

Estimating the reduction in US mortality if cigarettes were largely replaced by e-cigarettes

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ONLINE RESOURCE 1

Population estimates

Population estimates (in thousands) by sex and five year age groups (10-14, 15-19 ... 75-79 were downloaded from the United Nations website (<http://population.un.org/wpp/Download/Standard/Population/>) on April 15, 2020 for the years 1990 to 2040, those for 2018 to 2040 being what are termed medium variant projections. The data are shown in the pages that follow.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Male													
10-14	89031.79	90093.6	91490.97	93079.16	94770	96512.57	98371.88	100412.4	102464.7	104379.3	106077.3	107756.3	109118.3
15-19	92222.14	91302.19	90966.03	91303.71	92257.42	93654.31	94834.36	96333.3	98162.73	100192	102236.4	104176.7	105968.2
20-24	100348.9	98390.93	96510.26	94886.76	93679.01	93010.96	93359.15	94094.85	95031.09	96016.26	97058.99	98121.35	99481.11
25-29	109467.9	108580.8	107180	105248.4	103031.1	100852	99475.17	98598.51	98093.31	97798.89	97619.52	97313.25	97023.56
30-34	111409.7	112212.1	112772.2	113189.8	113410.1	113222.2	111782.9	110062.4	108257	106592.9	105173	103578.7	102067.8
35-39	101184.6	103486	105908.9	108279.6	110431.5	112330	113473.9	114420.3	115013.1	115051.2	114480.8	113408.1	111647.3
40-44	87675.59	90529.83	92984.73	95313.84	97826.52	100621.5	103279.7	105936.2	108441.5	110556.4	112133.2	113472.3	114268.8
45-49	66913.26	70105.78	73880.27	77872.73	81678.24	85148.38	88745.03	92068.86	95059.86	97798.85	100379.2	102949.8	105314.7
50-54	57242.9	58289.97	59405.76	60841.8	62890.22	65623.29	68687.82	72544.65	76959.04	81408.23	85447.29	88866.89	91652.95
55-59	50454.24	50659.52	51337.86	52352.31	53528.8	54809.16	56134.65	57539.83	59116.67	61117.44	63750.46	67108.47	71067.43
60-64	49829.53	49093.72	48320.34	47659.28	47330.28	47453.14	47776.08	48636.01	49881.02	51264.2	52625.59	53915.79	55109.19
65-69	45494.37	45463.44	45364.87	45251.86	45139.98	45018.38	44477.92	43949.16	43563.66	43482.99	43785.58	44327.13	45212.58
70-74	35396.16	35964.08	36641.51	37307.79	37873.18	38342.31	38539.7	38730.51	38858.67	38873.49	38789.13	38599.61	38329.11
75-79	25225.57	25533.44	25803.59	26193.56	26788.88	27551.98	28127.37	28752.86	29408.69	30022.8	30533.84	30729.04	30864.57

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Male													
10-14	110140.4	110688.1	110548.6	111533.1	108775.3	107784.4	107080.9	106920.5	106475.8	106257.1	106161.8	106089.4	106047.7
15-19	107647.5	109309.5	110959.2	106705.2	112301.3	113121.9	113728.3	113973.9	113924.8	113157.8	111881.9	110510.9	109331.8
20-24	101208.4	103239.7	105433	98729.93	107848	108925.5	109986.1	111059.9	112938.4	114840.8	116538.3	117693.7	118085.6
25-29	96809.07	96881.61	97461.26	98196.82	100360.4	102056	103557	104813.5	106739.5	108751.6	110797.3	112835.9	114818.5
30-34	100759.6	99719.31	98923.82	103896	97861.38	97978.12	98524.19	99371.16	100462.4	101907.8	103621.4	105495.7	107455.9
35-39	109513	107424.9	105629.1	112467.7	102485.9	101353.1	100433.3	99734.77	99324.74	99246.69	99487.85	100043.1	100908.5
40-44	114543.9	114335.8	113684.9	111962.6	110882.8	109085.4	107281	105611.2	104061.5	102762.6	101706.6	100876.6	100277.1
45-49	107446.9	109300.7	110828.7	100974.6	112845.7	113341.8	113317	112749.8	111588.6	110082.9	108360	106630.4	105045.4
50-54	94012.93	96311.53	98746.95	86313.21	103347.8	105738.2	107896.9	109630.6	110553.2	111172.7	111433.2	111279.1	110697.3
55-59	75344.81	79503.46	83261.19	64101.69	88975.02	91370.69	93732.36	96204.21	98332.62	100546.5	102695.8	104563.1	106015.4
60-64	56452.26	58344.95	61008.35	50052.68	67943.39	72169.73	76249.04	79866.26	82659.8	85036.34	87130.21	89193.64	91370.31
65-69	46370.93	47670.51	49031.47	39075.52	51152.93	52540.84	54507.44	57180.19	60057.39	63548.89	67338.56	70969.12	74169.14
70-74	38113.16	38166.45	38620.85	31439.05	39921.58	41051.87	42299.41	43591.46	44675.65	45772.21	47062.35	48822.71	51187.63
75-79	31021.66	31222.12	31446.04	111533.1	31336.98	31261.2	31389.37	31831.6	32397	33272.08	34357.3	35518.64	36701.31

