LETTERS

BIOMEDICAL AND SOCIAL DIMENSIONS OF HIV PREVENTION

The recent article by Kippax and Stephenson argues that increasing bio medicalization distorts prevention efforts.[1] All prevention requires that people change their social practices and such changes can only be effectively sustained if they are supported by broader social transformation. Developing effective HIV prevention requires that the field move beyond the distinction between biomedical and social dimensions of HIV. Effective prevention requires that biomedical technologies, behavioral strategies, and social structures are not treated as separate entities.[1] We agree.

We propose that part of the problem results from the focus on interventions as opposed to prevention programs. Despite the encouragement for multidisciplinary teams working together, conducting prevention science, most efforts in HIV prevention reflect a disciplinary focus. Interventions tend to be behavioral, structural, or biomedical, whereas prevention programs, out of necessity, have to be all of the above. Even within the biomedical research field, there has been recent acknowledgment that the "silo-ization" of preventive intervention modalities is not tenable.[2] The focus on interventions brings with it additional problems. More often than not the "intervention" approach fails to recognize the importance of synergistic or antagonistic interactions between interventions; the interaction between epidemiological and social context and interventions; and the potential diminishing marginal returns resulting from implementation of multiple interventions.[3] The "combination prevention" strategy fails to solve this problem.[4] It focuses on combining a few interventions; it does not bring the necessary systems approach to the analysis of context, interventions, and the resulting interactions. What is needed is a focus on prevention programs and the use of a complex adaptive-systems approach in analyzing context, interventions, and the resulting interactions.[5,6]

The emerging view is that populations that are the focus of prevention efforts constitute complex adaptive systems with distinct characteristics and that the effectiveness of prevention can only be defined as a function of the interaction between the preventive intervention mix and the population context. This view necessitates a new understanding of prevention science, one based on the basic tenets of complexity sciences, which include concepts of feedback loops, path dependence, phase transitions, compensatory mechanisms, and emergent properties.

We need an approach that is program-centered, population-based, and that attempts to understand and evaluate a multiplicity of interventions in different contexts, and at a large scale. Policy makers and program managers need to be fully engaged to develop prevention science at the practical level.

Kippax and Stephenson have started an important dialogue. The prevention field needs to expand the dialogue. ■

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KIPPAX AND STEPHENSON RESPOND

We are pleased that Aral and Blanchard concur that public health needs to move beyond the distinction between biomedical and social dimensions of HIV prevention and resist the increasing biomedicalization of HIV