Research with Real Outcomes

Healthy People, Healthy Ecosystems:
Implementation, Leadership, and Sustainability in Global Health

Consortium of Universities for Global Health
Washington, DC
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Preface

As we enter the 21st century, global health plays an increasingly crucial role in global security, commerce, and the health of the world. Because the world and its economies have become increasingly globalized, it is important, more so than ever, to think about health in a global context. Infectious diseases—as well as noncommunicable diseases—continue to place larger burdens on populations around the world. For example, Human Immunodeficiency Virus (HIV), malaria, and vaccine-preventable diseases continue to physically and financially impact developing countries at significant rates.\(^1,2\) In addition, the global rate of deaths from noncommunicable causes, such as heart disease, stroke, and injuries, are growing and exceed those deaths caused by infectious diseases.\(^3\)

Globalization has resulted in a rise in international travel, trade, and the ability of diseases and other causes of bad health to affect nations across borders. For these reasons, the concepts and concerns of global health are becoming increasingly prominent worldwide. Because diseases and other causes of bad health have no respect for boundaries, they can destabilize populations, economies, and governments. Many health problems and health issues can only be solved using global and local responses. This can ensure the availability of financial, technological, and government resources where they are needed. In addition, collaboration can help establish standards for drug safety, set protocols for treatment, and encourage vaccine development.\(^1,2,3\)

We have all seen the profound impact that diseases can have on communities, individuals, and the global ecosystem. This can be demonstrated by the worldwide HIV pandemic, the 2014 Ebola outbreak in West Africa, and the 1918 influenza outbreak.\(^1,3\) Incidents such as these have had devastating impacts on communities—greatly affecting morbidity, mortality, and productivity.\(^2\)

However, when analyzing global health, it is important to think more broadly than how diseases impact health. Diseases can have devastating repercussions on health. However, it is important to consider how they can destabilize populations, economies, and governments. For example, in 2003, the Severe Acute Respiratory Syndrome (SARS) outbreak cost the countries of Asia $18 billion in lost economic activity.\(^1,4\) In addition, aside from the direct costs of medical care and control interventions, SARS caused widespread social disruption and economic losses. As a result of SARS, schools, hospitals, and borders were closed. International travel fell by 50-70% and the hotel and tourism industry suffered, resulting in job instability and loss.\(^3\) Because of examples like this, it is necessary to link health to economic and social development.\(^5\)

Finally, the lack of a unified system that promotes global health can have a profound impact on global security and freedom.\(^5\) This can be demonstrated by the use of biological warfare during the 2001 United States anthrax attacks.\(^6\) As a result of the attacks, 22 people—including 12 mail handlers—were victims of anthrax, and 5 of these 22 people died.\(^6\) Although only 5 individuals were killed during the 2001 attack, anthrax spores are extremely deadly and have the potential to cause mass casualties and have a devastating effect on the economy, critical infrastructure, and public confidence.\(^6\) For this reason, a global approach to health is key in maintaining public health, safety, and public perception.
Despite the negative impacts that diseases, disasters, and poor governance have had on health and stability, significant progress has been made in the field of global health within the last 50 years. For example, the world has experienced an increase in global life expectancy between the years of 1950 to 2015.\(^7\) In 1950, the global average life expectancy was 48 years. As of 2015, the global life expectancy at birth was 71.4 years.\(^7\) In addition, it is important to note that the global average life expectancy increased by 5 years between 2000 and 2015, the fastest increase since the 1960s.\(^7\) This fast increase can be attributed to improvements in child survival, reduced maternal mortality, access to vaccines, poverty reduction, and the expanded access to antiretrovirals for HIV treatment.\(^7\) In addition, the world has also experienced a significant drop in under-five mortality rate. For example, the global under-five mortality rate has decreased by 53%, from an estimated rate of 91 deaths per 1,000 live births in 1990 to 43 deaths per 1,000 live births in 2015.\(^8\) Lastly, and most notably, the field of public health has been able to successfully eradicate smallpox and nearly eliminate polio.\(^1\) Continued accomplishments and progression demonstrate that the field of global health is necessary.

Despite the progress in improving human health within the 20th century, a large amount of work still needs to be done. For example, in 2008, 164,000 people died from measles globally and 343,000 women died from maternal causes.\(^1\) In addition to the health challenges stated, extreme disparities in health care exist among different groups.\(^1\) Many individuals in high-income countries have access to lifesaving technology such as the hepatitis B vaccine, which is not in widespread use in low-income countries.\(^1\)

Because of existing disparities and high rates of noncommunicable and infectious disease, a need is continually present to address global health challenges. Because of this, the Consortium of Universities for Global Health (CUGH) has dedicated the last nine years to building and promoting interdisciplinary collaboration by facilitating the sharing of knowledge to address global health challenges. Because of CUGH, individuals have been able to share their expertise across education, research, and service in order to create equity and reduce health disparities everywhere.

**Citations:**


Introduction

CUGH’s 2017’s annual conference theme was “Healthy People, Healthy Ecosystems.” This theme is reflective of CUGH’s ongoing efforts to work collaboratively and across disciplines to disseminate information and address complex challenges the world faces. CUGH embodies a vision of a safer, healthier, more compassionate, open, and fairer world. CUGH believes in a world without borders, because the desire for health and well-being is universal and doesn’t change based on race, ethnicity, national, socioeconomic status, sexual identity, or geographic location.

To further exhibit that CUGH is a truly global organization, for the first time this year, data from the 2017 CUGH Global Health Conference is being aggregated into the form of an eBooklet. The purpose of this eBook is to address the most prominent health issues of 2017 presented during the conference. This eBook, entitled Research with Real Outcomes, will allow global health professionals and students access to research presented by prominent global health researchers to address prevalent global health problems. Having access to the most up-to-date research in an aggregate format will guide students and professionals on effective health interventions, impact, cost-effectiveness, and policy implications when addressing global health needs. We hope this eBook will be a useful guide to policymakers, researchers, and students alike to improve the lives of everyone, but particularly those who are disadvantaged. The findings in this eBook come from some of the world’s finest researchers in global health. Please use it.
Book Structure

*Research with Real Outcomes* consists of six tracks, and each track represents one of the six themes presented at the 2017 annual conference. The themes include Planetary Health, Governance & Political Decision-Making, Health Systems and Human Resources, Women’s Health is Global Health, Noncommunicable and Communicable Diseases: The Double Burden, and Infectious Disease Old and New.

