Insurance Testing

NEW LABORATORY TESTS STUDY

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Introduction

The quality practice of clinical pathology requires "doing the right tests, doing the tests right and taking the right action." The quality practice of insurance medicine requires similarly high standards.

Insurance medical directors frequently have questions regarding if, when, and how to use a test result. We believe that medical directors would appreciate an independent, non-economically involved pathologist's comments on major laboratory issues. We will try to provide the necessary information to allow you to make a valid decision about insurance testing. When we believe that we can write a helpful article, we will write it. When the discussion is not in our area of expertise, we will attempt to get a guest author with specialized expertise.

In keeping with the editorial calendar devoted to actuarial-medical, we thought that a fuller treatment of the new laboratory tests study sponsored by the Association of Life Insurance Medical Directors of America (ALIMDA) and the Society of Actuaries (SOA) would be of interest. Harry Woodman, a well-known actuary, consented to write a description of this new study.

New Laboratory Tests Study

On November 28, 1990, an invitation was sent to the Chief Medical Directors and Chief Actuaries of companies that are prospective contributors to a new Laboratory Tests Study. The first two paragraphs of this letter of invitation are as follows:

> You are invited to participate in an intercompany individual life insurance mortality study of blood test and urinalysis results jointly sponsored by the Association of Life Insurance Medical Directors of America (ALIMDA) and the Society of Actuaries (SOA). Participation in this study will not require any manual effort by contributing companies provided that the contributing company (1) is submitting records on a seriatim basis to the SOA's annual studies of ordinary life insurance, (2) has a computer interface with the laboratory(ies) used, and (3) provides automated translation of the test results from the lab reports to the seriatim record being contributed.
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> This will be primarily a prospective study based on blood test and urinalysis results recorded on current or recent issues because it is doubtful that companies have the needed information on older records. Although meaningful results will not be available until at least five experience years have been observed, the study will undoubtedly be of great value to anyone interested in the effect of blood cholesterol, sugar, liver enzymes, etc., levels on mortality. These findings will indicate the test readings associated with the lowest mortality as well as the extent to which mortality increases as reading levels increase or decrease. The study will parallel the *1959 and 1979 Build and Blood Pressure Studies*, also jointly sponsored by ALIMDA and SOA, which revealed the builds and blood pressures associated with the lowest mortality and the deviations from these lowest mortality levels with increases and decreases in weight and blood pressure.

The recent expanded use of blood and urine testing and the availability of new tests at reasonable cost have provided the incentive and opportunity to collect extensive data on blood and urine test results. Although this study is similar to the *1959 and 1979 Build and Blood Pressure Studies*, it is different in that it is possible to study only current and future policy issues.

When the Build and Blood Pressure studies were initiated, most companies had height-weight and blood pressure readings stored in their records of prior issues in anticipation of such studies. This preparatory action had been taken to avoid the great manual effort in the earliest studies to extract measurements from prior application files. This past difficulty has made it apparent to most companies that it was much easier to extract this information during the underwriting process than to resurrect it at a later date.

We are currently in the same position as the earlier planners at the time they decided to retain build and blood pressure readings for future mortality studies. We have a substantial advantage, however, in that retention of test data can be done without manual effort provided a company has a computer interface with the labs that it is using and provided that it is contributing or will begin to contribute to the Society of Actuary's life insurance experience studies. All that is required is the programming effort to incorporate the test results sent by the lab on the mortality record to be sent to the Center for Medico-Actuarial Statistics (CMAS) at MIB.

As the data are accumulated, they will be evaluated to determine when the data are sufficiently extensive and mature to warrant publication. It is likely that this will not occur before the 1990s. Results published before that time would have an average duration of only one or two years. Although results will not be immediately forthcoming, the effort taken now will pay large dividends in the future.

Data has been requested for all blood and urine tests that are currently being routinely done. However, requests for data will be updated because some tests currently used may later be discontinued as part of the general testing protocol and others may be added.

Some tests have been done for many years (e.g., urinalysis for the presence of albumin, hematuria, and pyuria; blood tests for glucose levels), and the new study will supplement the results of prior studies. For most tests, mortality experience will be presented for the first time, and we will be able to correlate various levels of test readings with mortality levels. This will help to validate the effectiveness of these tests in estimating mortality results, and will provide important information for the practice of preventive medicine by identifying the ideal test result levels and by suggesting the points at which treatment should be considered to control elevations of certain test readings.

In the early responses to the questionnaire sent with the invitation to participate, four of the six regular contributors to the annual studies indicated that they would participate. In addition, three other companies also stated that they would participate. We are optimistic that a majority of the remaining regular contributors will participate, and that some initial non-contributors will join at a later date.

It is important for all companies to make every effort to contribute. At the same time, it must be recognized that this effort is an investment in the future because study results will not be available for several years.

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