

able to say that the program is "actuarially sound". In my opinion, this is true under the second, less restrictive definition of "actuarial soundness", which is fully satisfied by the self-supporting basis of the system. Certainly, the program can be said to have staunch financial safeguards as long as Congress continues to be cost-conscious, as it has been in the past, and to finance benefit liberalizations adequately.

*Credibility of 10/20 Experience as Compared with 5/10 Experience,*  
by LEWIS H. ROBERTS.

The expression 10/20 in liability insurance means that the insurance company limits its coverage to \$ 10,000 per claim and \$ 20,000 per accident. Because of the admission of larger amounts on individual claims into the losses, experience subject to limits of \$ 10,000 per claim and \$ 20,000 per accident will be subject to more fluctuations arising from the relatively infrequent large claims than experience subject to \$ 5,000/10,000 limits. On the basis of a study of New York private passenger car experience it is estimated that somewhat over 40 %, possibly 50 %, more claims are needed for experience under the higher limits to have the same actuarial credibility as it would have under the lower limits.

In the conduct of this study, account was taken of the frequency distributions of claims by size and of accidents by number of claims. For the purpose of dealing with the subject of credibility in an analytical way, it was necessary to investigate the mathematical basis for credibility factors and to derive formulas for the coefficient of variation, or relative sampling error, of losses experienced.

In essence, both of these formulas are an extension of the Poisson theory, under which the variance of the number of independent random events occurring is equal to the expected number of events. The need for extension arises from the unequal weight that must be given to different events (due to variation between claims) and the only partial independence of events (due to multiple-claim accidents).

*Commutation Functions for Individual Policies Providing for Hospital, Surgical and Medical Care Benefits after Retirement,* by HENRY W. STEINHAUS.

On March 5, 1958, the New York State Legislature enacted four new health insurance laws which went into effect on July 1, 1959. One of these laws provided that, if the employer so elects, his workers covered for 3 months or more by a group policy are entitled to convert to an individual policy from the same insurance company whenever they leave their jobs to retire or for any other reasons. The individual policy must provide a benefit of at least \$ 10 per day for hospital room and board, up to 21 days; at least \$ 100 for other hospital expenses and, at a minimum, surgical benefits under the \$ 200 surgical schedule. In case of death of the worker, the law also extends this conversion privilege to the worker's wife or child.

As a consequence of this legislation which may spread into other states, health insurance benefits must be provided for the retired, through conversion of group insurance certificates to individual policies.

The purpose of this paper is to explore the health insurance experience available here and abroad for persons 65 years of age or over that might serve as a basis for rate calculations.