962-92-849 **Glenn F. Webb*** (webbgf00@ctrvax.vanderbilt.edu), Mathematics Department, Vanderbilt University, Nashville, TN 37240. *Models of vancomycin resistant enterococci epidemics in dialysis clinics.* Preliminary report.

Models of vancomycin resistant *enterococci* epidemics in dialysis clinics will be presented. Patients are distinguished by age since admission to the clinic.The densities $pu(a,t)$ of uncolonized patients and $pc(a,t)$ of colonized patients at time t with respect to clinic age a, and the populations $Hu(t)$ of uncontaminated health care workers and contaminated health care workers $Hc(t)$ satisfy

$$\frac{\partial}{\partial a}pu + \frac{\partial}{\partial t}pu = -\alpha_p\beta_p(1-\eta)\frac{Hc}{N_h}pu - \gamma_u(a)pu$$

$$\frac{\partial}{\partial a}pc + \frac{\partial}{\partial t}pc = \alpha_p\beta_p(1-\eta)\frac{Hc}{N_h}pu - \gamma_c(a)pc$$

$$pu(0,t) = \Lambda(1-\phi),\ pc(0,t) = \Lambda\phi$$

$$\frac{dHu}{dt} = -\alpha_p\rho\beta_H\frac{Pc}{Pu+Pc}Hu + \mu_H Hc$$

$$\frac{dHc}{dt} = \alpha_p\rho\beta_H\frac{Pc}{Pu+Pc}Hu - \mu_H Hc$$

where $Pu(t) = \int_0^\infty pu(a,t)da$ and $Pc(t) = \int_0^\infty pc(a,t)da$ are the total populations of uncolonized and colonized patients, respectively. (Received September 28, 2000)