VALUATION OF LONG TERM CARE (LTC)
HEALTH INSURANCE CONTRACT USING MULTISTATE MODEL

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Abstract. In this paper, we are using multistate model to evaluate Long Term Care (LTC) health insurance contract. Some products in LTC contract such as stand alone Annuity, LTC as a rider benefit, Enhanced pension and Insurance package are discussed. We use Discrete Time Markov Chains (DTMC) to model health status of each of the patients. Every time, a patient is exposed to one of the status that already set in the status space, for example: health, ill and death. We also consider evaluating premiums and reserves generated by this model which also useful for the practioneers and insurance companies.

Keyword: Long Term Care, Markov chain, Multistate modeling.