SHOPS
772	BEAUTY SHOPS
780	BARBER SHOPS
781-791	OTHER & MISCELLANEOUS PERSONAL SERVICES
781	FUNERAL SERVICE AND CREMATORIES
782	SHOE REPAIR SHOPS
790	DRESSMAKING SHOPS
791	MISCELLANEOUS PERSONAL SERVICES
800-802	ENTERTAINMENT & RECREATION SERVICES
800	THEATERS AND MOTION PICTURES
801	BOWLING ALLEYS BILLIARD AND POOL PARLORS
802	MISC. ENTERTAINMENT AND REC. SERVICES
812-840	HEALTH CARE SERVICES
812	OFFICES OF PHYSICIANS
820	OFFICES OF DENTISTS
821-830	OFFICES OF OTHER HEALTH PRACTITIONERS
831	HOSPITALS
832	NURSING AND PERSONAL CARE FACILITIES
840	HEALTH SERVICES, N.E.C.
841	LEGAL SERVICES
842-861,872	CULTURAL, EDUCATIONAL & SCIENTIFIC SVC.
842	ELEMENTARY AND SECONDARY SCHOOLS
850	COLLEGES AND UNIVERSITIES
851	BUSINESS, TRADE, AND VOCATIONAL SCHOOLS
852	LIBRARIES
860	EDUCATIONAL SERVICE, N.E.C.
861	JOB TRAINING AND VO. REHAB. SERVICES
862	CHILD DAY CARE SERVICES
870	RESIDENTIAL CARE FACILITIE, W/O NURSING
871	SOCIAL SERVICES, N.E.C.
872	MUSEUMS, ART GALLERIES, AND ZOOS
880-881	RELIGIOUS & MEMBERSHIP ORGANIZATIONS
880	RELIGIOUS ORGANIZATIONS
881	MEMBERSHIP ORGANIZATIONS
882-890	ENGINEERING & ACCOUNTING PROF. SVC.

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LITERAL INDUSTRY GROUPS

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882	ENGINEERING, ARCHITECTURAL, & SURVEYING
890	ACCOUNTING, AUDITING, AND BOOKKEEPING
841, 862-871, 892	OTHER PROFESSIONAL & RELATED SERVICES
891	NONCOMMERCIAL ED. & SCIENTIFIC RESEARCH
892	MISC. PROFESSIONAL AND RELATED SERVICES
900-932	GOVERNMENT OFFICIALS & PUBLIC ADMIN.
900	EXECUTIVE AND LEGISLATIVE OFFICES
901	GENERAL GOVERNMENT, N.E.C.
910	JUSTICE, PUBLIC ORDER, AND SAFETY
921	PUBLIC FINANCE, TAXATION, MONETARY POLICY
922	ADMIN. OF HUMAN RESOURCES PROGRAMS
930	ADMIN. OF ENVIR. QUAL. & HOUSING PROG.
931	ADMINISTRATION OF ECONOMIC PROGRAMS
932	NAT. SECURITY AND INTERNATIONAL AFFAIRS
942	ARMED FORCES
951-990	INFO. INSUFFICIENT TO ALLOCATE IND.
951	RETIRED
961	NEVER WORKED
981	REFERRAL
990	UNKNOWN