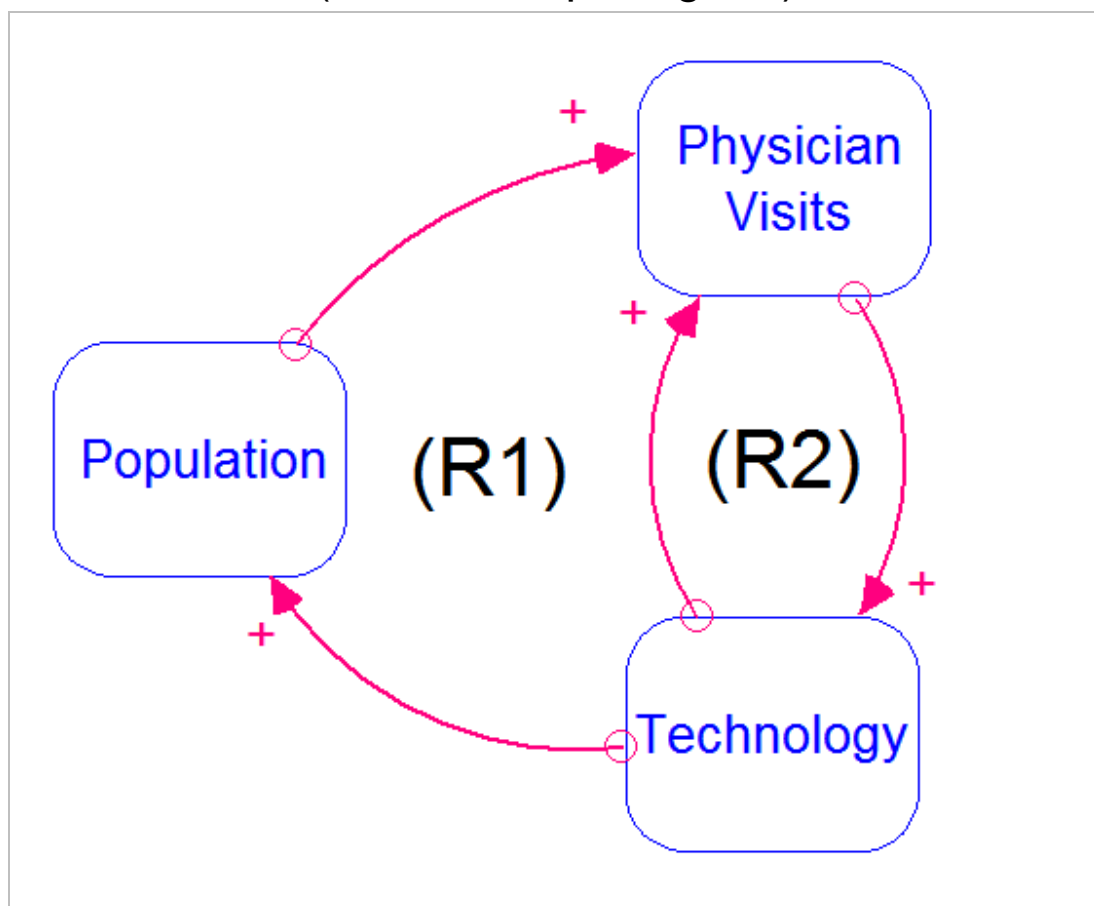# *"Getting Started with STELLA and iThink"*
International System Dynamics Conference
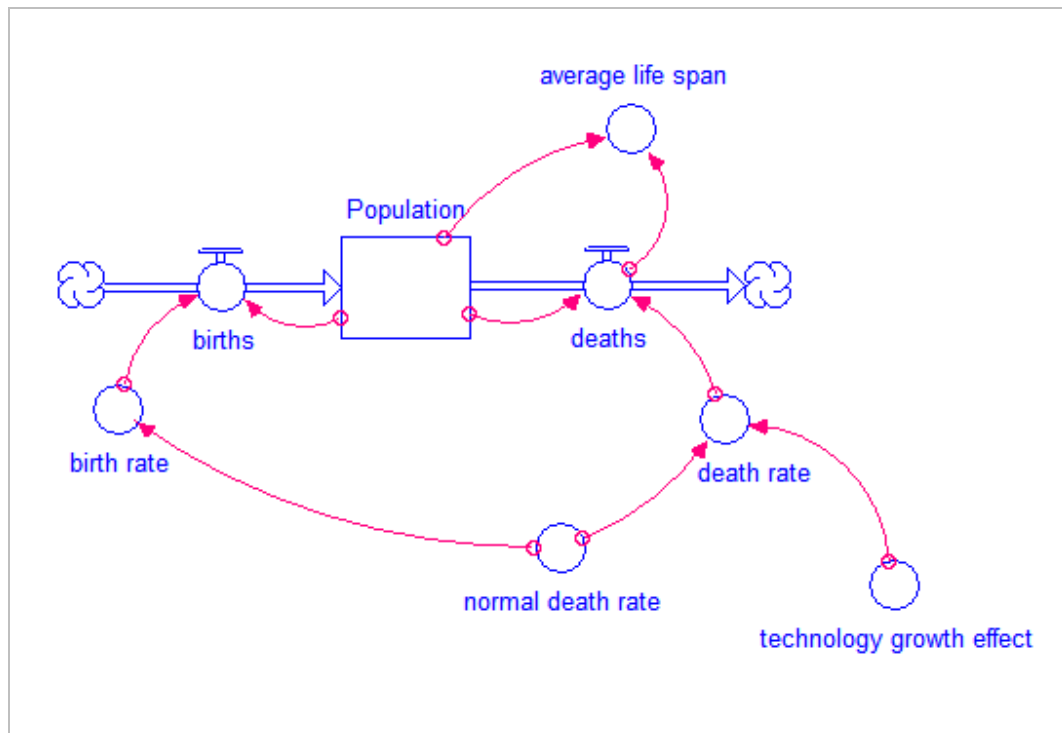## *July 30, 2009*

