

both HIV/AIDS prevention and care. Bangladesh currently has 102 VCT centres. This study was aimed to identify the status of existing VCT services, analyse the policy documents and identify the needs perceived by the service recipients.

**Methods** 30 in depth interviews with key informants (eg, GoB, NAC, UNAIDS, WHO, INGOs) and 24 focus group discussion (FGDs) with 120 males and 97 females were conducted. The respondents include sex workers (M&F), MSMs, transgender, PLWHIV, migrant workers and youth.

**Results** Existing VCT services are rather peer driven than voluntary. Neither the policy documents nor the existing intervention takes into account the needs of street children, underaged sex workers, adolescents and youth, leading to unequal VCT service coverage. Stigma and discrimination is the main reason for not seeking services. National policy or existing VCT guidelines do not suggest any unique mechanism for demand creating campaign.

**Conclusions** Policy reformulation and separate SOP for VCT is needed immediately. Streamlining of VCT services under government ownership can be an initiative for enhancing the service delivery regime. Health providers with excellent counselling skills are required in large numbers.

#### SP4-19 USE OF LOGISTIC REGRESSION AND RECEIVER OPERATING CHARACTERISTIC CURVES TO DISCRIMINATE BETWEEN BLOOD DONORS AND NON-DONORS AMONG NORTH AMERICAN MEDICAL STUDENTS IN GRENADA, WEST INDIES

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**Introduction** The WHO estimates that 50 units of blood per 1000 inhabitants per year is necessary to meet the transfusion needs of a country. In Grenada 8.7 units are donated per 1000 inhabitants yearly.

**Methods** We surveyed 452 St. George's University second year medical school students (>95% North American) regarding blood donation attitudes and experiences before and after arrival in Grenada. This analysis of the 363 responses, determined if age, gender, knowledge of blood group, time since first arrival in Grenada and donating blood in the year preceding arrival would predict who donated (14%) since arrival. In SPSS, we used logistic regression to estimate probabilities of donating blood since arrival as a function of each covariate. From these probabilities we generated Receiver Operating Characteristic curves with the area under each curve estimating the covariate's ability to predict blood donation after arrival in Grenada.

**Results** 68% of the time [95% CI 60% to 76%] students who had donated blood the year before arrival were more likely to be donors after arrival than those who had not. This percentage was slightly higher (72%, 95% CI 63% to 80%) if, compared to the same group, these students had been in Grenada for a longer time and knew their blood group. Neither gender nor age showed predictive ability.

**Conclusion** Blood drive promotion should first target students who were not donors the year before arriving in Grenada as they are less likely to donate, without prompting, upon arrival.

#### SP4-20 INFLUENCE OF SOCIO-CULTURAL PRACTICES ON HIV INFECTION IN TWO NAIROBI SLUMS; A CROSS-SECTIONAL STUDY

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**Background** HIV/AIDS is the leading cause of death in Africa accounting for more than 20% of all deaths. Major concerns have

been expressed regarding the continued rise of HIV infections among specific cultural groupings.

**Objective** To describe the association between socio-cultural practices (circumcision and pubic hair removal) and HIV infection risk in informal urban settlements.

**Methods** Data were collected from the Nairobi Urban Health and Demographic Surveillance System between January 2007 and December 2008. A total of 4767 residents of Viwandani and Koro-gocho slums, between the ages of 15–54 years for males and 15–49 years for females were recruited. Data were collected using interviewer-administered questionnaires. HIV serostatus was assessed using Determine® HIV-1/HIV-2 (Abbott) and Uni-Gold Test kits.

**Findings** The highest HIV infection burden was observed among participants aged 25–34 years (40%). Among HIV+ men, 64% were circumcised compared to 88% among HIV– men. Majority of participants were circumcised before they were 12 years old and there were no differences among the HIV+ and the HIV–. A similar proportion of HIV+ (85%) and HIV– (83%) individuals had ever removed/shaved their pubic hair. After controlling for certain factors, circumcised men had a threefold reduced risk of developing HIV (OR 0.28; 95% CI 0.16 to 0.47;  $p<0.01$ ) whereas those that had ever removed their pubic hair had only a onefold reduced risk of developing HIV (OR 0.98; 95% CI 0.48% to 1.98%;  $p>0.05$ ).

