

# ASSOCIATED ECONOMIC CONSULTANTS LTD.

## COST OF FUTURE CARE APPROXIMATORS

The cost of future care multiplier factors below may be used to derive approximate present values of future care costs for men and women in British Columbia.

### MEN

	PRESENT VALUE MULTIPLIER FACTORS DISCOUNTED AT 2.0% PER ANNUM TO LIFE EXPECTANCY							
FREQUENCY OF COST TO LIFE EXPECTANCY	AGE AT START (CURRENT AGE)							
	10	20	30	40	50	60	70	80
EVERY YEAR	37.466	34.706	31.531	27.706	23.258	18.272	13.012	8.005
EVERY 2 YEARS	18.983	17.603	16.015	14.103	11.879	9.386	6.756	4.252
EVERY 3 YEARS	12.823	11.903	10.845	9.570	8.087	6.426	4.673	3.005
EVERY 4 YEARS	9.744	9.054	8.260	7.304	6.192	4.946	3.633	2.384
EVERY 5 YEARS	7.897	7.345	6.710	5.945	5.056	4.060	3.010	2.014
EVERY 6 YEARS	6.667	6.207	5.677	5.040	4.299	3.469	2.596	1.769
EVERY 7 YEARS	5.788	5.394	4.940	4.394	3.759	3.048	2.300	1.596
EVERY 8 YEARS	5.129	4.785	4.388	3.910	3.355	2.733	2.080	1.467
EVERY 9 YEARS	4.618	4.311	3.958	3.534	3.040	2.488	1.909	1.369
EVERY 10 YEARS	4.209	3.933	3.615	3.233	2.790	2.293	1.774	1.292
EVERY 15 YEARS	2.985	2.800	2.590	2.336	2.037	1.712	1.374	1.061
EVERY 20 YEARS	2.375	2.241	2.079	1.892	1.667	1.429	1.173	0.980

### WOMEN

	PRESENT VALUE MULTIPLIER FACTORS DISCOUNTED AT 2.0% PER ANNUM TO LIFE EXPECTANCY							
FREQUENCY OF COST TO LIFE EXPECTANCY	AGE AT START (CURRENT AGE)							
	10	20	30	40	50	60	70	80
EVERY YEAR	38.540	35.984	32.931	29.271	24.978	20.053	14.660	9.260
EVERY 2 YEARS	19.520	18.242	16.715	14.886	12.739	10.277	7.580	4.880
EVERY 3 YEARS	13.181	12.329	11.311	10.092	8.661	7.019	5.222	3.423
EVERY 4 YEARS	10.013	9.373	8.610	7.695	6.622	5.391	4.044	2.696
EVERY 5 YEARS	8.112	7.601	6.990	6.258	5.400	4.416	3.338	2.263
EVERY 6 YEARS	6.846	6.419	5.911	5.301	4.585	3.765	2.869	1.974
EVERY 7 YEARS	5.941	5.576	5.140	4.617	4.004	3.302	2.534	1.771
EVERY 8 YEARS	5.264	4.944	4.563	4.105	3.569	2.955	2.284	1.618
EVERY 9 YEARS	4.737	4.453	4.114	3.708	3.231	2.685	2.089	1.500
EVERY 10 YEARS	4.316	4.060	3.755	3.389	2.961	2.470	1.935	1.408
EVERY 15 YEARS	3.056	2.884	2.684	2.438	2.151	1.832	1.474	1.130
EVERY 20 YEARS	2.432	2.300	2.153	1.964	1.758	1.506	1.258	1.003

## EXAMPLES OF THE USES OF THE COST OF CARE APPROXIMATORS

The cost of care multiplier factors are derived using a discount rate of 2.0% and survival probabilities, based on Statistics Canada's 2010-2012 Life Tables, for the average BC-resident male or female. The cost of care approximators may be used to determine present values of costs of future care, as illustrated in the examples below.

For example, assume that a 30-year old BC male expects to incur an annual cost of \$2,000 for the rest of his life. The present value of such cost would be:

$$\$2,000 \times 31.531 = \$63,062,$$

where 31.531 is the multiplier factor at row 1 of the table for males who are 30 years of age.

As another example, suppose a back support costs \$80 (including taxes) and needs to be replaced every 3 years to life expectancy. The present value of this cost, say, for a 20-year-old BC female, is calculated as:

$$\$80 \times 12.329 = \$986,$$

where 12.329 is the multiplier factor at row 3 of the table for females who are 20 years of age.

The investment income generated by a lump-sum award for costs would impact upon an individual's tax situation in the future. This implies that a "tax gross-up" calculation should be performed, to determine the amount required to offset the taxes attracted by the investment income earned by a cost of care award.

For your convenience, Associated Economic Consultants Ltd. can assist in this regard. For more information, please contact:

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