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Male													
10-14	106662.4	107281.3	107820.2	108058.2	107775.1	107441.8	106584.5	105339.4	104004.7	102858.8	102347.1	101967.3	101686.2
15-19	108871.9	108585.4	108437	108371.9	108343.2	108844.9	109515	110116.3	110337.6	110010.6	109660.7	108831.4	107648.3
20-24	117866.1	116915.1	115549.4	114235.5	113227.3	112480.5	112060.2	111946.1	112037.4	112220.6	112555.5	113161.8	113837.9
25-29	116664.5	118445.2	119991.4	121043	121444.6	121074.8	120072.5	118718.7	117445.5	116529.3	115783.2	115395.3	115330.5
30-34	109396.5	111313	113212.6	115120.7	117025.1	118757.7	120480.8	122003	123037.1	123431.2	123099.8	122150.7	120849.6
35-39	102029.4	103397.3	104980.4	106727.8	108588.7	110434	112312.9	114204.9	116096.6	117963.2	119699.6	121440.5	122984.9
40-44	99919.43	99793.01	99936.3	100395.6	101185.8	102208.8	103543.2	105128.9	106876.4	108719.3	110549.1	112434.2	114340.8
45-49	103581.6	102272.1	101165.7	100298.9	99690.99	99242.93	99093.21	99254.35	99737.28	100542.9	101546.3	102882.9	104481.4
50-54	109627.2	108137.6	106413	104711.9	103195.4	101687.2	100399	99352.7	98551.39	98004.48	97565.92	97442.82	97640.03
55-59	106941.1	107502	107703.7	107543	107020.7	105928.8	104506.2	102905	101336.9	99943.84	98515.25	97312.38	96350.73
60-64	93413.07	95463.36	97419.45	99129.39	100498.9	101325.9	101894.7	102171.6	102106.2	101686.4	100706.9	99431.26	97989.85
65-69	76738.31	78871.94	80741.69	82621.82	84652.74	86461.99	88359.04	90225.39	91890.97	93257.36	94090.33	94720.98	95097.64
70-74	53807.54	56941.82	60322.41	63567.12	66455.19	68627.23	70495.96	72213.7	73996.64	75946.51	77642.7	79455.67	81271.07
75-79	37638.95	38552.76	39637.64	41167.73	43269.86	45476.76	48148.98	51047.2	53839.87	56355.46	58243.73	59927.44	61548.21

	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Male												
10-14	101498.6	101470.6	102114.8	102877.4	103681	104401.5	104955.6	105877.4	106570.9	107039	107313.7	107433.9
15-19	106394.3	105276.7	104802.1	104470.8	104248.2	104119.5	104083.9	104723.3	105537.1	106382.5	107105.1	107619.1
20-24	114259.7	114195.9	113718.7	112837.2	111736	110690.4	109833.5	109162.2	108713.5	108513.4	108545.6	108746.9
25-29	115497.6	115822.8	116202.2	116849.2	117569.1	118056.4	118118.8	117643.5	116765.5	115670.6	114651.2	113890.4
30-34	119629.2	118778.2	118134.8	117811	117782.7	117975	118328.8	118772.5	119447	120162.2	120630.5	120687.7
35-39	124045.5	124469.9	124226.7	123342.5	122091.5	120908.7	120074.1	119494.5	119205.3	119187.7	119374.6	119711.4
40-44	116250.1	118133.6	119919.8	121692.8	123260.6	124341.2	124775.8	124577.7	123731.6	122510.5	121348.4	120525.3
45-49	106248.9	108117	109976.9	111882.2	113806.8	115734.3	117628.6	119421	121196.2	122766.3	123855.7	124310.2
50-54	98167.01	99023.15	100068.6	101429.1	103046.3	104833.8	106719.4	108574	110468.9	112385.7	114312.8	116218
55-59	95635.8	95179.27	94853.58	94810.04	95066.3	95640.25	96531.34	97604.83	98971.23	100579.3	102352.2	104228.7
60-64	96579.59	95336.98	94127.23	93103.03	92285.06	91686.74	91322.81	91095.36	91124.32	91426.53	92024.97	92928.27
65-69	95160.86	94892.86	94152.8	93125.67	91934.49	90764.25	89736.52	88691	87817.73	87132.51	86653	86398.47
70-74	82935.72	84358.3	85296.91	86070.81	86633.91	86924.62	86911.54	86311.54	85470.66	84501.56	83576.13	82803.34