**Conclusion** Our study found an association between circumcision and HIV, supporting findings from other studies.

#### SP4-21 CLINICAL VALIDATION OF ANEROID SPHYGMOMANOMETER

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**Introduction** The Mercury sphygmomanometer has been used for more than 100 years to measure blood pressure. There are increasing concerns regarding mercury toxicity and its effects on the human health and the environment. Non-mercurial Aneroid sphygmomanometers have flooded the market, although very few complying with standards. The aim of this study was to determine whether conversion to aneroid manometers would cause a systematic shift in measured blood pressure. This study is important in ensuring the quality and consistency of blood pressure measurements taken across hospital clinics.

**Methods** We examined 83 volunteers who were residents of Dehradun. Two blood pressure readings were taken by a trained observer for each volunteer using the aneroid and mercury sphygmomanometers randomly. The instruments were subjected to grading using the criteria from the British Hypertensive Society.

**Results** There was no statistically significant difference in the mean systolic ( $-3.62\pm4.88$ ) or diastolic ( $-2.36\pm3.77$ ) blood pressure measurements obtained by either sphygmomanometer. The values of the SBP and DBP from both the instruments showed a linear correlation with systolic blood pressure (SBP  $r=0.94^{***}$ ; DBP  $r=0.92^{***}$ ).

**Conclusions** The study has demonstrated that the aneroid device achieved a grade of B performance according to the criteria described by the British Hypertensive society, when used at clinical settings.

#### SP4-22 ADHERENCE TO NICOTINE REPLACEMENT THERAPY AMONG CHINESE SMOKERS WHO HAD NO INTENTION TO QUIT SMOKING

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**Introduction** Evidence had shown that nicotine replacement therapy (NRT) is effective to help smokers quit. Many studies reported a

positive linear relationship between adherence and cessation rates however, adherence to NRT among unmotivated smokers is uncertain.

**Methods** Chinese smokers who aged  $\geq 18$ , had no intention to quit within 4-week and had no contraindication to NRT were recruited and randomly allocated to Group A1, A2 and B in a RCT. Only Group A1 and A2 were provided 8-week free NRT. We reported 8-week adherence rate to NRT at 3-month and reasons for non-compliance among subjects in Group A1 and A2.

**Results** From October 2004 to April 2007, 1154 smokers were recruited (Group A1=479; A2=449; B=226). Subjects in Group A1 and A2 ( $n=928$ ) were  $42.0 \pm 10.3$  year-old and smoked  $19.6 \pm 9.4$  cigarettes daily on average. We contacted 797 subjects (85.9%) for 3-month follow-up, but those who did not receive 8-week free NRT ( $n=115$ ; 14.4%) were removed from the analysis. 55.4% (378/682) used NRT as the recommended regime, 41.6% (284/682) did not fully comply with the prescription and 3.0% (20/682) even did not use it. Among 304 ( $n=284+20$ ) who did not comply, "Forget to use" (24.0%) and "Side effects" (14.5%) are the two most cited reasons for non-compliance.

**Conclusion** The adherence rate in this study is more encouraging compared to a local study (20%) which only provided 1-week free NRT. Thus, providing the entire course of free NRT seems to yield an improved NRT adherence among unmotivated Chinese smokers.

#### SP4-23 SOCIAL POSITION AND RISK OF DEMENTIA IN PEOPLE WITH HIGH LEVELS OF ABSOLUTE POVERTY BUT LOW LEVELS OF CARDIOVASCULAR RISK FACTORS AND DEPRESSION: THE ANHUI COHORT STUDY

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**Introduction** The relationship between dementia and socioeconomic deprivation is unclear. This study examined the association between social position and dementia, and determined the prevalence of dementia diagnosed using the 10/66 algorithms in people with high levels of absolute poverty but low levels of cardiovascular risk factors and depression.

