

screening services within the last two years) and 45 “non-doers” were conducted by Peace Corps Volunteers. The 12 determinants of behavior, including self-efficacy, positive and negative consequences, and social norms, were assessed using quantitative and qualitative surveys.

**Findings:** After preliminary analysis, the following determinants were found to be statistically significant between “doers” and “non-doers”: 1) Self-Efficacy: “doers” are more likely to say that being notified about a screening event makes it easier to seek screening for cervical cancer (p-value = 0.011, OR 5.47); 2) Perceived Susceptibility: “non-doers” are more likely to say that they do not feel at risk of developing cervical cancer (p-value = 0.001, OR 0.15); 3) Perceived Severity: “doers” are more likely to say that developing cervical cancer is serious (p-value = 0.021, OR 9.55).

**Interpretation:** The results enable the partnership to implement informed interventions that aim to increase the utilization of health services in low resources areas of rural Senegal. This study illustrates the instrumental role of Peace Corps Volunteers in assessing the community-health service interface while facilitating university-engaged implementation science. The significant findings point to a lack of understanding about cervical cancer and cervical cancer screening. The next steps are to triangulate the data with qualitative interviews to better understand the nuances of the significant determinants. With this information, local communities and health service partners will identify strategies to address these barriers.

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**Abstract #:** 1.023\_MDG

### Measuring skills retention and impact of helping babies breathe trainings in Ghana

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**Background:** The Helping Babies Breathe (HBB) program teaches basic newborn resuscitation techniques to midwives in low resource settings. Studies in Tanzania and India have demonstrated that the program is associated with a decrease in stillbirth or newborn mortality rate (NMR) in urban hospitals, but fewer studies have evaluated the impact in rural settings where NMR is higher. Our study aims to evaluate the impact of the first in a series of HBB trainings in Ghana by measuring skills retention of the midwives trained and the number of newborns that benefit from the program.

**Methods:** Twenty-one midwives from rural health clinics underwent a 2-day training course in Sunyani, Ghana. At the end of training, their skills were evaluated by a written exam and an objective structured clinical examination (OSCE). Three months later, 16 of the midwives were re-tested by OSCE and instructed how to record the level of intervention required by each newborn they delivered.

**Findings:** The average OSCE score of the 16 midwives tested decreased from 97% to 86% after 3 months; 14 of the 16 received passing scores. In the first 3 months of data collection, midwives recorded information from 325 deliveries. 62.2% of the newborns required no resuscitation, 25.2% required drying and stimulation, 9.2% required suctioning, 2.2% required bag-mask ventilation, and 1.2% did not survive.

**Interpretation:** Three months after HBB training, midwives had retained the most important skills they learned, but the decrease in OSCE scores highlights the need for ongoing refresher courses. Since midwives did not have bag-mask ventilation or suction devices before training, the program likely prevented at least seven neonatal deaths in the first three months after follow up. Data collection is ongoing and will continue to expand to other regions where HBB trainings have taken place.

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### Intrapersonal, interpersonal and environmental risk influences for cigarette smoking among the youth of southern Nigeria

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**Background:** We investigated the risk influences for smoking behaviour amongst the youth in Southern Nigeria guided by the Theory of Triadic Influence with specific focus on cultural/environmental, interpersonal and intrapersonal factors serving to increase smoking initiation and perpetuation.

**Method:** We used an exploratory mixed methods research design. Purposive and multi-staged convenience sampling techniques were employed in recruiting participants for the qualitative and survey phases respectively. Qualitative face-to-face interviews were conducted with 27 persons (18 young male smokers aged 18–24 years, 4 political analysts and 5 community leaders). Survey participants were 550 youth aged 18–24 years. Interpretative phenomenological analysis (IPA) with the aid of the software Nvivo 9 and the software Statistical Package for the Social Sciences (SPSS) version 19 were used in analysing the qualitative and quantitative data respectively.

**Findings:** At the cultural environment level, traditional practices exist in some parts of Southern Nigeria demanding the provision of cigarettes for consumption by the youth. Current smokers were three times more likely to have been sent on errands to buy or sell cigarettes as minors. With the absence of an operational national tobacco control law presently, cigarette is cheap, easily accessible and tobacco manufacturers and marketers still promote their business in many ways which target the youth. At the interpersonal level, youth were influenced majorly by their peers to initiate smoking but indirectly by parents, older sibling and role models who smoke. At the intrapersonal level, the need to ward off depression, cope with social stress, low self-efficacy and wanting to live up to the expectations of friends drive the habit. Youth’s knowledge about the negative health effect of smoking did not translate to a desire to quit smoking.