Each track is comprised of various sections that take the most compelling global health research on how to address various global health challenges relating to each theme. Each section is comprised of a description of the global health issue, the intervention, and its effectiveness. In addition, cost, cost-effectiveness, and policy recommendations are considered. Finally, each section will provide the reader with credible links and videos to further explore the global health topic being discussed.
Acknowledgments

I would first like to thank my capstone site advisor, Dr. Keith Martin of Consortium of Universities for Global Health. The door to Dr. Martin’s office was always open whenever I ran into a trouble spot or had a question about my research or writing. He consistently allowed this book to be my own work, but steered me in the right direction whenever he thought I needed it.

I would also like to thank my capstone advisor, Jessica Brown, PhD of the University of Maryland, Baltimore. She was always available when needed, and she was always interested to know what I was doing and how I was proceeding.

I am also grateful to Virginia Rowthorn JD, LLM (Global Health Law), Dalal Najjar, Arisa Koyama, and Karen Lam for helping me secure a capstone placement and making my capstone a rich and fulfilling experience. Without their passionate participation and input, the eBook could not have been a success.

I would also like to acknowledge Tony Smith of LITE Publishing as the second reader of this eBook, and I am gratefully indebted to him for his very valuable comments on this eBook.

Finally, I must express my very profound gratitude to my parents, Keith and Patti McKinnon, and to my boyfriend Ron Colbert for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this eBook. This accomplishment would not have been possible without them. Thank you.

Breana McKinnon BSN, RN.
Global health problem: Maternal and infant mortality related to pharmacy and supply chain

Description of the problem:

The health status of the people of Sierra Leone is among the worst in the world. In addition, infant and maternal mortality rates remain among the highest in the world. According to the Sierra Leone demographic health survey 2008, life expectancy is 47 years, infant mortality rate is 89 per 1,000 live births, under-five mortality rate is 140 per 1,000 live births, and maternal mortality ratio is 857 per 100,000 births.¹

The high maternal and infant mortality rates contribute to the countries total expenditure on health, which is $95 per capita, as well as the life expectancy of 57.8 years as of 2015.²

Within Sierra Leone two skilled providers are available for every 10,000 people. In addition, the people of Sierra Leone often face struggles related to lack of supplies at local hospitals, high out-of-pocket spending, and undermined trust in the health care system.²

Description of the intervention:

- Hospitals and clinics have been preselected to implement the intervention.
- At the select locations, free health care and essential medicines are provided to pregnant, lactating women and children under five.
- Shifted stock management responsibilities from nurses to pharmacy technicians.
- An “emergency cabinet” has been established in order to provide 24-hour access to essential medications.
- Three ward level pharmacies have been established to dispense directly to patients.
- Quality of storage facilities has improved through store expansion, enhanced temperature, rationalized organization through shelving, and supplemented government provisions of electricity to provide 24-hour coverage.
Photos provided by Bangura. Photos demonstrate medication storage space pre- and post-intervention.
Country: Sierra Leone
Urban/rural/mixed: Rural

Study population:
Study site was defined as:
• Kono District
• Population of 500,000 people
• 1 hospital
• 86 peripheral health units

Outcome/impact:
• 47% increase in pediatric and maternal admission from Nov 2012 to Aug 2016
• 95% increase in hospital based deliveries from Nov 2012 to Aug 2016

Improved relationship between national and district program
• Higher quality district data → higher quality national procurement and distribution
• District staff able to use data to advocate and communicate needs
• Reduced gaps in national supply to district
• Established robust local and international procurement process to address gaps due to chronic national shortages
• Logistics support to national program to facilitate emergency distributions

Strengthened supply chain of other parallel programs (i.e. TB/HIV, malaria, etc.)
• Same staff overseeing supply chain operations for Free Healthcare support other programs → applied learnings across 100% availability of essential commodities

Cost and cost-effectiveness: Not defined

Sustainable development goals (SDG):
• SDG 3: Ensure healthy lives and promote well-being for all at all ages.

Policy recommendations:
• Enhance and strengthen pregnancy-related mortality and morbidity surveillance to identify all pregnancy-related deaths
• Increase federal and local funding and support to implement the World Health Organization (WHO) recommendations to develop and establish multidisciplinary, independent pregnancy-related mortality review boards
• Encourage all departments of health to create electronic data linkages between death and birth certificates to better identify pregnancy-associated deaths
• Support funding for programs focused on increasing access to timely and appropriate quality health care for all women, free from economic, legal, psychosocial, and cultural barriers
• Encourage maternity care professionals, facilities, and professional associations to revise standards of practice and practice guidelines on the basis of the best available evidence
• Establish a shared ownership with the Ministry of Health
• Integrate central and district-level information systems
• Invest in Human Resources

Study recommendations: Cost and cost-effectiveness should be added to the data.

Links to important reports/articles/videos about intervention:

• Analytical study link about maternal and infant mortality statics-  http://www.aho.afro.who.int/profiles_information/index.php/Sierra_Leone:Analytical_summary_-_Health_Status_and_Trends

Citations:


Section Two: Swaziland Action Group Against Abuse (SWAGAA) (Presented by Dlamini)

Global health problem:

- Gender-based violence (GBV)
- HIV

Description of the problem:

Swaziland is a country comprised of 1.2 million people. According to recent statistics, Swaziland has the world’s highest rates of HIV infection. Twenty-six percent of adults 15 to 49 years of age are HIV-positive.

According to USAID, gender inequality is a major contributor to the country’s HIV prevalence rate. Within Swaziland, women are disproportionately affected by HIV, representing 59 percent of those infected. In addition, 12 percent of all women aged 15 to 19, 38 percent of women aged 20 to 24, and almost half (49 percent) of women aged 25 to 29 are infected with HIV.

Finally, there is a link between GBV and HIV. Studies conducted by Reza indicate that GBV significantly increases a woman’s risk for health-related issues, including depression, unwanted pregnancies, alcohol use, and sexually transmitted diseases.