**Methods** Prospective cohort study of 1766 elders in rural and urban community-dwellings in Anhui, China. Standardised mental status measures were administered and socioeconomic and risk factors were characterised at baseline. At 6.2-year follow-up, dementia cases were identified using the 10/66 algorithms, causes of death and reports by psychiatrists.

**Results** The world age-standardised prevalence of dementia diagnosed by the 10/66 algorithms was 5.41% (95% CI (4.26% to 6.55%)); in men 4.38% (2.88% to 5.89%) and in women 6.44% (4.76% to 8.13%). The risk of dementia significantly and independently increased with age, lower educational level, uncontrolled hypertension, not watching television, feeling lonely and hearing problems. Compared to those that achieved an educational level of  $\geq$  secondary school and middle income participants, those with lower educational attainment and in the lowest or highest income groups had a higher risk of dementia; multiple adjusted OR (AOR) were 2.99 (1.24 to 7.23) and 3.30 (1.09 to 9.97) respectively. Business/non-labouring participants with educational levels of  $\leq$  primary school had the highest risk of dementia (AOR 3.80 (1.43 to 10.1)) compared to other combinations of occupational class and educational level.

**Conclusions** Increasing income and minimising the gap in income between poor and rich may reduce the epidemic of dementia in China. Increasing levels of education and TV watching could be an efficient measures to prevent dementia in developing countries.

#### SP4-24 SELF-REPORTED TOBACCO SMOKING PRACTICES AMONG MEDICAL STUDENTS AND THEIR PERCEPTIONS TOWARDS TRAINING ABOUT TOBACCO SMOKING IN MEDICAL CURRICULA: A CROSS-SECTIONAL, QUESTIONNAIRE SURVEY IN MALAYSIA, INDIA, PAKISTAN, NEPAL, AND BANGLADESH

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**Introduction** Tobacco smoking issues in developing countries are usually taught non-systematically as and when the topic arose.

**Methods** A cross-sectional questionnaire survey was carried out among final year undergraduate medical students. An anonymous, self-administered questionnaire included items on demographic information, students' current practices about patients' tobacco smoking habits, their perception towards tobacco education in medical schools on a five point Likert scale. Questions about tobacco smoking habits were adapted from GHPSS questionnaire.

**Results** Overall response rate was 81.6% (922/1130). Median age was 22 years while 50.7% were males and 48.2% were females. The overall prevalence of "ever smokers" and "current smokers" was 31.7% and 13.1% respectively. A majority (>80%) of students asked about patients' smoking habits. Only a third of them did counselling, and assessed the patients' willingness to quit. Majority of the students agreed about doctors' role in tobacco control as being role models, competence in smoking cessation methods, counselling, and the need for training about tobacco cessation in medical schools. About 50% agreed that current curriculum teaches about tobacco smoking but not systematically and should be included as a separate module. Majority of the students indicated that topics about health effects, nicotine addiction and its treatment, counselling, prevention of relapse were important or very important in training about tobacco smoking.

**Conclusion** Medical educators should consider revising medical curricula to improve training about tobacco smoking cessation in medical schools. Our results should be supported by surveys from other medical schools in developing countries of Asia.

#### SP4-25 POPULATION SURVEY OF SEMEN QUALITY IN YOUNG SCOTTISH MEN

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**Introduction** For years concerns have been raised that male semen quality is declining globally, and that this is a birth cohort effect. However, there has been a degree of subject selection bias and trend estimates have been ecological. Our study aimed to examine semen quality in a representative sample of a general population (Scottish), and to explore trend by birth year within the data.

**Methods** A randomly selected sample of 22–32 year-old Scottish-born men were recruited to a survey of male reproductive health. Background information was collected by questionnaire and men were asked to provide a semen sample for analysis.