

Strategic Roles for Health Communication in Combination HIV Prevention and Care Programs

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Abstract: This special issue of *JAIDS: Journal of Acquired Immune Deficiency Syndromes* is devoted to health communication and its role in and impact on HIV prevention and care. The authors in this special issue have tackled a wide swath of topics, seeking to introduce a wider biomedical audience to core health communication principles, strategies, and evidence of effectiveness. Better awareness of health communication strategies and concepts can enable the broader biomedical community to partner with health communication experts in reducing the risk of HIV, sexually transmitted infections, and tuberculosis and maximize linkage and adherence to care. Interventions can be strengthened when biomedical and health communication approaches are combined in strategic and evidence-based ways. Several of the articles in this special issue present the current evidence for health communication's impact. These articles show how far we have come and yet how much further we have to go to document impact convincingly. Examples of the biomedical approaches to HIV control include treatment as prevention, voluntary medical male circumcision, preexposure prophylaxis, sterile needle exchange, opiate substitution therapy, and prevention of mother-to-child transmission. None will succeed without behavior change, which can be facilitated by effective health communication.

Key Words: health communication, HIV prevention, care and treatment, low- and middle-income countries, effectiveness, biomedical intervention

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Health communication is a multifaceted field that encompasses the diverse approaches and processes through which information is exchanged between health prevention and/or care providers, educators, and advocates and intended

beneficiaries.¹ As commercial advertisers know, the content, medium, and style of the messaging must suit different societal contexts. Audiences differ as to their assumptions, attitudes, self-efficacy, and receptivity to messages from health educators, whether they are health authorities or community peers. Language, culture, religion, education, gender, age group, experience with the health topic in question, socioeconomic status, level of trust, degree of social isolation or integration, social norms, and other elements in a person's background and social context shape a person's behavior and their response to key health messages. Variations in health literacy and numeracy can influence the effectiveness of health messages for certain audiences (eg, in terms of medical care access and correct use of prescription drugs).^{2–4} Members of stigmatized or marginalized subpopulations may respond differently to messages than would persons from the majority subpopulation. People's responses may evolve over time as historical changes take place. Given this complex context, it is no surprise that many biomedically oriented scientists and clinicians feel poorly informed about the technical aspects of modern health communication. Furthermore, there is a need to more fully elaborate and evaluate the many complementary roles that health communication and biomedical prevention and care programs can play; this is an emerging landscape with many possible avenues of synergy.

To that end, on July 30 to August 1, 2013, the Health Communication Capacity Collaborative project sponsored a 3-day symposium in Baltimore, MD, on HIV and health communication. Its interdisciplinary audience included the sponsor, the United States Agency for International Development, and the symposium coordinator, the Center for Communication Programs of the Johns Hopkins Bloomberg School of Public Health. This symposium was entitled "Evidence Review: Impact of Health Communication on HIV Prevention Outcomes Charting the Way Forward." Its goal was to examine the evidence, identify gaps, and make recommendations on the areas where health communication enhances critical pathways toward behaviors for HIV prevention and self-care, including support to biomedical interventions.

At the conclusion of the symposium, a strong consensus suggested the value this special supplement of *JAIDS: Journal of Acquired Immune Deficiency Syndromes* would have to introduce health communication principles to a wider clinical and biomedical audience, as well as to explore key cross-cutting issues among persons seeking to prevent HIV transmission and to treat persons living with HIV. A central theme was the key roles that health communication can play in supporting and synergizing with evidence-based biomedical

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interventions.⁵ This *JAIDS: Journal of Acquired Immune Deficiency Syndromes* supplement seeks to broaden this discussion across disciplines so as to maximize the combined impact, particularly in low- and middle-income countries, of health communication, other behavioral approaches, and biomedical approaches to HIV prevention and care.

Our assumption in this special issue is that there is a large pool of clinicians and public health scientists who have vital expertise in HIV control and care but who are new to the field of health communication. We have invited authors to capitalize on strategic health communication approaches and to build the evidence base for health communication's contribution to and impact on both behavioral and biomedical outcomes. Thus, this supplement illuminates key issues relating to how strategic communication has best been used to improve HIV prevention and care outcomes, how its impact can be measured, and how it can be better integrated in future HIV programs in low- and middle-income countries.

ROLE OF HEALTH COMMUNICATION IN BIOMEDICAL OUTCOMES IN RESEARCH

Virtually all biomedical interventions that have been deemed efficacious rely on behavioral change of one sort or another, and clients make key health-related decisions outside of the clinical setting essentially everyday.^{6–11} Condom use and preexposure prophylaxis, for example, require complex behaviors to use the products. Persons living with HIV are asked to adhere to their medications (for their own health and for “treatment as prevention”), another complex behavior that must be strictly maintained, generally for a lifetime. Male circumcision requires consent from adults who want the procedure or assent from parents and practitioners on behalf of male adolescents or newborns. It is also vital that men who have been circumcised refrain from sexual activity for the 6 weeks that it takes the wound to heal.¹² For persons who inject drugs, sterile needles and syringes must be obtained and used, and/or opiate substitution therapy must be adhered to. Pregnant women must obtain HIV testing, agree to take the antiretroviral intervention if they test HIV positive, adhere to treatment, and ensure that their newborn infants continue the required antiretroviral prophylaxis. Any future vaccine will require persons to agree to the prime series and boosters.

As these many instances illustrate, biomedical interventions require behavior change, just as primary approaches to behavioral risk reduction do, for example, limiting the number of sexual partners and engaging in lower risk sexual behaviors. When proponents of biomedical interventions highlight their efficacy, many do not appreciate fully that for user-effectiveness outside idealized clinical trial conditions, behavior change is *still essential*. Effective health communication is vital to the success of biomedical HIV interventions.

