

BSPS NEWS

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Further training workshop information:

<https://onlineshop.st->

age at first birth, pregnancy and birth intervals, parental investment and grandmotherhood. One session focussed exclusively on a particularly important life history trade-off, that between investment in reproduction and investment in somatic maintenance. The remaining two sessions concerned

statistical methods such as event history analysis, which can incorporate time varying covariates. Such techniques are vitally important for interpreting the dynamic processes that occur during the life course.

The other theme that emerged was the importance of kin in female life histories. A number of empirical papers demonstrated the key importance of relatives in female life history, including Donna Leonetti's (University of Washington) analysis of first births in two Indian communities, Monique Borgerhoff Mulder's (UC Davis) paper on contraceptive use in rural Tanzania, Brooke Scelza's (UCLA) paper on grandmaternal investment in Martu Aborigines, Australia and David Coall's (University of Basel) paper on grandparental investment in modern Switzerland. Papers by Meredith Reiche (Harvard University), Jonathan Wells (Institute of Child Health, University College London) and Lesley Newson (University of Exeter) all explored the theoretical implications of the importance of kin. Reiche's paper considered how female life history trade-offs would be better understood in the context of 'pooled energy budgets', that is the energy budgets of not just the woman herself but all her relatives, including her partner, who may be contributing to her reproductive effort. Wells's paper discussed the importance of kin in the context of genomic imprinting, and how this may have influenced the evolution of female reproductive behaviour. Lesley Newson brought the influence of kin to bear on the puzzle of the demographic transition, and suggested that part of the explanation for low fertility in industrialised societies is a lack of kin support, given the evidence that kin provide both encouragement and practical support for raising children.

Much of the research presented at the workshop has important policy implications, touched upon by the presenters. For example, Alejandra Nunez-de-la-Mora's paper on the trade-off between immune defence and reproduction highlighted the need to take a holistic approach to development, since a reduction in disease prevalence may inadvertently lead to an increase in fecundity. One paper focussed exclusively on the implications of such life history research for policy-makers. Sarah Johns, from the University of

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need for better HIV surveillance and other strategic health information on these key populations, both in generalised and concentrated epidemics. For example Dr G P Garnett (UK) proposed the use of theoretical frameworks, such as the proximate determinants (Gregson/Boerma & Weir, 2005) or social epidemiology framework (Poundstone et al, 2004) which take social and structural determinants of health outcomes into account, to develop a greater understanding of the risks of HIV acquisition, and hence HIV incidence.

Vaccine research and viral reservoirs

An efficacious HIV vaccine will not be available in the foreseeable future. Research such as that presented by R Siliciano et al (USA) showed that while highly active anti-retroviral treatment (HAART) can stop viral replication of HIV, it cannot eradicate it from the body because of the persistence of HIV in reservoirs in resting CD4 T-cells (white blood cells). These latent reservoirs allow the ongoing production of the virus during HAART. The field of HIV vaccine research is currently in a phase of critical re-evaluation after the failure of the Merck vaccine trials (STEP and Phambili clinical trials) and the early termination of the PAVE 100 trials. Simply put, a much better understanding of the viral and molecular determinants of HIV transmission and pathogenesis appears to be necessary in order to improve the prospects of generating an effective AIDS vaccine.

Clinical treatment and care

While effective antiretroviral therapies are available, questions about the appropriate time to initiate antiretroviral therapy (ART) and what drugs to start on remain central to people living with HIV and their clinicians (i.e. Anton Pozniak, UK). There is growing evidence from recent trials that suggests that earlier ART intervention may protect against not only AIDS-defining illnesses but also non-AIDS cancers and heart, liver or kidney diseases. These findings may result in changes in recommendations regarding ART initiation and in WHO treatment guidelines. If that happens, the number of people who need treatment can be expected to increase substantially.

In terms of clinical management, an important theme was the need to develop and implement inexpensive, quality-assured diagnostic and monitoring tools for use in resource-limited settings. For example, there have been complications in assessing the presence of drug resistant HIV antiretroviral strains in resource-constrained countries where, in the absence of viral load monitoring, changes in ART are driven only by signs of clinical failure (i.e. Dr Pillay).

Prevention research

In terms of prevention research, one major theme was the possibility of using oral and topical anti-retroviral HIV drugs not only as post-infection therapy but also as pre-exposure prophylaxis (PrEP) (i.e. Dr M Cohen, USA). Should the prophylactic use of antiretroviral drugs both to block infection and to reduce infectiousness in HIV-positive individuals prove effective, issues related to drug toxicity, long-term adherence, drug resistance and distribution will have to be considered before scale up (N S Padian et al and from personal communication with Prof A N Phillips, UK).

Yet, it was emphasised repeatedly that there is no "technical fix" and that we cannot "treat our way out of the epidemic" (J Sepulveda, Mexico/USA). While a high number of treated individuals (or less infectious individuals) could reduce HIV transmission at a population level, the fact remains that for every two persons starting anti-retroviral therapy there are five new infections.

Thus, in light of recent setbacks in terms of a vaccine and with oral and vaginal antiretrovirals as a preventative measure still being assessed, HIV experts, such as M H Merson (USA) et al, during a special session by the Lancet, called for a reinvigorated commitment to prevention research and accelerated implementation of proven prevention strategies.

Since there is no "magic bullet" against HIV/AIDS, the new buzzword seems to have become "combination prevention strategies" in which biomedical interventions, such as male condom use, ARTs and male circumcision, should be integrated with other modes of prevention, such as behavioural strategies to affect health behavioural change, and structural approaches that seek to change the context that contributes to vulnerability to and risk of HIV, such as poverty, violence, stigmatisation and discrimination. This way the prevention of HIV transmission could occur on multiple levels and increase the

Innovative theories and methodologies in social science research

Within the multi-disciplinary perspectives in the social, behavioural and economic sciences, determinants of the epidemic, such as poverty, sexual behaviour, drug use, gender relations and globalisation; and the relationships between HIV/AIDS and issues such as war, violence and security, migration, intergenerational issues, labour and trade relations, and social movements, were examined. Further, the need for research theories and methodologies to continue to move beyond the epidemiological realm, to include social and structural determinants of HIV/AIDS, alongside the behavioural and biological factors, was identified as being critical to the development of more effective HIV/AIDS intervention programmes.