Description of the intervention:

- Swaziland Action Group Against Abuse (SWAGAA) was created to challenge prevailing norms about gender roles and sexuality.
- The intervention’s goal is to eradicate GBV and promote human rights for all. Strategies for achieving this include advocacy, services, improving GBV policy, violence prevention, and providing care, support, and access to justice for survivors of GBV.
- SWAGAA focuses on five keys to prevent GBV.
  1. Lihiombe Lekukhalela - This is the child protective initiative. SWAGAA oversees 15 target communities. The purpose is to identify a “go-to” adult for children in need.
  2. Education prevention - This initiative is an educational program which includes the awareness campaign, messages about GBV and HIV prevention, human rights, human trafficking, and the role of GBV as a driver in the HIV epidemic.
3. School sensitization - This initiative is a peer-based program that increases awareness of abuse and promotes HIV prevention through abstinence.\(^1\)

4. The male involvement initiative - This initiative brings together men to discuss topics related to gender norms and how men are partners in ending GBV.\(^1\)

5. Girls’ empowerment club - This initiative promotes school-based gatherings where girls can discuss topics including sexuality, abuse, and HIV.\(^1\)

- Other aspects of the intervention include self-help groups, legal services for access to justice, and case management.\(^3\)

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**Country:** Swaziland

**Urban/rural/mixed:** Not defined

**Study population:** Not defined
Outcome/impact:
- SWAGAA has been working to establish an effective monitoring and evaluation system. SWAGAA plans to develop indicators and tracking mechanisms to be able to measure program impact.
- No baseline exists for comparison; however, SWAGAA reports an increase of reporting on GBV based on anecdotal evidence.
- Support also has been growing in the communities for activities, including campaigns for preventing violence against women.

Cost and cost-effectiveness: Not defined

Sustainable development goals:
- SDG 3: Ensure healthy lives and promote well-being for all at all ages.
- SDG 5: Achieve gender equality and empower all women and girls.

Policy recommendations:
- Improve services for survivors of violence by providing physical and mental health services and establishing empowerment clubs
- Strengthen prevention efforts through male involvement initiatives, school sensitization, and education campaigns
- Increase awareness of the scope of the problem by establishing surveillance systems
- Involve family, community, and health teams in promoting violence prevention
- Require health workers to provide referral and counseling services for survivors to trusted and tested networks of support organizations

Study recommendations:
- Develop a tool to effectively monitor, track, and evaluate the intervention.
- Add cost and cost-effectiveness to the data.

Links to important reports/articles/videos about intervention:
- Link to USAID Case Study about SWAGAA- http://www.jsi.com/JSIIternet/Inc/Common/_download_pub.cfm?id=12547&lid=3
• Video describing the link between GBV and HIV- https://www.youtube.com/watch?v=XXAwJjGzfBM
• Video entitled Liesl Gerntholtz: the link between gender inequality and HIV is very, very clear - https://www.youtube.com/watch?v=t1LP_wecU9o

Citations:


Global health problem: Shortage of health care workers

Description of the problem:

According to The Nursing Education Partnership Initiative (NEPI), the nursing and midwifery workforce is key to improving the performance of the health system overall.\textsuperscript{1} Health workforce shortages are significantly influenced by the productive capacity of health profession education institutions.\textsuperscript{1} Because of long-standing underinvestment in nursing and midwifery education, this severely limits the ability of institutions to educate nurses and midwives in sufficient numbers, and with the necessary clinical skills, to meet the needs of the population being served.\textsuperscript{1}

Currently the nursing workforce in sub-Saharan Africa is a critical component to prevention, intervention, and treatment of communicable and noncommunicable diseases.\textsuperscript{2} Based off of the World Health Organization’s (WHO) estimate, the largest health care worker need is in sub-Saharan Africa. According to the WHO, an increase of 140% of health care workers is needed to overcome this shortage.\textsuperscript{2}

Description of the intervention:

The Nursing Education Partnership Initiative (NEPI) is an initiative developed to address the critical shortage of health care workers in sub-Saharan Africa by strengthening the quality and capacity of nurses and midwives throughout Africa.\textsuperscript{3} NEPI’s goal is to strengthen the quality and capacity of nursing and midwifery education institutions, increase the number of highly skilled nurses and midwives, and support innovative nursing retention strategies in African countries.\textsuperscript{3}

The NEPI education intervention addresses six issues:

- Infrastructure
- Curriculum
- Faculty
- Clinical skills
- In-service training
- Partnership
Additional techniques utilized by NEPI include shortened duration of training, simulation labs, e-learning, and interactive case studies.
Photo provided by Khanyola. Demonstrates the E-learning intervention.

Photo provided by Khanyola. Demonstrates the interactive case study intervention.
Country:
  - Democratic Republic of Congo
  - Lesotho
  - Zambia

Urban/rural/mixed: Not defined
Study population: Not defined
Outcome/impact:
NEPI has had multiple achievements:
  - Increasing the nurse and midwife workforce.⁴
  - Increasing student’s clinical skills and competencies through construction, renovation, and refurbishment of clinical simulation laboratories.⁴
  - Implementing nurse-initiated and managed antiretroviral treatment (NIMART).⁴
  - Increasing health workforce retention through innovative training in rural and hard-to-reach areas.⁴
  - Creating and promoting the idea or task shifting. Allowing nurses to take on some physician roles and community health workers taking on some nursing roles.⁴
  - Multidisciplinary teaching and learning.⁴

Cost and cost-effectiveness: Not defined

Sustainable development goals:
  - SDG 3: Ensure healthy lives and promote well-being for all at all ages.
  - SDG 4: Ensure inclusive and quality education for all and promote lifelong learning.
  - SDG 5: Ensure inclusive and quality education for all and promote lifelong learning.
  - SDG 10: Reduce inequality within and among countries.
Policy recommendations:

- Make effort to change public opinion that nursing is “women’s work.” Make efforts to prevent gender-based discrimination within the field of nursing.
- Implement harsh rules and punishment for those who commit violent acts against health workers.
- Address issues such as improving nursing recruitment and retention.
- Provide professional development opportunities, promote autonomy, and allow nurses to participate in decision-making.
- Decentralize style of management, allow for flexible employment opportunities, and access continuing professional development.
- Broaden the recruitment base including mature entrants, entrants from ethnic minorities, and less qualified entrants who have vocational qualifications or work-based experience.
- Provide clarity of roles and a better balance of registered nurses, physicians, other health professionals, and support workers.