Health communication takes place at the individual level (eg, counseling), through family- or community-based interventions, at the community level, within service delivery, or at a population level, often through the mass media and, increasingly, via mHealth, using mobile devices, such as cell phones, smart phones, and the Internet.^{13–18} Furthermore, health communication may address the behavior of the

individual, or it may seek to change the environment and structure that influences and sometimes even determines individual behavior. All may be woven into a fabric of outreach styles and approaches. All are within the bailiwick of health communication professionals. The articles in this supplement address these considerations.

OVERVIEW OF THE SPECIAL ISSUE

Framing of Health Communication

The first article entitled *What is health communication and how does it affect the HIV/AIDS continuum of care? A brief primer and case study from New York City*¹⁹ defines health communication and describes how it can affect HIV-related knowledge, attitudes, risk perceptions, and behavioral decisions across the prevention to treatment spectrum, thereby achieving better HIV outcomes. Building on this foundation, *Health behavior change models for HIV prevention and AIDS care: practical recommendations for a multi-level approach*²⁰ reviews theories of health behavior change and contributes to a holistic theorization while advancing understanding of behavior related to HIV prevention and care. *Effects of behavioral intervention content on HIV prevention outcomes: a meta-review of meta-analyses*²¹ examines meta-analyses focused on the content of HIV prevention interventions, arguing for the use of formal taxonomies of behavior change techniques to increase specificity about what aspects of interventions contribute to improvements in HIV outcomes.

Design and Measurement

The second section of this special issue focuses on research design and measurement as they relate to assessing behavioral outcomes in the realm of HIV and AIDS. *Strengthening nonrandomized studies of health communication strategies for HIV prevention*²² explores factors that complicate the impact evaluation of health communication interventions and encourages the use of cluster-level quasiexperimental designs in evaluations.

*HIV communication programs, condom use at sexual debut, and protection from HIV in South Africa, 2005*²³ presents a secondary statistical analysis of the 2005 national South African Human Sciences Research Council survey, revealing how condom use at first sex helps to explain the reduction in HIV prevalence in recent years. The combined application of structural equation modeling with biprobit regression and propensity score matching with sensitivity analysis documents that those who used a condom at sexual debut were less likely to have acquired HIV than those who did not, suggesting the importance of early condom advocacy and establishment of adolescent norms.

*Validity of behavioral measures as proxies for HIV-related biological outcomes*²⁴ then reviews the literature, assessing behavior change after exposure to HIV health communication, including interventions addressing sexual behavior, substance use, and medication adherence. The authors suggest that self-reports and biological measures should be jointly used to measure all 3 types of behaviors.

The fourth article in the design and measurement section, *Enhancing reporting of behavior change intervention evaluations*,²⁵ addresses 4 common practices that weaken reporting of evaluations and makes recommendations for improvement.

Implementation Science

The third section of this supplement unpacks the effects of health communication across prevention, care, and treatment efforts ranging from risk reduction to supporting improved progression through the treatment cascade. The first article, *HIV communication capacity strengthening: a critical review*²⁶ finds that there are few tools that evaluate capacity strengthening efforts. The authors propose, therefore, a holistic model for HIV communication capacity strengthening and call for rigorous evaluation to support the scale-up of capacity building interventions that optimally strengthen communication for HIV prevention, care, and treatment.

*A role for health communication in the continuum of HIV care, treatment, and prevention*²⁷ describes areas where health communication can enhance HIV treatment, care, and prevention, presenting evidence from interventions that include health communication components. *Role of community-level factors across the treatment cascade: a critical review*²⁸ examines the literature to better understand community-level factors associated with the progression from testing to treatment and care in low- and middle-income countries.

The next article, *Enhancing benefits or increasing harms: community responses for HIV among men who have sex with men, transgender women, female sex workers, and people who inject drugs*,²⁹ systematically reviews the evidence on community-level determinants of HIV-related outcomes for key populations. It highlights the importance of the continued measurement of community-level determinants of HIV risks. To conclude the supplement, *Effectiveness of mass media interventions for HIV prevention, 1986–2013: a meta-analysis*³⁰ shows how mass media interventions can increase condom use and improve knowledge of transmission and prevention.

IMPLICATIONS

Although attempting to be comprehensive, this special issue also highlights a number of areas in critical need of further research. We must continue to tackle the question of how health communication can be used most strategically in prevention efforts and to work across disciplines to broaden our thinking and challenge our assumptions. Further research to explore how communication can enhance critical preventive behavioral pathways and support biomedical interventions will help illuminate the most promising and effective strategies, given local sociocultural environments. In addition, further exploration of the economic evaluation of health communication is necessary so that program managers and policy makers can better understand the cost, cost-effectiveness, and return on investment of such interventions.³¹

This special issue offers an overview of the data (and data gaps) on the strengths, roles, and potential uses for health communication in this era of HIV prevention and treatment. Observational data suggest the impact of health communication

to date, but perhaps, the most crucial challenges and most telling evidence will come from work on the continuum of care that is being rolled out in “treatment as prevention” initiatives, preexposure prophylaxis, voluntary medical male circumcision, and combination prevention initiatives.^{32–47} Integration of behavioral approaches facilitated by health communication into these biomedical approaches will determine the degree, and speed, of their success. The true test of all HIV prevention and treatment efforts is whether, working in concert, they reduce HIV incidence, transmission rates, and deaths. History will judge the combined effectiveness of our multidisciplinary efforts in terms of whether we truly took a step toward an “AIDS Free Generation.”

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