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Prevalence and trends of smoking in South African platinum miners

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DECLARATION

I, Mireille Yimnga Ngantcha Chamba Kapseh Cheyip, declare that this research report is my own work. It is being submitted for the degree of Master of Science in Medicine in the branch of Epidemiology and Biostatistics in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

…….

…….day of ……..2005

Dedicated to Bonny, Mama and Joseph for all their sacrifices

ABSTRACT

Background: In association with other occupational exposures like silica dust and radon, cigarette smoking impacts on the health of miners, especially with regard to the risk of developing COPD, PTB and lung cancer. These compensable diseases place a great burden on both miners and mines. The prevalence of smoking among black miners in South Africa is unknown and data for white miners are not recent.

Objectives: To determine the prevalence of smoking and smoking trends in miners in a platinum mining company from 1998 to 2002 and to describe some important factors associated with their smoking habits.

Methods: This was a cross-sectional study using medical surveillance data about employees of a platinum mining company from 1998 to 2002.

Results: Over 80000 repeated records of over 25000 miners were studied over the five-year period. The prevalence of smokers was 44.4%. Miners were less likely to smoke in 2002 than in 1998 (OR 0.23, CI 0.21 – 0.25). Over this period, smoking prevalence dropped from 43.3% to 31.3%. The decrease was evident in most socio-demographic groups. There was also a decrease in cigarette consumption over time ($p<0.001$). Multivariable analysis showed that whites were more likely to “always” and/or “ever” smoke than blacks (adjusted OR=2.4, CI 1.79 – 3.20 and OR 2.5, CI 1.98 – 3.27, respectively).

Conclusion: Even though there has been a decline in smoking prevalence since 1998, the relatively higher prevalence in platinum miners compared to that of the general population, and the additional effect of occupational exposures, are still a public health concern. There is need to establish smoking cessation and prevention programmes and to continue collecting detailed smoking information during annual surveillance programmes that could be used to monitor the effectiveness of such programmes.

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