1062-39-273 **Tamara Awerbuch*** (tamara@hsph.harvard.edu), Department of Population and Intern. Health, 655 Huntington Ave, Boston, MA 02115. *A system of Four Difference Equations for Exploring the Dynamics of Dengue Spread, and its Control (Work in Progress).*

We are expanding a previous system of three difference equations (Awerbuch-Friedlander T., Levins R. and Predescu M. Far East Journal of Applied Mathematics 37, 2: 215-228, 2009) to include the proportion of infected people that prompt the intervention.

Awareness (A) is prompted by the proportion of sick people (P) Control of Mosquitoes (M) is carried out directly by spraying, or by community intervention through the habitats (H).

Pn+1 = a*P(n) +[1 ...; exp(-i*Mn]*(1- P(n)) Mn+1 = l*Mn*exp(-gAn) + b*Hn*[(1- exp(-s*Mn)] Hn+1 = c*Hn/(1+p*An) + d/(1+q*An) An+1 = r* An + f*Pn

Preliminary results show that (0,0,1/(1-c),0) is an equilibrium point; and that there is also a positive equilibrium for (P, M, H and A). (Received August 10, 2010)