Health Care Dynamics Model 1
(Causal Loop Diagram)

Health Care Dynamics Model 2
(Population Module)

Population = 300000 { in thousands }

births = birth_rate*Population
deaths = death_rate*Population

normal_death_rate = 0.013 {1.3% per year}
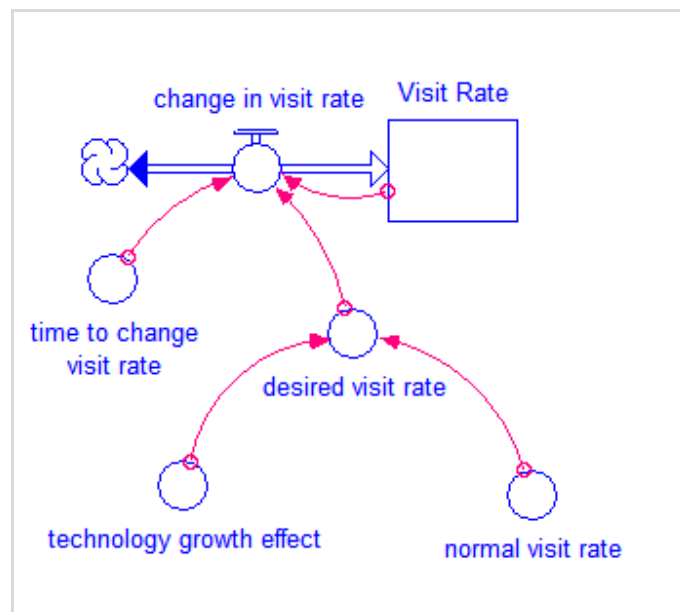birth_rate = INIT(normal_death_rate)
death_rate = INIT(normal_death_rate)/technology_growth_effect
technology_growth_effect = 1