Study recommendations:

- Add cost and cost-effectiveness to data.
- Show qualitative achievements of NEPI in data.

Links to important reports/articles/videos about intervention:

- Link discussing the partnership between pepfar and NEPI-https://www.pepfar.gov/partnerships/initiatives/nepi/
- Link describing NEPI program- https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-7-66

Citations:


Section Four: Implementation of an Adapted Safe Childbirth Checklist (Presented by Rose Molina)

Global health problem: Safe childbirth

Description of the problem:

Within Chiapas Mexico, maternal child health issues place a large burden on women and children alike. Within Chiapas, the maternal mortality rate is 68 per 100,000, and 60% of births are conducted at home. In addition, a large percentage of the population are subsistence farmers.

Because of the described issues, the Mexican Ministry of Health has advocated for increased skilled birth attendance in hospital facilities to decrease maternal and newborn morbidity and mortality.

Description of the intervention:

- The primary purpose of the proposed intervention is to improve the quality of care, including respectful practices during childbirth. In addition, the proposed intervention hopes to strengthen the role of professional midwives and obstetric nurses. The goal is to have the nurses and midwives competent at managing women with low-risk pregnancies during childbirth.

- The interventions are aimed to address two issues. One intervention addresses supply and demand. For example, in terms of supply the intervention will optimize quality of care around childbirth and facility. In terms of demand the intervention aims to address barriers related to accessing care in the community.

- The intervention was comprised of a multidisciplinary team, safe childbirth checklist, respectful care at the hospital, transpiration to hospital, food and lodging, and supply chain support.

- The checklist was adapted to local context. Four pause points were added to discuss perceived quality of care. These pause points were at admission, just before delivery, within one hour of birth, and before discharge.

- Training was provided to professional midwives, perinatal nurses, and obstetric nurses to make optimal use of the checklist.
How to improve maternal and newborn outcomes?

Supply:
Optimizing quality of care around childbirth at the facility

Where We Work

Demand:
Addressing barriers to accessing care in the community

Photo provided by Molina. Demonstrates the approach to the intervention.
Country: Mexico
Urban/rural/mixed: Rural
Study population: Not defined
Outcome/impact:

- August 2016, five obstetric nurses, one perinatal nurse, and one professional midwife were using the adapted Safe Childbirth Checklist.¹²

- March 2017, data was captured from 350 birthing women using the WHO Safe Childbirth Checklist and 160 women who had completed the discharge survey. In addition, 25 interviews were conducted with postpartum women and some of their birth companions.¹²

- Date showed that 64% (171/266) of women were asked at least two questions about their preferences in labor,
13% (28/216) of women received episiotomies without indication, 68% (147/216) initiated skin-to-skin within one hour of delivery, and 56% (122/216) of women initiated breastfeeding after delivery.²

- Preliminary analysis of the discharge surveys revealed high satisfaction with the care women received at the hospital. Qualitative interviews indicate some variation in birth experiences.¹²

Cost and cost-effectiveness: Not defined

Sustainable development goals:

- SDG 3: Ensure health lives and promote well-being for all ages.
- SDG 5: Achieve gender equality and empower all women and girls.
- SDG 10: Reduce inequality within and among countries.

Policy recommendations:

- Require hospital and clinic use of the WHO Safe Childbirth Checklist.
- Ensure hospitals and clinics are adequately stocked with supplies needed for childbirth.
- Adopt policies that encourage birth companions to be present at birth.
- Adopt policies that offer and encourage family planning to mothers.
- Provide hospital- and health facilities-based capacity to support exclusive breastfeeding, including revitalizing, expanding, and institutionalizing the baby-friendly hospital initiative in health systems.
- Provide community-based strategies to support exclusive breastfeeding, including the implementation of communication campaigns tailored to the local context.
- Invest in training and capacity-building in how to utilize the WHO Safe Childbirth Checklist.

Study recommendations: Cost and cost-effectiveness should be added to the data.

Links to important reports/articles/videos about intervention:

Citations:


Global health problem: Postpartum hemorrhage and neonatal asphyxia

Description of the problem: According to the WHO, the major causes of maternal and newborn complications and deaths include postpartum hemorrhage, infection, obstructed labor, preeclampsia, and birth asphyxia.\(^1\)

Postpartum hemorrhage (PPH) is the leading cause of maternal mortality, accounting for about 35% of all maternal deaths. Every year about 14 million women around the world suffer from PPH.\(^1\) According to the WHO, the risk of maternal mortality from hemorrhage is 1 in 1,000 deliveries in developing countries. In addition, most deaths (about 99%) from PPH occur in low- and middle-income countries, compared with only 1% in industrialized nations. However, recent studies have shown an increase in the incidence of PPH in developed countries as well.\(^1\)

Deaths related to neonatal asphyxia have been more difficult to account for, largely because deaths at the time of birth have gone unrecorded. However, according to the WHO, newborn deaths—that is, deaths in the first four weeks of life (neonatal period)—account for 41% of all child deaths before the age of five.\(^1\) Of those documented deaths, three causes for neonatal death are found worldwide: infection (36%, which includes sepsis/pneumonia, tetanus and diarrhea), pre-term (28%), and birth asphyxia (23%).\(^1\)

Of the more than 130 million births occurring each year, an estimated 303,000 result in the mother’s death, 2.6 million in stillbirth, and another 2.7 million in a newborn death within the first 28 days of birth.\(^1\) The majority of these deaths occur in low-resource settings, often lacking skilled birth attendants.

Description of the intervention:

- LDHF means “low dose, high frequency.” The LDHF model was adopted when providing training to the providers.\(^2\)
- Each provider was trained using a curriculum that emphasized facility-based, hands-on learning that offered manageable amounts of information/skills (dose) at appropriate intervals (frequency) to the entire health care team, followed by short and repeated practice after learning.\(^2\)
- LDHF practice included 10-15 minutes a week of hands-on practices.
- Providers practiced eight weeks of Helping Babies Breathe (HBB) and eight weeks of Helping Mothers Survive, Bleeding After Birth (BAB).
- Providers also practiced four weeks of combined BAB and HBB.
- Selected facilities were provided with clinically active midwives to serve as mentors.
- Selected facilities were provided telephone support to clinical mentors from district trainers.

