

**Description of Simulation of Impact of 10 Year Latency
among 40 Year Old Subjects
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Summary

We illustrate how the simulation works for 40 year old subjects in 1978 when we assume that there is a 10 year latency period. The latency period implies that the conditional probability of death in a year isn't affected by exposure until 10 years have passed since exposure. The simulation basically uses the specified latency period to postpone exposure, acting as if the exposure took place when the exposure actually had the effect. A total of 20 subjects are simulated in the program lc01ed05.sas.

We do not provide a detailed description of these results, but instead illustrate the results for two subjects. The illustrations are similar to illustrations for simulations for 40 year old subjects. A detailed list of simulated values for subjects=1 and 10 is given on the next pages. Each row in this list represents a year for the subject, with the first row representing the year the subject was born. The actual year represented by the row is given in the first column. We first discuss the results for ID=1.

The subject corresponding to ID=1 described in Table 2 was 40 years old in 1978, and hence was born in 1938. The second column indicates the age of the subject each year. The simulation indicated that the subject was exposed to Love Canal Chemicals for 13 years during the 1942-1954 exposure period. The years of exposure correspond to 1942-1954. However, since a latency period of 10 years is specified, the indicators for years of exposure are assigned to the calendar years 1952-1964.

Table 2. Example of Simulated Data

Example of Data Simulated for ID=1 born in 1938 who was 40 in 1978.

The subject was exposed for 13 years beginning at age 14 .

Risk rate = 2 Latency = 10

Current Year	Current Age	Indicator of Exposure	Cumulative Exposure Yrs	Unexposed Cond. Prob. of Death	Exposed Cond. Prob. of Survival	Luck	Di ed?	Year of Death or Censor
1938	0	0	0	.02000	.98000	.9148	No	1996
1939	1	0	0	.00500	.99500	.9549	No	1996
1940	2	0	0	.00500	.99500	.8358	No	1996
1941	3	0	0	.00500	.99500	.9291	No	1996
1942	4	0	0	.00500	.99500	.2659	No	1996
1943	5	0	0	.00100	.99900	.3496	No	1996
1944	6	0	0	.00100	.99900	.5061	No	1996
1945	7	0	0	.00100	.99900	.2621	No	1996
1946	8	0	0	.00100	.99900	.8886	No	1996
1947	9	0	0	.00100	.99900	.7452	No	1996
1948	10	0	0	.00100	.99900	.8319	No	1996
1949	11	0	0	.00100	.99900	.1482	No	1996
1950	12	0	0	.00100	.99900	.2491	No	1996
1951	13	0	0	.00100	.99900	.7297	No	1996
1952	14	1	1	.00100	.99800	.0036	No	1996
1953	15	1	2	.00100	.99600	.2898	No	1996
1954	16	1	3	.00100	.99400	.3565	No	1996
1955	17	1	4	.00100	.99200	.3640	No	1996
1956	18	1	5	.00100	.99000	.3920	No	1996
1957	19	1	6	.00100	.98800	.3156	No	1996
1958	20	1	7	.00100	.98600	.9276	No	1996
1959	21	1	8	.00100	.98400	.3848	No	1996
1960	22	1	9	.00100	.98200	.5173	No	1996
1961	23	1	10	.00100	.98000	.2814	No	1996
1962	24	1	11	.00100	.97800	.7595	No	1996
1963	25	1	12	.00100	.97600	.2532	No	1996
1964	26	1	13	.00100	.97400	.4569	No	1996
1965	27	0	13	.00100	.97400	.6610	No	1996
1966	28	0	13	.00100	.97400	.6693	No	1996
1967	29	0	13	.00100	.97400	.5899	No	1996
1968	30	0	13	.00100	.97400	.7690	No	1996
1969	31	0	13	.00100	.97400	.7039	No	1996
1970	32	0	13	.00100	.97400	.1269	No	1996
1971	33	0	13	.00100	.97400	.4045	No	1996
1972	34	0	13	.00100	.97400	.3993	No	1996
1973	35	0	13	.00100	.97400	.3826	No	1996
1974	36	0	13	.00100	.97400	.6373	No	1996
1975	37	0	13	.00100	.97400	.9701	No	1996
1976	38	0	13	.00100	.97400	.9572	No	1996
1977	39	0	13	.00100	.97400	.7317	No	1996
1978	40	0	13	.00100	.97400	.7153	No	1996
1979	41	0	13	.00100	.97400	.1178	No	1996
1980	42	0	13	.00100	.97400	.4132	No	1996
1981	43	0	13	.00100	.97400	.1347	No	1996
1982	44	0	13	.00100	.97400	.4118	No	1996
1983	45	0	13	.00100	.97400	.3637	No	1996
1984	46	0	13	.00100	.97400	.0911	No	1996
1985	47	0	13	.00100	.97400	.3739	No	1996
1986	48	0	13	.00100	.97400	.8417	No	1996
1987	49	0	13	.00100	.97400	.0199	No	1996
1988	50	0	13	.01000	.74000	.4757	No	1996
1989	51	0	13	.01000	.74000	.4306	No	1996
1990	52	0	13	.01000	.74000	.8727	Yes	1990