average_life_span = Population/deaths

Health Care Dynamics Model 3
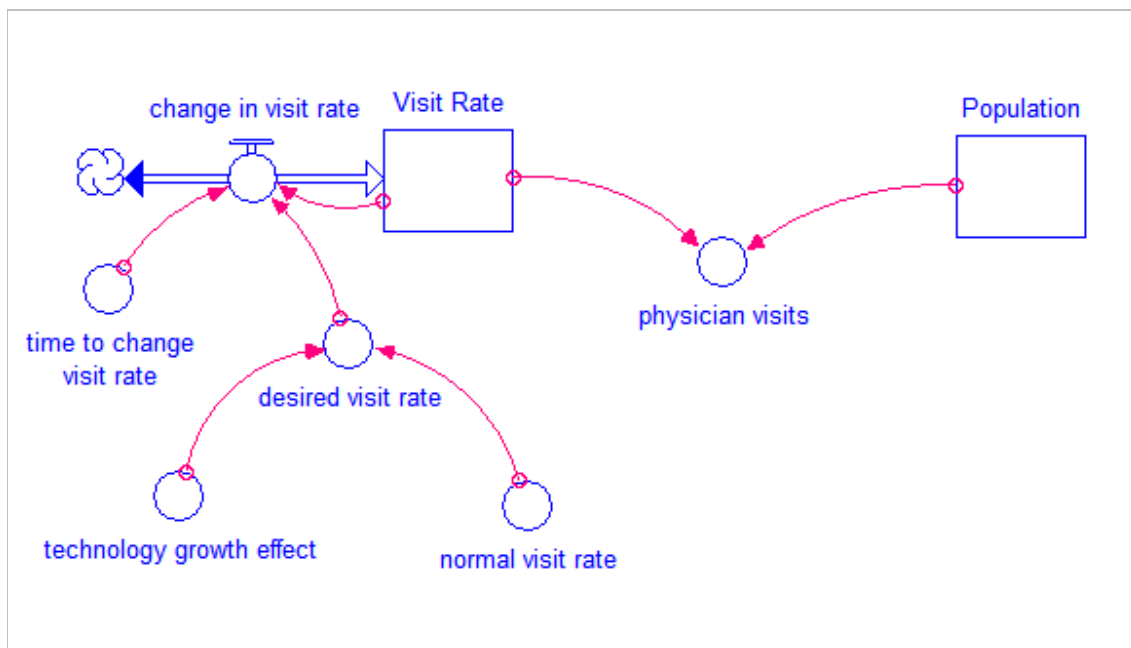## (Physician Visits Module – Part 1)

Visit_Rate = normal_visit_rate

change_in_visit_rate = (desired_visit_rate - Visit_Rate)/time_to_change_visit_rate
time_to_change_visit_rate = 1

desired_visit_rate = normal_visit_rate *technology_growth_effect
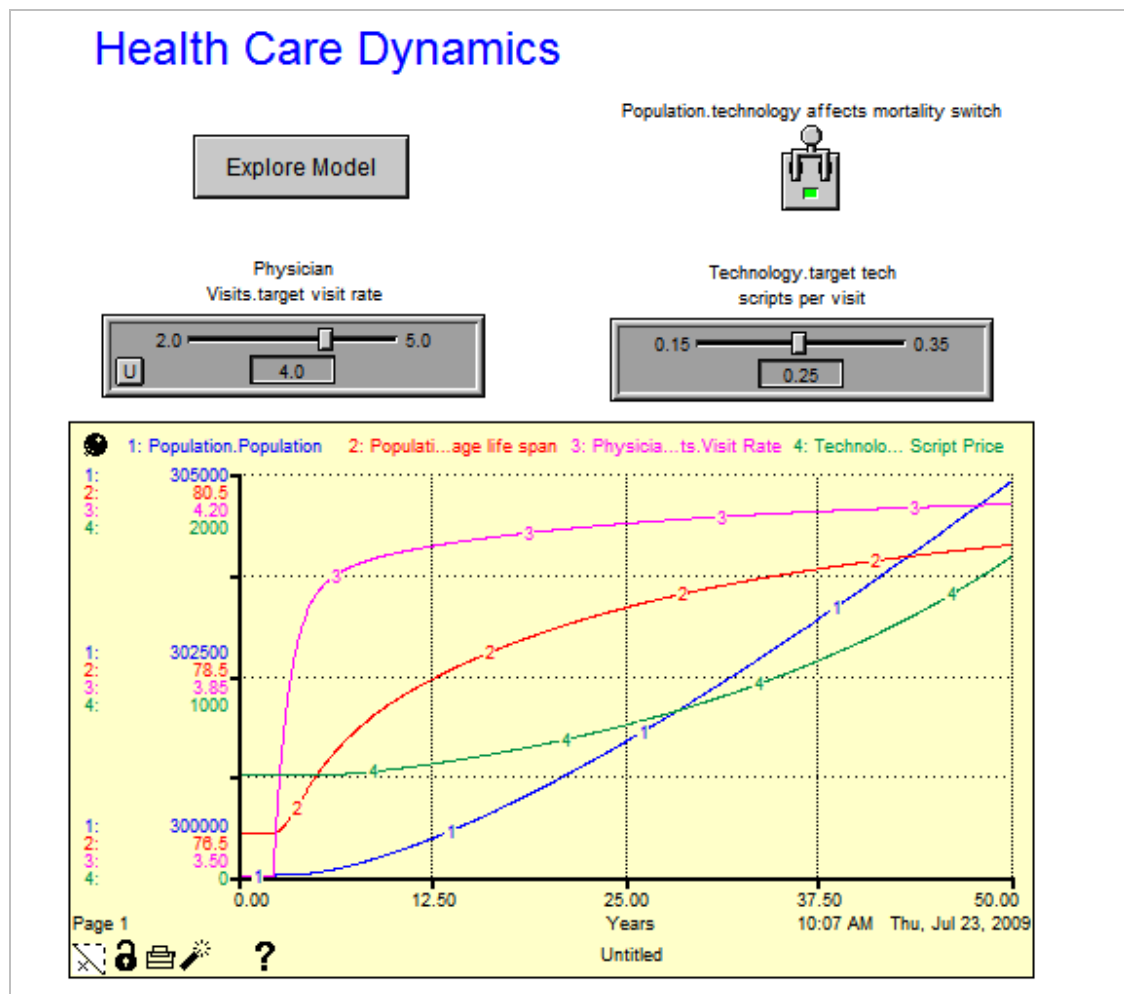normal_visit_rate = 3.5
technology_growth_effect = 1

