care engagement rates than Sub-Saharan Africa, as well as a growing rate of HIV incidence. Little research has explored why some PLH are actively in care and taking ART regularly as prescribed, while others fall out of care or have never engaged in care.

Methods: We sought to identify facilitators and barriers to medical care engagement amongst PLH in Russia from their own individual perspectives through qualitative, in-depth interviews. These interviews were conducted over a period of 4 weeks in June 2015 in St. Petersburg, Russia with 14 PLH who have not been in medical care in the last 6 months or do not take ART regularly as prescribed. Participants were recruited via online forums and social network groups for HIV+ members. Questions asked covered a wide range of topics including opinions of medical care, past and current substance abuse, and social support systems. Audio-recorded interviews were then transcribed and qualitatively analyzed.

Findings: Facilitators involved the critical nature of social support systems and positive perception of medical services and relationships with medical providers. Both factors increased the likelihood that PLH engaged in care. Barriers to medical care engagement included issues surrounding substance abuse, perceived social stigma, and poor civilian and prison medical infrastructure and organization, all decreasing the likelihood of care engagement.

Interpretation: By encouraging the facilitators and overcoming the barriers at both micro and macro levels, a greater proportion of PLH in Russia may be more likely to engage in care, infection rates could decline, and lifespan could be prolonged. Further research needs to delve deeper into each of these facilitators and barriers and expand on them quantitatively.

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Abstract #: *2.065_NEP*

Kumawu polyclinic: A needs assessment of a district facility in Ghana

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Background: Many district hospitals and medical centers in Ghana are limited with regard to the number of employed medical staff, hospital resources, and services available. Our team went to Kumawu Polyclinic to learn about the detailed operations of the hospital, resources, and to determine the challenges faced by the facility. A needs assessment was developed that can be used as a model for how to briefly and efficiently evaluate a district facility in Sub Saharan Africa.

Methods: A team consisting of an emergency physician working at a tertiary referral hospital in Ghana and medical students from the United States developed a needs assessment and conducted a visit to Kumawu Polyclinic (Sekyere Afram Plains District, Ashanti Region, Ghana) over three consecutive days in July 2015. The team surveyed the facility, observed rounds with the medical staff, and conducted informal interviews with the polyclinic director and staff.

Findings: Kumawu Polyclinic is a district health facility with 23 inpatient beds, split between three wards. There is only one medical officer (physician) at the hospital, along with one physician's assistant and a physician assistant in training. 25 nurses work at the hospital but only 8 are formally trained. The most common patient presentations are fever in children under five, pregnancy and delivery, and complications of noncommunicable diseases such as stroke and hypertensive crisis. The clinic faces several challenges, one being an unreliable supply of essential consumables from the Ghana Health Service. The polyclinic also has limited capability to run laboratory tests and has to send patients 45 minutes away to a larger facility for any imaging. Electric supply is intermittent and requires the use of a backup generator during periods of electrical failure.

Interpretation: Our team recommended establishing a triage system for patient intake to increase the efficiency of the clinic. In addition, the needs assessment addressed the clinic's limited range of drugs it can prescribe, moving forward on a 25-bed extension, and the challenges of intermittent electricity. This method of assessing the needs of a district facility can be employed at other polyclinics in Ghana and in developing countries in Africa.

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Assessing perceptions of genetic risk and breast cancer of women diagnosed and undiagnosed with breast cancer in Ibadan, Nigeria

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Background: The World Health Organization (WHO) projects that cancer will be the leading cause of death worldwide by 2030 if urgent strategies are not implemented arrest the cancer disparity in low- to middle-income countries. 75% of women with breast cancer in developing countries, like Nigeria, are diagnosed in stages 3 or 4. The causes of these disparities, resulting in the lack of early detection, must be examined through the many cultural, economic, and social factors shaping the perceptions held by these communities. Only then, can the appropriate interventions be implemented.

Aims: The primary objectives are to identify the structural, social, and cultural factors that influence perception of risk and understanding of disease in Nigerian women diagnosed with breast cancer and women never diagnosed with breast cancer. The specific aims are to identify the perceptions of risk for developing cancer, to identify where and how information about breast cancer is received, and to identify what social, economical, or demographic factors influence knowledge of breast cancer and the perceptions of risk.

Methods: The survey consisted of 33 questions. The setting was University College Hospital (UCH), a federal tertiary teaching hospital, located in Ibadan, Nigeria. A total of 36 cases – women self-reporting as diagnosed with breast cancer were recruited from the Surgery Out-Patient Oncological and 42 controls – women self-reporting as never diagnosed with breast cancer were recruited from the OB-GYN and Family Planning units.

