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Ek Pal
Cultural director: Karamjeet Ballagan
Running time: 40 mins
Birmingham Health Promotion Unit (tel + 44 (0)121 446 1088)
Available in Bengali, Hindi, and English versions

Bollywood film is not a typical medium for public-health campaigns, but a health-promotion worker recognised the need to make UK residents of south Asian origin more aware of HIV/AIDS. Karamjeet Ballagan persuaded Bollywood film producers and prominent Indian soap actors to take on the project, entitled Ek Pal, meaning one moment of regret, after she realised how difficult it was to reach vulnerable groups—particularly women—with controversial messages about sex outside marriage and HIV/AIDS.

Ek Pal’s storyline relies on the stock Bollywood themes of love and tragedy. A young Indian man, Sanjay, discovers he has HIV, probably contracted on a business trip to Bombay, and not only does he have to tell his wife but also his young lover, with tragic consequences. Basic messages about infection, transmission, and testing are covered. People familiar with the UK AIDS public-health campaigns of the 1980s will notice how starkly Ek Pal contrasts, but the aim of the film was to engage the south Asian community in a dialogue about the disease and to give the audience “ownership” of the message. Says Ballagan: “Almost every south Asian family in the UK and India watches Bollywood films. I wanted to get the issue of HIV and AIDS into the home . . . We wanted an emotional story that would engage the whole family in the privacy of their home. It is vital that we eradicate the image that HIV and AIDS has of being a disease which affects only prostitutes or gay men”.

In the past 5 years HIV incidence among UK residents of south Asian origin has increased by at least 70%. Promiscuity among the young and extramarital affairs are increasingly common, but those hardest to reach are women, who often remain at home while their husbands are mixing socially. Even in the medical community cultural prejudices prevail: a discussion after the December 1 (World Aids Day) London premiere of Ek Pal revealed one case of a woman whose HIV infection went undetected for a decade because doctors did not even consider it as a diagnosis.

The script of Ek Pal was scrutinised by leaders of the Birmingham Asian community, whose endorsement was needed if the film was to be a success. Ballagan acknowledges that the film is only the first step in a process and anticipates a second film to empower women to negotiate safe sex.

Ek Pal is available from the Birmingham Health Promotion Unit and will be launched by the BBC World Service in Delhi.

Rachael Paterson

The following reviews highlight projects that are using technology to rapidly detect and counter bioterrorism threats and prevent the spread of infectious diseases.

Nanoparticles as biohazard treatment
Researchers at Argonne National Laboratory (University of Chicago, IL, USA) are testing a system that would cleanse the blood of toxins using tiny magnetic particles and an external magnetic separator. As shown in the figure (this page), the developers are studying the magnetised nanoparticles with a laser, which assesses the particles’ size, shape, stability against coagulation, and surface charge.

Currently available detoxification methods—primarily dialysis and filtration techniques—work only with a few types of toxins and are both costly and time-consuming, according to the researchers. Therefore, their use is limited to patients with kidney failure and certain types of drug overdoses. For most biohazard exposures, supportive treatment is the only option.

The new biohazard detoxification system would use biodegradable nanoparticles coated with polyethylene (to prevent destruction by white blood cells), containing both a magnetic iron compound and a protein that binds to a specific toxin. The particles would be injected intravenously into the circulation. To remove the nanoparticles and attached toxins, a small dual-channel shunt inserted into the arm or leg would circulate blood to and from the magnetic separator, where powerful magnets would immobilise the iron-based particles, allowing
cleansed blood to flow back into the body. Recent tests in rats showed promise, the research team reports. For more information see http://www.anl.gov/OPA/whatsnew/031107nanodetox.htm

“Nanofingers” to support chemical sensors
Nanotechnology is also being used to develop relatively inexpensive devices to detect toxic chemicals in the air. Ohio University researchers reported at the International Conference on Materials for Advanced Technologies (December 7–12 in Singapore; http://www.mrs.org.sg/icmat2003) that they have found an easy way to carve the surface of ceramic material into tiny filaments, or “nanofingers” (figure, this page), creating a sensor platform. Work has advanced to the point that a penny-sized sample of the material can detect the presence of hydrogen. For more information see http://researchnews.osu.edu/archive/nanofing.htm

Smallpox research grid
Grid computing—harnessing the power of individual computers to create a virtual “supercomputer”—has been used to screen molecules that show promise against anthrax and certain forms of cancer. Another ongoing project, the Smallpox Research Grid, takes a similar approach. Users download a software “agent” that screens antismallpox molecules when their computer is otherwise idle. Data on the molecules are regularly uploaded to the grid’s server for evaluation. The website provides full instructions, a frequently asked questions page, and online discussion groups. The project is funded by the United States Army Medical Research Institute of Infectious Diseases and IBM, with support from various technology companies, universities, and medical centres. For more information see http://www.grid.org/projects/smallpox

Electronic disease surveillance in Pennsylvania
Pennsylvania’s web-based public-health reporting system recently played an important role in identifying the source and curtailing the spread of a state-wide hepatitis A outbreak. The system—Pennsylvania’s National Electronic Disease Surveillance System (PA-NEDSS)—was called into action when an emergency physician in Pittsburgh called the state’s health department after seeing several patients with the same symptoms. PA-NEDSS “soon found the common thread among everyone with the illness”, according to a report in Government Computer News (http://www.gcn.com/vol_01o1/web/24189-1.html). PA-NEDSS is part of a national initiative driven by the US Centers for Disease Control and Prevention (CDC). The system serves as a “web channel for physicians, hospitals, laboratories, clinicians, and other health care providers” to report communicable and infectious diseases to both the state health department and to the CDC. More than 121 000 reports have been submitted to date.

For more information see http://www.dsf.health.state.pa.us/health/cwp/view.asp?a=171&Q=230681; http://www.mtlsd.org/district/stuff/pahealthalert62.pdf; http://www.cdc.gov/phin/conference_presentations/05-15-03/8A/PA_NEDSS_Features_Specs.pdf

China and USA gear up for SARS
The national severe acute respiratory syndrome (SARS) control and reporting system went into operation in China on November 6, 2003, to provide 24-hour online monitoring and consultation about the disease. Li Liming, director of the Chinese Centre for Disease Prevention and Control, is quoted as saying that the system “will guarantee fast reporting of new SARS cases”. Up to 20 000 users—who can access SARS medical information and receive online consulting—can be accommodated at the same time.

Several days earlier, the US CDC released a draft plan outlining the US response to a SARS outbreak. The plan includes a web-based reporting system that would permit individual state health departments to upload information from their databases or enter data directly into the system; the CDC would transmit the data to state health departments nationally on a daily basis. The complete draft plan, which includes information on SARS surveillance, community containment measures, and managing international travel-related transmission risk, is available for downloading in PDF format. Relevant slide sets and updated SARS guidance for clinicians and laboratories are also available from this section of the CDC site.

For more information see http://www1.chinadaily.com.cn/en/doc/2003-11/06/content_278867.htm; http://www.cdc.gov/ncidod/sars/sarsprepplan.htm

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Erratum
Russell AD. Biocide use and antibiotic resistance: the relevance of laboratory findings to clinical and environmental situations. Lancet Infect Dis 2003; 3: 794–803. In figure 2 of this Review, the text under the arrow on the left side of the cell should read: Stress response of cell.

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