75-79	63282.21	65200.04	66882.79	68676.42	70497.44	72222.45	73769.11	74675.1	75475.6	76138.72	76605.74	76840.03

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Female													
10-14	84910.03	85944.58	87265.62	88808.99	90491.35	92211.44	93889.98	95724.85	97637.54	99500.59	101190.6	102598	103729.3
15-19	87224.15	86822.22	86728.4	87022.06	87748.19	88880.47	90166.24	91724.36	93491.76	95322.42	97103.57	98936.56	100560.8
20-24	94131.08	92713.06	91465.69	90472.86	89779.73	89421.36	89906.59	90649.98	91499.67	92374.36	93299.33	94545.33	95928.76
25-29	104689.8	103476.3	101947.2	100118.4	98212.14	96484.87	95339.86	94819.52	94797.76	95009.68	95233.99	95257.29	95272.78
30-34	110174.6	110451	110295.1	109920.5	109454.5	108824.8	107328.2	105623.1	103850.1	102240.1	100963.4	99909.59	99108.39
35-39	101477.5	103611.5	105871.4	108006	109770.9	111119.3	111833.9	112290.5	112415.4	112090.2	111269.9	110038.2	108236.8
40-44	90433.92	93002.17	95086.57	97008.3	99128.25	101557.1	103939.5	106389.5	108712.6	110601.1	111876.7	112864.9	113272.8
45-49	70860.05	74345.33	78125.63	81900.98	85392.85	88540.37	91820.56	94795.24	97434.74	99846.43	102134.3	104512.1	106731.8
50-54	58832.07	60293.89	62114.08	64376.66	67128.52	70297.49	73622.11	77485.06	81701.82	85859.7	89594.31	92791.07	95334.33
55-59	54785.26	54545.06	54677.37	55188.34	56090.79	57415.46	59112.73	61197.47	63611.79	66349.33	69442.67	73052.67	77024.9
60-64	57015.65	56036.42	54991.69	53985.82	53219.87	52842.51	52729.96	53106.95	53907.3	55038.38	56437.68	58079.47	59941.12
65-69	55534.24	55333.81	54985.49	54600.51	54227.73	53837	52939.2	52045.5	51297.24	50834.88	50713.24	50748.87	51072.26
70-74	46425.14	47104.21	47898.12	48618.93	49151.76	49526.41	49663.11	49754.4	49702.86	49447.6	49025.78	48422.99	47768.47
75-79	37272.45	37322.75	37521.94	37999.44	38778.48	39753.32	40370.95	41109.91	41914.66	42667.05	43257.29	43092.66	42868.5

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Female													
10-14	104625	105168.8	105125.7	104421.5	103536.3	102653.8	102070.2	101989.2	101766.1	101653.3	101576.3	101485.3	101423.5
15-19	102016.3	103394.4	104735.9	105559.5	106480.9	107335.4	107871.8	107995.7	108176.6	107724.9	106796.6	105730.7	104768.8
20-24	97433.94	99036.61	100697.6	101985.5	103233.3	104383.4	105414.2	106345.7	107937.8	109619.6	111185.3	112317.7	112795.3
25-29	95412.95	95860.83	96698.1	97596.19	98820.66	100240.1	101658.2	102937.8	104432.5	105952.1	107492.2	109078.2	110704.6
30-34	98554.57	98201.91	98019.89	97816.06	97849.09	98097.1	98564.17	99250.61	100147.6	101368.4	102822	104383.8	105974.6
35-39	106199.1	104363.4	102970.8	101638.2	100824.7	100431.7	100247.8	100128.8	99959.44	99908.46	100019.2	100384.4	101062.2
40-44	113171.9	112665.4	111832.5	110422.1	108696.9	106839.8	105108.9	103687.9	102561.9	101845.9	101439.2	101172.5	100951.4
45-49	108725.4	110390.6	111659.3	112512.4	113028.1	113106.8	112671.4	111741.2	110339.4	108615.8	106748.6	105015.7	103603
50-54	97442.99	99497.07	101704.3	103846.7	106149.2	108426.2	110368.1	111758.9	112334.8	112506.6	112264.8	111623.2	110617.4
55-59	81147.81	85101.16	88668.75	91578.69	94105.81	96382.59	98629.37	100961.8	102984	105047.9	106984.1	108552.6	109612.8
60-64	62101.78	64711.39	67844.02	71236.17	75167.37	79327.14	83283.91	86787.92	89568.23	91915.53	93957.27	95934.66	97981.03
65-69	51728.93	52755.14	54157.06	55532.91	57306.17	59517.87	62212.32	65369.38	68570.38	72199.86	76007.45	79633.4	82854.48