Results: The qualitative results of this assessment reveal that although patients have a desire to learn more about breast cancer

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(75% case; 74% control), most patients (60% case response; 44% control response) report that they do not know the etiologies. About 50% of total participants report that they have no available resources for information about breast cancer. Other results reveal that participants occasionally or frequently have conversations about health and wellness with their family members (86% case response, 83% control response) and a self reported family history of cancer is comparable to that of the global percentage (8% case, 14% control). 86% of cases have shared their breast cancer diagnosis with at least one family member.

The Likert-Scale component reveals that both the cases and controls share similar sentiments about the perceptions of genetic risk and understanding family history. This denotes, that whether a woman is directly, indirectly, or not at all affected by breast cancer, it is the cultural contingencies that shape ones experience and interaction with breast cancer in Ibadan, Nigeria.

Abstract #: *2.067_NEP*

Higher levels of education mitigate the relationship between perceived stress and common mental disorders among women in rural India: results of a cross-sectional study

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Background: Common mental disorders (CMD) are a constellation of mental health conditions that include depression, anxiety, and other related non-psychotic affective disorders. The WHO ranks CMD as the leading cause of disease burden in India among women in the 15 - 44 year age group. Qualitative explanatory models of mental health among reproductive-aged women in India reveal that distress is strongly associated with CMD. The relationship of perceived stress and CMD might be attenuated or exacerbated based on an individual's sociodemographic characteristics. Identification of these attributes and the mechanisms through which they could mitigate the relationship of high perceived stress and CMD holds promise for developing new strategies to promote mental health in rural India.

Methods: Cross-sectional survey of 700 women from rural Gujarat, India. CMD status was assessed using Self-Reported Questionnaire 20 (SRQ-20). Factors associated with CMD were evaluated using multivariable logistic regression. Effect modification for the relationship of perceived stress and CMD based on age, education, income, and marital status was assessed using interaction terms and interpreted in terms of predicted probabilities.

Findings: 663 women were in the analytic cohort with roughly one in four screening positive for CMD (23.7%). Poor income, low education, food insecurity, and recurrent thoughts after traumatic events were associated with increased risk of CMD. Perceived stress was closely associated with CMD status. Higher education attenuated the relationship between high levels of stress and CMD (82.3%, 88.8%, 32.9%; p-value for trend: 0.03). Increasing income and age attenuated the link between moderate stress and CMD.

Interpretation: Our findings suggest a high burden of common mental disorders among reproductive-aged women from rural western India. Higher education, age, and income may provide resources to women to cope with stress. Women with increased age and income are able to manage moderate stress, but high stress might overwhelm their coping mechanisms. Future efforts to improve mental health in rural India should focus on preventing CMD by enhancing rural women's self-efficacy and problem-solving capabilities to overcome challenging life events and stressors, thereby reducing the risk of CMD.

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Orthopedic care capacity assessment and strategic planning in Ghana: mapping a way forward

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Background: Orthopedic conditions incur more than 52 million disability-adjusted life years annually. This burden disproportionately affects low- and middle-income countries, which are least equipped to provide orthopedic care. We aimed to assess orthopedic capacity in Ghana, illustrate population-level spatial access to orthopedic care, and identify hospitals that would improve access to care most if their capabilities were improved.

Methods: Seventeen orthopedic resources were selected from the World Health Organization's *Guidelines for Essential Trauma Care*. Direct inspection and structured interviews with hospital staff were used to assess resource availability at 40 hospitals countrywide. Cost distance analyses were used to map population-level potential spatial access to orthopedic care. We identified facilities for targeted capability improvement that would have the greatest impact population-level spatial access to care using location-allocation modeling.

Findings: Orthopedic care assessment demonstrated marked deficiencies. Some deficient resources were low-cost (e.g. spinal immobilization, closed reduction capabilities, prosthetics for amputees). Several factors contributed to resource non-availability, namely equipment absence, technology breakage, and lack of training. User fees for orthopedic implants were often prohibitively expensive for patients in need. Population-level spatial access to basic (i.e. closed reduction, traction), intermediate (i.e. fixation), and advanced (i.e. spine, pelvis, or hand surgery) orthopedic care within two hours was: 74.9% of Ghanaians [uncertainty interval (UI) 70.8–77.3%]; 74.6% (UI 69.9–77.1); and 59.4% (UI 50.0–68.3), respectively. Building basic orthopedic capacity at 15 target hospitals would improve spatial access to basic care from 74.9 to 83% of Ghanaians