Experiences in CDT Testing


Address: Jefferson-Pilot Life Insurance Company PO Box 21008
101 N. Green Street, Greensboro, North Carolina 27401

Correspondence: Neal A. Pickett, Jr., MD
Vice President and Medical Director Jefferson-Pilot Life Insurance Company


To the Editor:

I read with interest the article by Dr. John Roberts entitled “Experiences in CDT Testing” I was particularly interested in his brief explanation of “Demographics”.

Beginning June 15, 1995, Jefferson-Pilot Life Insurance company initiated a screening program to evaluate CDT based purely upon the amount of insurance requested. Our criterion of these project was $250,000 or above. During the ensuing nine months, a total of 5,250 specimens was screened for indication of an elated Carbohydrate Deficient Transferrin (CDT).

Initially, let me state that in our study, 2% of the specimens screened were elevated and 98% were normal. Now, for my Demographics, in reviewing the incidence of male vs. female applicants of amounts of insurance as outlined above. I found that 81% of our applicants were male. Consequently 19% were female. In that I indicated that 2% were elevated, the number of elevated specimens were determined to be 105.

The ages of the applicants with the elevated CDT’s varied from 25 to 80. We also found more elevated specimens at the lower amounts of insurance-probably secondary to an increased frequency of all applicants at that amount rather than any other factor. However, the number of women with elevated CDT was 47-in a population which represented only 19% of those being screened. The number of males being screened and testing positive was 58. Thus, the finding of a positive CDT in a female applicant applying for over $250,000 was 47/997*100%=4.7%. the finding of an elevated CDT in a male applicant applying for the same amount of insurance was 58/4253*100%=1.3%. No other demographic explained this finding.
If one looks at the number of elevated CDT's the ratio is 58:47 while in our pool of applicants it is 4243:997. If one assumes for the moment that the incidence in the male and female is the same, a total of 14 elevated CDT's would have been expected. I find it extremely difficult to believe that the incidence is markedly greater among female applicants.

I note that you did not mention the breakdown in your study of male vs. female in either the incidence of which the two sexes were screened or the breakdown of elevated results along sexual lines.

Our findings did concur that no parameter in the usually performed blood and urinalysis provided a useful predictor of a subsequent elevated CDT. However I would appreciate Dr. Roberts comment on the findings outlined above in order to assist the underwriting community on the routinely screening of CDT.

Neal A. Pickett, Jr. MD
Vice-President and Medical Director
To the Editor:

Thank you for the opportunity to respond to Dr. Neal Pickett's letter regarding my article in the Journal of Insurance Medicine (Volume 27, no. 4, pages 287 - 293).

First, it should be noted that my original manuscript was submitted in March of 1996 so the data presented was essentially a “stop-action” of our statistics at that time. Secondly, the article was written to provide medical directors and underwriters with information to assist them in deciding what specifications to use when requiring CDT testing on their applicants. It was not my purpose to provide a complete demographic analysis of our CDT testing experience at that time.

Dr. Pickett has found the frequency of elevated CDT samples from women (in the Jefferson-Pilot applicant population) to be disproportionate to their application frequency (Jefferson-Pilot samples from June, 1995 through March, 1996 were analyzed by Dr. Pickett). We have found (in our composite applicant population of insurance client company from June, 1995, through October 1996) that overall, approximately 2.4% of applicants showed elevated CDT test results. Further, about 3.0% of all women tested for CDT showed an elevated test result, and 2.1% of all men presented an elevated CDT level. Similarly, in a sampling of CDT results from a company with an applicant population similar to Jefferson-Pilot’s, from June, 1995, through the end of October, 1996, we found the following:

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<th>Elevated CDT Results</th>
<th>Percentage Elevated of Total Tests</th>
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<tr>
<td><strong>Males</strong></td>
<td>64.7%</td>
<td>2.9%</td>
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<tr>
<td><strong>Females</strong></td>
<td>32.6%</td>
<td>4.15%</td>
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The overall and the representative company-specific percentages are not terribly different, and other technical and statistical analyses we have performed have shown that the CDT results (as we perform the test and analyze the data) are not gender-specific.

It has been well established the the frequency of excessive alcohol abuse varies in different socio-economic levels. Could it be that the applicant population served by Jefferson-Pilot has a higher than normal/expected proportion of alcohol abusing women? Given the statistical analyses for reliability we continually perform on our test results. I am at a loss to explain Dr. Pickett's reported observations in any other way.

Dr. Pickett also indicates in his letter that he found a higher incidence of elevated CDT results in applicants requesting lower amounts of insurance than are published. Perhaps this might also be due to a different population of applicants being addressed by Jefferson Pilot than was, and is, evaluated by our laboratory overall. It must be remembered that our laboratory serves many insurance companies and the demographics represent a composite analysis.

John W. Roberts, Ph.D.
Manager, Research & Development
GIB Laboratories