**Interpretation:** The Nigerian government needs to urgently address the tobacco problem through policy implementation.

Cessation clinics are needed to help smokers who desire to quit. Increased awareness on the dangers of smoking and the use of alternative culturally significant products should replace tobacco products currently being used as cultural artefacts in some parts of Southern Nigeria.

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### Examine the critical thinking capabilities of Chinese urban and rural medical students

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**Background:** Global Minimum Essential Requirements (GMER) indicated critical thinking is an essential competency a medical graduate should possess. This study was to investigate the disposition for critical thinking that Chinese medical students possess, exam the differences between urban and rural areas, and to explore the impact of current trends in medical education on the cultivation of these students' critical thinking capabilities.

**Methods:** We used Multistage Stratified Cluster Sampling to recruit a total of 1241 medical students, from three different levels of the medical schools in China (Shanghai; Soochow, Jiangsu; and Gannan, Jiangxi), and in five different years of training. The Critical Thinking Disposition Inventory–Chinese Version (CTDI-CV) was used to collect cross-sectional data. One hundred and twelve students underwent a scrutinized longitudinal study between their third and fourth years.

**Findings:** The mean CTDI-CV score of the total population of 1241 was 287.04. 729 (58.7%) received a 280 or higher. There is a significant difference between the urban and rural medical students ( $p < 0.05$ ). Statistically significant differences were also found among years of school attended, GPA, time spent learning after class, medical students' attitude toward medicine, desire to be a doctor after graduation, and perception of critical thinking. Chinese students scored the highest on "Inquisitiveness" and the lowest on "Truth seeking" for CTDI-CV subscale. The 112 students in the longitudinal study had significantly lower CT subscale scores and percentage possesses positive CT disposition ( $>280$ ) after one academic year.

**Interpretation:** Even though Chinese medical students demonstrate a positive disposition for critical thinking in general, there is a disparity between urban and rural medical students. Moreover, the Chinese system of medical education may not do enough to stimulate critical thinking skills in the students it cultivates. That is, there exists a gap between current critical thinking abilities and the standard for which they should strive for. Chinese medical schools should

institute reforms to their traditional curricula, teaching methods, and evaluation systems, as a means to bridge these gaps and further develop critical thinking abilities within their medical students.

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### Assessment of perinatal outcomes, health practices and health system capacity in Solukhumbu, Nepal

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**Background:** Despite recent investments in maternal-neonatal health services in rural Nepal, deficiencies in care persist. Limited information exists about the quality of maternal-neonatal (MN) health services, current care practices and capacities.

**Study objective:** To assess maternal-neonatal care capacity, health practices and outcomes in Solukhumbu District.

**Methods:** We evaluated 16 health facilities (HFs) in Solukhumbu using a previously validated HF assessment tool for MN care quality and care capacity. 9 of these HFs were also birthing centers (BC) that provide basic obstetric and neonatal care services. We conducted focus group surveys with HF providers and reviewed HF medical records. We randomly surveyed families who utilized MN care services in the preceding 12 months and assessed care quality through a previously validated questionnaire about evidence based care interventions. Qualitative and quantitative methods were used to characterize our findings.

**Findings:** All HFs (16/16) provided antenatal services, and 88% had nurse midwives available 24 hours per day. At BCs, 33% had functional delivery sets per government standards. 100% had neonatal resuscitation equipment; only 11% reported knowing how to properly use it. 89% of BC staff were trained in the management of neonatal asphyxia; 25% felt this training was adequate. 75% of providers identified additional training and delivery equipment as a top priority.

55 families with a delivery during the past year were surveyed. 100% had at least 1 antenatal visit; 72% had at least 4 visits. 60% were counseled on birth preparedness and pregnancy complications. 45% of deliveries were at any HF, and 47% were attended by a skilled provider.

HF records revealed a total of 346 deliveries in the past 12 months; there were 15 neonatal deaths, 15 stillbirths, and 2 maternal deaths. 32% of women experienced a pregnancy danger sign, only 22% of them were referred for higher care. 46% of newborns were weighed at birth and breast-feeding was initiated within 1 hour of birth in 68% of cases. 32% of newborns had symptoms consistent with suspected neonatal sepsis.

**Interpretation:** Significant challenges in perinatal care delivery, primarily for intrapartum and postpartum care, persist in Solukhumbu. Targeted interventions are highly needed.

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