SUMMARIES OF RESEARCH DISCUSSION PAPERS

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AN ACTUARIAL MODEL FOR AIDS

By A. D. WILKIE

THIS paper describes fully the actuarial model used by the Institute of Actuaries AIDS Working Party for the calculations presented in AIDS Bulletins Nos 1, 2, and 3. The model is described in terms of states: Clear, At Risk, Positive, Immune (not in fact used by the Working Party), Sick and Dead. Conditional on a given starting position, the proportions in each state at future times are governed by a series of differential equations, which are mostly of the usual actuarial type. However, the representation of infection follows a more complex epidemiological model.

The various transition intensities (forces of mortality, infection, etc.) used in the different set of projections are described, and the reasons for the choice of values are explained. There is some discussion of alternative formulae for the distribution of the 'incubation period'.

The initial conditions used for population projections are described. Finally, there is brief comment about the way of allowing for insurance selection, discussed rather more fully in AIDS Bulletin No. 2.

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