Photo provided by Britt. Photo demonstrates a nurse practicing the Helping Babies Breathe technique.
Country: Uganda

Urban/rural/mixed: Mixed. Intervention occurred in Western and Eastern Uganda in 12 districts in 125 different health facilities.

Study population: The study selected 755 providers. Each provider was selected from one of the 125 selected health facilities. Each provider worked in a health facility that provided or would be providing maternal child health services to the community.

Outcome/impact:

- Data was collected by direct facility assessments, direct clinical observations, Health Management Information System (HMIS) registers, knowledge and skills, practice logs, and interviews.²
- The study observes providers’ skills at baseline, midline and end line, totaling 1716 observations.
- Overall results showed a 17% decline of PPH, 47% decline in retained placenta, 34% decline in fresh stillbirth, and a 62% in newborn death.²
- A 24% increase was noted in administration of uterotonic before birth, a 35% increase was noted one minute after birth, and a 25% increase was noted five minutes after birth.²
- Motivations to practice include having a certified midwife at their facility, expressing a desire to maintain skills and be prepared for emergencies, receiving external recognition for practicing, and having a set schedule for practice.²
• Barriers to practice include short staffing, heavy workloads, and the perception that competency can be maintained through routine clinical care.

Cost and cost-effectiveness: Not defined

Sustainable development goals:
• SDG 3: Ensure healthy lives and promote well-being for all at all ages.

Policy recommendations:
• Reaffirm and refine best practice for PPH and neonatal asphyxia prevention.
• Ensure oxytocin availability and appropriate storage in a cool environment at all health facilities where deliveries are occurring.
• Monitor oxytocin stocks.
• Continue to promote active management of the third stage of labor (AMTSL) in national policies—including supporting the practice of AMTSL in all maternity facilities of the health system, and by all cadres with midwifery skills.
• Inform colleagues that other elements of AMTSL—controlled cord traction (CCT) and immediate fundal massage—are optional for PPH prevention.
• Orient colleagues to drying, stimulation, and neonatal resuscitation.
• Ensure AMTSL is included in all in-service and pre-service curricula for skilled attendant cadres.
• Ensure systems are in place to monitor and track HBB and BAB implementation.
• Add Prophylactic Uterotonic Coverage Indicator as a process indicator for national programs.
• Ensure that training and education systems continue to include the component of HBB and BAB training programs.
• Require tracking PPM and neonatal deaths at the national and subnational level.

Study recommendations: Cost and cost-effectiveness should be added to the data.

Links to important reports/articles/videos about intervention:
• Video demonstrating HBB program- https://www.youtube.com/watch?v=PSN0vYedrdE
• Video demonstrating BAB program- https://www.youtube.com/watch?v=tW8dBNNu0yM
• Link to WHO RECOMMENDATIONS ON PREVENTION AND TREATMENT OF POSTPARTUM HAEMORRHAGE- http://apps.who.int/iris/bitstream/10665/120082/1/WHO_RHR_14.20_eng.pdf

Citations:


Global health problem: Transparency, accountability, and access

Description of the problem:

Promoting access to quality essential medicines is critical to achieving universal health coverage and making progress toward the Sustainable Development Goals.¹ Patients in many parts of the world still lack access to essential medicines or must pay disproportionate amounts to obtain them: data from low-income countries suggests that only 27% of respondents in poor households can access treatment for all chronic illnesses, and 41% of poor households devote all their health care spending to medicines.¹ By 2015, generic medicines were available in 58% of public health facilities in low- and lower-middle income countries, compared to 67% of private facilities.¹

Barriers to expanding medicine access include weak pharmaceutical sector governance, a lack of transparency and accountability, inadequate attention to social services on the political agenda, and financing challenges.¹

Lack of transparency and gaps in accountability for performance can contribute to problems such as poor forecasting of medicine supply, shortages of medicines (or surpluses which expire before they can be used), price markups which limit access, poor quality medicines, or corruption.¹

Description of the intervention:

The Medicines Transparency Alliance (MeTA) approach was to collect and analyze pharmaceutical sector indicators and information which would be used to inform policy discussions.² The initiative also sought to develop national-level multi-stakeholder platforms to debate issues and promote evidence-based policies to expand access to medicines.²

- Stakeholder meetings were held; in addition, proactive information dissemination strategies were used to expand transparency.
- Phase One: Establish structures to facilitate multistakeholder dialogue.
- Phase Two: Expand the implementation of transparency measures in the system and promote evidence-based policymaking.
Table 3: Transparency Strategies Used to Increase Access to Information

<table>
<thead>
<tr>
<th>Country</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>Open meetings model with MeTA forum events. Proactive dissemination through website, television, and newspapers. Contributed to progress toward a national policy on transparency and accountability in pharmaceutical sector. Created model policies/procedures at facility level where previously absent or ad hoc. Conducted educational activities to increase demand for and use of data.</td>
</tr>
<tr>
<td>Jordan</td>
<td>Proactive dissemination model with some elements of open public meetings. National Medicines Policy now has section on transparency. Disseminated hard copy and electronic versions of documents to government offices and civil society organizations; published work plans, analytical reports, and approved policies on government web site. Educational activities included advocacy training.</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>Proactive dissemination model included publishing state medicine policy in a trade journal. Held numerous public roundtables for policy discussions. Took actions to overcome legal barriers to disclosure, and to develop technical tools for transparency (medicine codifier software). Promoted public information campaign to increase awareness of rights, and to inform the public of dangers of unsafe medicines. Civic education on advocacy and monitoring of policy implementation. Started web site, but no longer available.</td>
</tr>
<tr>
<td>Peru</td>
<td>Mainly proactive dissemination through the Medicines Price Observatory. Open meetings; for example, medicines policy meetings held in different cities, attended by civil society groups, academics, and local officials.</td>
</tr>
<tr>
<td>Philippines</td>
<td>Open meetings model and proactive dissemination with strong social media component. Increased process transparency with information about rules, laws, and procedures, and access to performance data. Disseminated documents at meetings, through e-mail, and on password-protected web sites intended for multi-stakeholder initiative members only.</td>
</tr>
<tr>
<td>Uganda</td>
<td>Open meetings model with some proactive dissemination. Findings from survey of access &amp; pricing shared at a national meeting. Study on quality of medicines was not published due to sensitive data, but was presented at a public meeting. Stories in print media and television. Started a blog and web site, though the blog has not been updated.</td>
</tr>
<tr>
<td>Zambia</td>
<td>Proactive dissemination through radio programs, television, website, social media, brochures, pamphlets, fact sheets. Used a strategy of in-person communication through creation of MeTA groups at district levels. Created Facebook pages for advocacy. Disseminated some information through MeTA Forum and Roundtable events.</td>
</tr>
</tbody>
</table>

Photo provided by Kohler. This graph demonstrates the specific interventions used in each country to increase access to information.

