

# Wisconsin Trends in Pneumonia and Influenza Mortality, 1980-2003

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## INTRODUCTION

- Mortality due to pneumonia and influenza continues to be a serious public health threat, especially among those aged 65 and older.
- Continued monitoring of high risk and other populations is necessary for evaluating the impact of public health prevention activities, determining vaccine distribution policies, and ensuring that existing guidelines reflect the populations at risk.

## OBJECTIVE

- Characterize pneumonia and influenza mortality in Wisconsin from 1980 to 2003, including trend analysis, identification of high risk populations, and assessment of Wisconsin's progress toward state and national goals for vaccination.

## METHODS

- We examined mortality trends for pneumonia and influenza as underlying causes of death among all Wisconsin residents who died in the state from 1980 to 2003.
- Data sources: mortality data for DHFS, population estimates for CDC WONDER and WISH, vaccination rates from BRFSS
- Used ICD-9 487 (influenza) and 480-486 (pneumonia) for 1980-1998, and ICD-10 J10-J11 (influenza) and J12-J18 (pneumonia) for 1999-2003
- ICD-10 codes were adjusted to the ICD-9 code

## CONCLUSIONS

- Cause of early increase in rates unknown- may be due to increased population density and/or an ageing population
- Declining rates may be due to increased influenza and pneumococcal vaccine rates among those  $\geq 65$  years of age
- Lack of decrease to baseline rates in  $\geq 85$  age group may be due to reduced efficacy of the vaccine, lack of mortality prevention (purpose of vaccination is to prevent secondary complications), or a lack of vaccination among the ill
- Novel improvements in public health interventions are needed to improve the focus on the elderly, including efforts to increase vaccination, to prevent pneumococcal disease, and to explore other evidence-based strategies to reduce pneumonia and influenza mortality.

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**Table. Pneumonia and Influenza Mortality Rates by Age and Race, Wisconsin 1980-2003**

Year	Number of Deaths	Age-Specific Mortality Rates, 3-Year Movin Average (Deaths/100,000)			Age-Adjusted Mortality Rates 5-Year Moving Average (Deaths/100,000)		
		65-74	75-79	80-84	85+	White	Black
1980	1101	-	-	-	-	-	-
1981	1225	88	141	310	776	-	-
1982	1020	93	138	303	815	27	20
1983	1281	92	134	291	807	28	22
1984	1235	101	137	317	921	29	26
1985	1466	105	151	331	992	31	25
1986	1645	110	152	327	1072	33	29
1987	1532	121	159	346	1137	34	28
1988	1835	115	156	345	1171	35	30
1989	1666	113	165	369	1240	35	30
1990	1754	103	163	364	1230	35	31
1991	1779	99	158	364	1191	34	30
1992	1641	99	156	353	1172	33	34
1993	1820	97	154	347	1137	33	30
1994	1790	100	156	341	1131	32	28
1995	1727	100	157	338	1082	32	28
1996	1780	101	157	324	1068	32	30
1997	1794	102	156	330	1088	32	31
1998	1943	98	151	347	1135	32	33
1999	1448	98	146	332	1119	31	33
2000	1245	96	134	311	1082	31	33
2001	1258	93	132	286	1021	30	34
2002	1319	84	129	279	986	-	-
2003	1186	-	-	-	-	-	-