Health Care Dynamics Model 3
(Physician Visits Module – Part 2)

Population = 300000
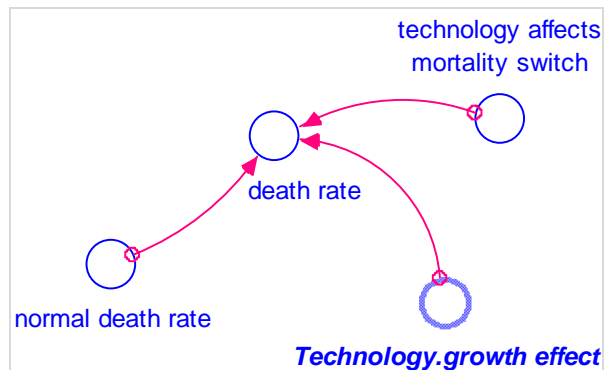physician_visits = Population*Visit_Rate
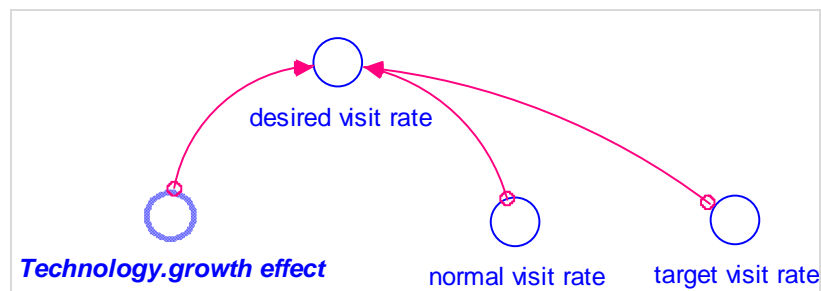
Health Care Dynamics Model 4
(Interface Layer)

Health Care Dynamics Model 4
(Model Changes for Interface Layer)

Population module:

technology_affects_mortality_switch = 1

death_rate = INIT(normal_death_rate)/((1 - technology_affects_mortality_switch)
    + technology_affects_mortality_switch*Technology.growth_effect)

Physician Visits module:

target_visit_rate = 3.5

desired_visit_rate = (normal_visit_rate
    + STEP(target_visit_rate - normal_visit_rate, 2))*Technology.growth_effect