Country:
- Ghana
- Jordan
- Kyrgyzstan
• Peru
• Philippines
• Uganda
• Zambia

Urban/rural/mixed: Not defined

Study population: Not defined

Outcome/impact:

• MeTA stakeholders did not explicitly define transparency or adopt a deliberate transparency model or strategy.
• Countries implicitly conceptualized transparency: as collecting and sharing relevant indicators and reports or analysis on access to medicine issues with stakeholders from government, civil society, and the private sector.
• A Disclosure Policies document was endorsed by government stakeholders in Jordan.
• Policies were implemented with data published on the website of the Jordan Food and Drug Administration.
• MeTA Kyrgyzstan contributed to the State Medicines Policy to provide for greater transparency and a system to monitor policy implementation.
• No common definition of accountability was established.
• The distinct political and health systems and cultures of each country likely influenced how accountability was understood and operationalized.
• MeTA stakeholders advanced three types of accountability efforts: multistakeholder policy dialogue/consultation, civil society capacity building, and citizen education.

Cost and cost-effectiveness: Not defined

Sustainable development goals:

• SDG 10: Reduce inequality within and among countries.
• SDG 16: Promote just, peaceful and inclusive societies.
• SDG 17: Revitalize the global partnership for sustainable development.
Policy recommendations:

- Have each country define and model what transparency and accountability are.
- Require disclosure policies.
- Require dialogues between multistakeholders.
- Promote evidence-based policy making.

Study recommendations:

- Add cost and cost-effectiveness to data.
- Describe tool used to measure transparency in detail.

Links to important reports/articles/videos about intervention:

- Research article entitled “Promoting transparency, accountability, and access through a multi-stakeholder initiative: lessons from the medicines transparency alliance” - [https://link.springer.com/content/pdf/10.1186%2Fs40545-017-0106-x.pdf](https://link.springer.com/content/pdf/10.1186%2Fs40545-017-0106-x.pdf)

- Video describing- Medicines Transparency Alliance (MeTA), a global health initiative that works to increase access to medicines for the poor in developing countries- [https://www.youtube.com/watch?v=2ad4vV05lG8](https://www.youtube.com/watch?v=2ad4vV05lG8)

Citations:


Section Two: The Syrian Crisis a Global Health Perspective (Presented by M. Zaher Sahloul, MD)

Global health problem: Trauma/Internal conflict/Syrian crisis

Description of the problem:

The Syrian crisis originally began as anti-government demonstrations in March 2011. Originally the demonstrations were a part of the Arab Spring.¹ Peaceful protests quickly escalated after the government’s violent crackdown, and armed opposition groups began fighting back.¹

It has been nearly eight years since the Syrian crisis began. The war has killed more than 480,000 people. Crowded cities have been destroyed and horrific human rights violations are widespread. Basic necessities like food and medical care are sparse.¹

The Syrian crisis has created an unprecedented strain on health services and systems because of the prolonged nature of the warfare, the targeting of medics and health care infrastructure, the evacuation of physicians and nurses, the shortage of medical supplies and medications, and the disruption of medical education and training.²

Within a short amount of time, the life expectancy of resident Syrians has declined by 20 years. Over the first four years of the conflict, more than 75,000 civilians died from injuries incurred in the violence.² More than twice as many civilians, including many women and children, have died prematurely of infectious and noninfectious chronic diseases for want of adequate health care.² Doctors, local administrators, and nongovernmental organizations have been struggling to manage the consequences of the conflict, which has resulted in significant loss of life.²
Photo provided by Sahloul. This photo demonstrates a hospital and its patients during the Syrian Crisis.
Description of the intervention:

To address the shortage of qualified critical care specialists, Syrian medical diaspora organizations implemented a two-pronged strategy based on training the trainer and using technology to reach hard-to-reach hospitals.  

- Board-certified critical care specialists residing in the United States provided structured courses on war trauma, disaster medicine, and adult and pediatric critical care.
• Between August 2012 and October 2015, hands-on practical courses using simulators, manikins, airway management kits, and ventilators were held in Turkey and Jordan.³

• Training sessions were held between 2012 and 2015. Topics at the training sessions included emergent use of intraosseous infusion needles for patients with difficult vascular access, nasotracheal intubation for transport, long-term care of neonatal and pediatric patients, and use of tranexamic acid transfusions in patients with massive bleeding.³

• Training was also provided in Focused Assessment of Sonography in Trauma. After the training, the trainees received portable ultrasound devices to use at field hospitals and emergency rooms.³

In addition to skills training, other interventions were utilized.

• Decontamination centers were established in 100 different locations. Personal protective equipment, antidotes, and other medications were distributed.

• Tele-education

• Webinars

Country: Syria
Urban/rural/mixed: Mixed

Study population: Not defined

Outcome/impact:

- Retrospective analysis using post-training surveys confirmed that a significant percentage of trainees incorporated the new skills in their management paradigms and daily practices (unpublished data).²
- Despite being a relatively new tool for trauma assessment, Focused Assessment of Sonography in Trauma has become a preferred screening tool in acute trauma management in Syria due to the ease of learning and nature of portable ultrasound devices—hand-held, highly portably battery-operated device.²
- Using a simple algorithm adopted by the course trainers, trainees have learned to use point-of-care ultrasonography to do a quick differential diagnosis and assessment of traumatic and nontraumatic patients in shock.²

Cost and cost-effectiveness: Not defined

Sustainable development goals:

- SDG 3: Ensure healthy lives and promote well-being for all at all ages
- SDG 6: Ensure healthy lives and promote well-being for all at all ages
- SDG 8: Promote inclusive and sustainable economic growth, employment and decent work for all
- SDG 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation
- SDG 11: Build resilient infrastructure, promote sustainable industrialization and foster innovation
- SDG 16: Promote just, peaceful and inclusive societies
- SDG 17: Revitalize the global partnership for sustainable development

Policy recommendations:

- International medical organizations and societies should advocate on behalf of their Syrian colleagues and champion an end to violations of international humanitarian law and respect for medical neutrality.
- Educational opportunities to support Syrian health care professionals, including scholarships for medical students, would help to build the health care staff that is essential for rebuilding the Syrian health system.
• More resources should be directed to research the impact of conflicts on health care and the use of technology and other innovative solutions to mitigate the harm.