We describe a second subject in the simulation corresponding to ID=10. This subject was 40 years old in 1978, and hence was born in 1938. The simulation assigned 8 years of exposure during the 1942-1954 exposure period to the subject, but the exposure was delayed by 10 years (due to latency). The actual years of exposure are indicated by a value of "1" in the third column. The first year of exposure occurred in 1957 at age 19. Other columns in the table have a similar interpretation as for ID=1. This subject was simulated to have died in 1981.

Example of Data Simulated for ID=10 born in 1938 who was 40 in 1978.

The subject was exposed for 8 years beginning at age 19 .

Risk rate = 2 Latency = 10

Current Year	Current Age	Indicator of Exposure	Cumulative Exposure Yrs	Unexposed Cond. Prob. of Death	Exposed Cond. Prob. of Survival	Luck	Di ed?	Year of Death or Censor
1938	0	0	0	.02000	.98000	.2253	No	1996
1939	1	0	0	.00500	.99500	.5504	No	1996
1940	2	0	0	.00500	.99500	.2383	No	1996
1941	3	0	0	.00500	.99500	.6750	No	1996
1942	4	0	0	.00500	.99500	.7462	No	1996
1943	5	0	0	.00100	.99900	.0315	No	1996
1944	6	0	0	.00100	.99900	.9209	No	1996
1945	7	0	0	.00100	.99900	.7641	No	1996
1946	8	0	0	.00100	.99900	.5011	No	1996
1947	9	0	0	.00100	.99900	.4560	No	1996
1948	10	0	0	.00100	.99900	.6941	No	1996
1949	11	0	0	.00100	.99900	.2646	No	1996
1950	12	0	0	.00100	.99900	.6388	No	1996
1951	13	0	0	.00100	.99900	.0089	No	1996
1952	14	0	0	.00100	.99900	.1170	No	1996
1953	15	0	0	.00100	.99900	.4025	No	1996
1954	16	0	0	.00100	.99900	.0264	No	1996
1955	17	0	0	.00100	.99900	.0924	No	1996
1956	18	0	0	.00100	.99900	.7972	No	1996
1957	19	1	1	.00100	.99800	.6318	No	1996
1958	20	1	2	.00100	.99600	.0921	No	1996
1959	21	1	3	.00100	.99400	.4165	No	1996
1960	22	1	4	.00100	.99200	.4473	No	1996
1961	23	1	5	.00100	.99000	.2140	No	1996
1962	24	1	6	.00100	.98800	.0989	No	1996
1963	25	1	7	.00100	.98600	.0368	No	1996
1964	26	1	8	.00100	.98400	.4684	No	1996
1965	27	0	8	.00100	.98400	.4994	No	1996
1966	28	0	8	.00100	.98400	.1336	No	1996
1967	29	0	8	.00100	.98400	.8267	No	1996
1968	30	0	8	.00100	.98400	.7004	No	1996
1969	31	0	8	.00100	.98400	.2977	No	1996
1970	32	0	8	.00100	.98400	.3729	No	1996
1971	33	0	8	.00100	.98400	.5943	No	1996
1972	34	0	8	.00100	.98400	.8492	No	1996
1973	35	0	8	.00100	.98400	.7967	No	1996
1974	36	0	8	.00100	.98400	.9072	No	1996
1975	37	0	8	.00100	.98400	.4764	No	1996
1976	38	0	8	.00100	.98400	.8111	No	1996
1977	39	0	8	.00100	.98400	.2507	No	1996
1978	40	0	8	.00100	.98400	.0542	No	1996
1979	41	0	8	.00100	.98400	.2035	No	1996
1980	42	0	8	.00100	.98400	.7092	No	1996
1981	43	0	8	.00100	.98400	.9844	Yes	1981