70-74	47162.18	46791.56	46790.99	46711.59	47018.06	47706.27	48746.16	50124.71	51568.91	53310.08	55376.99	57837.21	60711.32
75-79	42692.25	42602.36	42565.51	42187.39	41723.49	41251.46	40941.18	40932.41	40975.05	41373.68	42101.1	43135.96	44475.6

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Female													
10-14	102048.4	102668.1	103196.5	103416.5	103119.7	102838.6	102041.8	100854.3	99561.97	98437.76	98019.03	97707.32	97463.3
15-19	104490.8	104310.5	104200.4	104134.1	104085.9	104593.7	105258.8	105846.2	106048.8	105699.1	105411	104647.8	103524.1
20-24	112754.5	112105.8	111103.8	110124.2	109360.1	108770	108425.4	108322.6	108395.5	108550	108894	109496.4	110158.4
25-29	112260.4	113851.2	115313.9	116388	116908.8	116732.9	116025.6	115011.7	114041.8	113339.6	112753.7	112440.8	112383.4
30-34	107497.8	108962	110408.6	111913.5	113499.7	114988.6	116553.3	118007.1	119063.4	119562.5	119436.4	118779.2	117804.6
35-39	101999.3	103179.7	104553.8	106038.7	107569.2	109034.1	110485.7	111939.6	113436.5	114986.8	116509.2	118107.6	119585
40-44	100826.1	100749.5	100804.8	101120.1	101760.2	102630.7	103794.4	105177.6	106662.9	108171.1	109650.2	111123.9	112595.5
45-49	102532	101803.7	101360.1	101069.8	100847	100659.6	100575.9	100653.9	100986.7	101625.5	102500.8	103677.9	105073
50-54	109268.3	107545.3	105669.8	103952.8	102582.7	101478.7	100767.1	100364.9	100110.8	99910.25	99735.09	99674.37	99776.49
55-59	110181.6	110305	110017.5	109369.2	108402.1	107034.4	105367.2	103586.7	101959.8	100659.3	99601.26	98936.25	98571.78
60-64	99941.81	101888.1	103692.9	105167.1	106192.6	106670	106802.2	106586.9	106027.6	105148.8	103844	102267.9	100585.3
65-69	85495.31	87701.52	89628.99	91532.64	93537.53	95311.43	97151.03	98914.02	100389.8	101451.9	101911.2	102082.3	101945.4
70-74	63688.32	67061.37	70611.49	74021.46	77093.44	79442.78	81480.14	83335.8	85212.39	87206.59	88867.16	90635.93	92365.82
75-79	45747.25	47272.23	49103.09	51336.03	54007.48	56601.46	59618.26	62846.26	65980.48	68843.41	70916.17	72776.1	74545.1

	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Female												
10-14	97277.15	97213.74	97897.69	98659.12	99422	100073.8	100545.7	101474.2	102160.1	102601.7	102829.1	102884.6
15-19	102309.3	101201.4	100810.5	100543.2	100360	100239.4	100174.8	100832.7	101636	102445.8	103113.7	103554.7
20-24	110560.6	110472.5	110043.6	109215.5	108165.5	107158.7	106321.3	105709.1	105313.1	105152.8	105201	105384.1
25-29	112526.1	112817.5	113197.9	113832.5	114532.9	115000.7	115047.4	114600.1	113762	112710.9	111728.5	110989.3
30-34	116869.6	116215.1	115722	115461.7	115432.3	115598	115923.7	116352.7	117007.5	117704.8	118160.6	118208.2
35-39	120656	121163.9	121121.1	120513.4	119568.1	118651.5	118001.6	117559.6	117326	117302.7	117459.2	117763.4
40-44	114101.7	115652.2	117230.5	118857.3	120347.8	121425	121928.4	121919.3	121336.5	120407.5	119497.3	118841.1
45-49	106566.6	108079.3	109596.5	111088	112568.4	114080.5	115628.4	117216	118846.1	120337.2	121414.6	121918.3
50-54	100131	100788.2	101703	102896.1	104296.7	105794.2	107306.8	108824.8	110313.1	111790.4	113300.6	114847.4
55-59	98349.26	98179.66	98068.83	98049.73	98181.04	98557.22	99225.88	100154.4	101350.3	102745.4	104232.7	105735.3
60-64	99052.38	97837.8	96887.58	96301.1	95993.99	95818.8	95689.54	95610.22	95623.12	95783.17	96181.29	96864.11

65-69	101493.2	100741.8	99562.46	98120.48	96581.42	95196.79	94122.43	93233.27	92707.19	92457.99	92344.12	92283.66
70-74	93857.76	94993.39	95491.46	95744.27	95736.57	95458.32	94912.65	93804.05	92481.96	91099.81	89896.79	89017.71
75-79	76397.46	78406	79998.44	81713.29	83427.8	84971.38	86235.81	86675.68	86953.29	87056.02	86967.53	86679.86