• Consensus should be achieved and acted on by the international community on the urgent need to protect civilians from the airstrikes and chemical attacks and to apply pressure on the Syrian government to stop targeting the remaining health care staff and hospitals.

Study recommendations:

• Add cost and cost analysis to data set.
• Publish data regarding outcome and impact.
• Describe tool to measure data outcomes.

Links to important reports/articles/videos about intervention:

• Video demonstrating portable ultrasound device used to perform a Focused Assessment of Sonography in Trauma examination on a victim of a bombing attack at M-10 Hospital in Aleppo, Syria- http://www.atsjournals.org/doi/full/10.1513/AnnalsATS.201510-661PS

• Article entitled “War is the Enemy of Health. Pulmonary, Critical Care, and Sleep Medicine in War-Torn Syria”- http://www.atsjournals.org/doi/abs/10.1513/AnnalsATS.201510-661PS

Citations:


Global health problem: Long-acting reversible contraception in conflict areas

Description of the problem:

According to the WHO, complex humanitarian emergencies caused by armed conflict devastate already weak national health systems through the destruction of health facilities and flight of trained health workers. Women living in conflict and post-conflict settings may face many sexual and reproductive health (SRH) concerns, including high risk of mortality or morbidity due to pregnancy-related causes, unintended or unwanted pregnancy due to lack of information or access to contraceptive services, complications of unsafe abortions, gender-based violence, and sexually transmitted infections including HIV. The ten countries with the highest maternal mortality ratios in the world are affected by, or emerging from, war; these countries are also characterized by low contraceptive prevalence.

According to the Countdown to 2015 for Maternal, Newborn, and Child Survival, a reduction in maternal mortality and morbidity requires, among other changes, increased coverage of comprehensive contraceptive services. Maternal mortality and contraceptive prevalence have a strong negative correlation, indicating that contraceptive services are a key intervention to prevent maternal mortality.

Between 1998 and 2004, conflict and instability in the eastern Democratic Republic of the Congo (DRC) have resulted in a strong burden on the health system. Two decades of conflicts has led to an estimated 3.9 million deaths; the crude mortality rate was more than 70% higher than pre-war levels. In addition, DRC has the sixth highest maternal mortality ratio in the world at 730 maternal deaths per 100,000 live births and a lifetime risk of maternal death of one in 23.

The WHO determined that DRC made “insufficient progress” towards achieving the fifth millennium development goal of improving maternal health.

Description of the intervention:

The intervention is divided into four parts, which address four aspects of access to long-acting reversible contraception (LARC):

1. Contraceptive commodities and supplies security
   - Within this aspect of the intervention, commodities, supplies and equipment are provided.
   - A security stock is present.
   - Supply chain management training occurs.
2. Competency-based clinical training
   - Within this aspect of the intervention, a 3-week clinical training with practicum occurs.
   - A partnership with Ministry of Health (MOH) is established for local training centers.
   - Coaching and mentoring of nurses and midwives occur.

3. Community mobilization
   - Within this aspect of the intervention, community stakeholders are engaged.
   - Training and engagement take place in the follow-up of clients.

4. Family planning and service delivery
   - Within this aspect of the intervention, partnership is established with MOH at a national and provincial level
   - Support and supervision are provided
Country: Democratic Republic of the Congo
Urban/rural/mixed: Mixed
Study population: Not defined
Outcome/impact:

- From January 2012 to December 2013, the number of clients seeking modern contraceptive methods increased by 54% (from 8,301 in 2012 to 12,830 in 2013).\(^2\)
- The percentage change of clients seeking Intrauterine Devices (IUD) was 127% (from 440 to 999).\(^2\)
- The number of clients who had contraceptive implants increased by 46% (from 5124 to 7499).\(^2\)
Client exit interviews of 415 women at 23 clinics showed a satisfaction rate of 80 to 90%. \(^2\)

Cost and cost-effectiveness: Not defined

Sustainable Development Goals:
- SDG 3: Ensure healthy lives and promote well-being for all at all ages.
- SDG 5: Achieve gender equality and empower all women and girls.

Policy recommendations:
- Establish an international policy that supports the universal right to contraception access.
- Establish a policy allowing females the right to choose desired contraceptive methods.
- Maintain that contraceptive services and counseling should be evidence-based, client-centered, and customized to fit the needs and expectations of any given individual.
- Given the limitations of existing contraceptive options for women and men, provide funding for research in developing safer and more acceptable, affordable, and effective options.
- Provide comprehensive, evidence-based sexuality and contraception education and counseling without bias, discrimination, or coercion.
- Establish a model that focuses on antenatal, childbirth, and postpartum visits as key opportunities to reach clients for family planning services.
- Establish a low- or no-cost provision of contraception and reproductive health services.

Study recommendations:
- Defined study population
- Cost and cost-effectiveness

Links to important reports/articles/videos about intervention:
- Video describing the VLIR project in DR Congo- [https://vimeo.com/80446460](https://vimeo.com/80446460)
Citations:


Global health problem: Lack of Internet access.

Description of the problem: On the basis of data from 65 developing countries, the average percentage of schools with access to computers and the Internet for teaching purposes is above 60% in both primary and secondary education.\(^1\) According to data available within Sub-Saharan countries, less than 40% of schools have access to computers and the Internet for teaching purposes.\(^1\) More specifically, as of 2014, within Southern Africa, 12% of households had access to Internet and 11% of household had access to computers. In Eastern Africa only 9% of households have access to the Internet and 8% of households had access to computers.\(^1\)

However, in high income countries, 80% of households had access to the Internet and 81% had access to computers.\(^1\) The above statistics demonstrate that equity issues continue to be a major challenge in education. According to the available data, children from the richest 20% of households achieved greater proficiency in reading at the end of their primary and lower secondary education than children from the poorest 20% of households.\(^1\)
Description of the intervention:

- This study’s goal was to create and teach a health-based curriculum through the method of eLearning.
- The intervention used a creative approach to deliver information to individuals in resource constrained settings.
- This study provided a health-based curriculum by providing podcasts, quizzes, case studies, games and interactive discussions by sending messages to each user’s WhatsApp on cell phones or tablets.

