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2001 Program
New Investigator (3-year project)

Project Title: Pulmonary complications in tobacco users infected with the Human Immunodeficiency Virus

Project Summary: This study was the first to evaluate the impact of tobacco use on hospitalizations as well as medications used to treat HIV-1 infected men and women. The study also assessed the subsequent impact of tobacco on costs associated with treating tobacco-related diseases in the HIV population as well as in the effectiveness of HAART medications

Project Successes: Firstly, while prevalence of cigarette smoking is approximately 25% in the general population, an astounding 60-70% of HIV infected subjects are smokers.

The project data revealed that cigarette smoking is the major avoidable risk factor for two main leading causes of hospitalization, community-acquired pneumonia and *Pneumocystis carinii* pneumonia. In this study, the risk of developing these pneumonias doubled as the number of packages of cigarettes per day increased. This is of concern, as Pneumonia is the main cause of hospitalization among HIV infected individuals.

Projections estimate an exponential increase in the number of HIV-infected patients living with renal insufficiency. A disturbing statistic is that 71% of HIV infected patients admitted with renal insufficiencies were current smokers, with an additional 13% indicating former tobacco use. Analysis indicated that smokers were twice more likely to be hospitalized with a renal insufficiency than non-smokers

Finally, the data indicated that HIV (+) smokers had an increased number of admissions during the year of enrollment as well as in total admissions over the previous 5 years relative to non-smokers.

Selected publications from BRP funded research in Peer Reviewed Journals:

Miguez-Burbano MJ, Burbano X, Ashkin D, Pitchenik A, Rodriguez A, Pineda L, Rodriguez N, Shor-Posner G. Impact of tobacco use on the development of opportunistic respiratory infections in HIV seropositive patients on antiretroviral therapy. *Addict Biol.* 2003;8:43-47.

Selected presentations from BRP funded research:

Miguez-Burbano MJ, Hadrigan S, Ashkin D, Rodriguez A, Burbano X, de Pool I, Shor-Posner G. The impact of tobacco on hospital admissions in HIV infected individuals. 2004 NHSN. San Antonio Texas, October 13, 2004

Miguez-Burbano MJ., Rodriguez A., Hadrigan S., Azor C. and Shor-Posner G. Renal disease in HIV infected subjects: the deleterious effect of smoking. 2004 XV Intl AIDS Conf Bangkok, Abst# 17370, Bangkok, July 11-16, 2004

Flores M., **Miguez MJ.**, Archer H., Ashkin D., Pitchenik A., Rodriguez A., Shor-Posner G. Nontuberculous mycobacterial disease: An important cause of morbi-mortality in HIV infected subjects. European Respiratory Society Congress, Abst# P2106, Vienna-Austria, Sep 27-Oct 1st, 2003