1023-92-515 **Sze-Bi Hsu** (sbhsu@math.nthu.edu.tw), Department of Mathematics, National Tsing Hua University, Hsinchu, Taiwan, and **Lih-Ing W. Roeger*** (lih-ing.roeger@ttu.edu), Department of Mathematics and Statistics, Texas Tech University, Box 41042, Lubbock, TX 79409. *The Final Size of a SARS Epidemic Model Without Quarantine.* Preliminary report.

We will present the continuing work on a SARS model without quarantine by Hsu and Hsieh [SIAM J. Appl. Math., 66 (2006), 627–647]. An "acting basic reproductive number" ψ is used to predict the final size of the susceptible population. We find the relation among the final susceptible population size S_∞, the initial susceptible population S_0, and ψ. If $\psi > 1$, the disease will prevail and the final size of the susceptible, S_∞, becomes zero; therefore, everyone in the population will be infected eventually. If $\psi < 1$, the disease dies out, and then $S_\infty > 0$ which means part of the population will never be infected. Also, when $S_\infty > 0$, S_∞ is increasing with respect to the initial susceptible population S_0, and decreasing with respect to the acting basic reproductive number ψ. (Received September 15, 2006)