![HTS for Children and Adolescents Learning Activities]

Photo provided by Wall. Photo demonstrates the different learning activities that the intervention provides.

Country:

- Tanzania
- Namibia
Zimbabwe
Urban/rural/mixed: Not defined
Study population: Not defined
Outcome/impact:
Qualitative

- Participants and educators experienced satisfaction with the intervention because it was easy to implement, was cost-effective, and created a learning environment where students could learn anywhere at their own pace.

Quantitative

- For the three programs studied there was a reduction in cost from 41%-56% per person when implementing the health curriculum via tablets or cell phones through the use of WhatsApp.

Photo provided by Wall. The photo demonstrates how WhatsApp is utilized.
Cost and cost-effectiveness:

Health information system training (3-week training)
- Cost per person via traditional methods was $980 USD. After implementation of training via cell phone or tablet, the cost per person was $437. There was a 56% reduction in cost per person.¹

HIV Testing and Services (5-week training)
- Cost per person via traditional methods was $775 USD. After implementation of training via cell phone or tablet, the cost per person was $459. There was a 51% reduction in cost per person.¹

Prevention of Mother-to-Child Transmission of HIV (5-week training)
- Cost per person via traditional methods was $775 USD. After implementation of training via cell phone or tablet, the cost per person was $459. There was a 41% reduction in cost per person.¹

Sustainable development goals:
- SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- SDG 10: Reduce inequality within and among countries.
- SDG 17: Revitalize the global partnership for sustainable development.

Policy recommendations:
- Define the right to Internet access as a fundamental human right because of its ability to aid in freedom of expression and opinion.
- Universally mandate that countries have a responsibility to ensure that Internet access is broadly available, and that countries may not unreasonably restrict an individual’s access to the Internet.
- Grant individuals the right to development and allow for economic development opportunities.
- Grant individuals the rights to financial services such as savings accounts and enable online trading.
- Establish an international dialogue on how the Internet should be regulated. Currently portions of the Internet are subject to laws and regulations of the countries in which they operate.
- Integrate technology into global education.
- Take actions to reduce the “Global digital divide.” The global digital divide addresses access and disparities to
technology, high-quality computers, fast Internet, technical assistance or telephone services.

Study recommendations:

- The research should further explore and compare competencies or skills of the participant who engages in eLearning verses a traditional classroom setting.
- A specific study population should be defined.

Links to important reports/articles/videos about intervention:


Citations:

Global health problem: Integrating tobacco cessation with reduced harmful drinking and TB/HIV

Description of the problem:

South Africa has the third highest new tuberculosis (TB) caseload in the world, and about two thirds of TB patients are also HIV-positive. Within South Africa, the outcomes of TB programs are below the set targets, despite the widespread introduction of standardized treatment programs and efforts to integrate HIV and TB services. HIV is a well-established risk factor for both high TB incidence rates and poor TB treatment outcomes, but thus far, much less attention has been paid to the role played by tobacco smoking in adversely affecting those outcomes than to the role of HIV. Several systematic reviews have found substantial evidence that tobacco smoking is associated with an increased risk of TB infection and TB disease. In addition, some evidence exists regarding the adverse effects of active smoking on TB mortality and on TB outcomes in patients in whom the disease is established. Active smoking has been associated with lower treatment adherence, slower smear conversion, TB treatment failure, relapse, and death during or after treatment. Furthermore, the joint effects of smoking, TB, and HIV greatly increase the risk of chronic obstructive pulmonary disease in the long term. The introduction of smoking cessation services into TB programs has therefore been advocated by several international bodies.

Description of the intervention:

The intervention employed was Motivational Interviewing (MI). Motivational interviewing was designed to:

- Be a directive, client-centered counseling or communication style.
- Help the clients to explore and resolve ambivalence to change.
- Work on “motivation to change” and “confidence to change.”
- Improve self-efficacy to change multiple risk behaviors.
- Encompass 5 principles: (a) expressing empathy, (b) developing discrepancy, (c) avoiding argumentation, (d) rolling with resistance, and (e) supporting self-efficacy.
Country: South Africa
Urban/rural/mixed: Not defined
Study population: Not defined
Outcome/impact:
- 92% of the participants of the MI sessions rated the intervention very helpful.
- 50% of the participants of the MI sessions stated they will now drink less.
- 58% of the participants of the MI sessions stated they will now smoke less.
- 41.7% of the participants of the MI sessions stated they will quit smoking.
• 83% of the participants stated they now know more about smoking and TB.
• 91.7% of the participants stated they now know more about alcohol and TB.
• 100% of the participants stated they are now more adherent to TB meds.
• 28.9% of the participant were able to biochemically verify smoking abstinence after 6 months.

Cost and cost-effectiveness: Not defined

Sustainable development goals:
• SDG 3: Ensure healthy lives and promote well-being for all at all ages.
• SDG 10: Reduce inequality within and among countries.

Policy recommendations:
• Establish surveillance system for tobacco use among TB.
• Actively provide referral, counseling, and tobacco pharmacological treatment to all TB parents as a part of protocols.
• Involve family, community, and health center teams in tobacco control.

Study recommendations: Add cost and cost-effectiveness to data.

Links to important reports/articles/videos about intervention:

• Link describing the WHO tobacco free imitative-  http://www.who.int/tobacco/en/
• Link describing the WHO End TB strategy-  http://www.who.int/tb/strategy/en/
• Video link describing links between smoking and TB-  https://www.youtube.com/watch?v=uaxffPwYlhQ
• Video link about tobacco use and TB-  https://www.youtube.com/watch?v=P6cu0avJdhc

Citations:


Global health problem: Integrating Cardiovascular Disease Risk Factor (CVDRF) Screening into HIV

Description of the problem:

The largest proportion of people living with HIV resides in sub-Saharan Africa (SSA). Evidence from developed countries suggests that HIV infection increases the relative risk of cardiovascular disease (CVD) by up to 50%\(^1\). In addition, a global prevalence of CVD risk factors exists.

Because of the rising global prevalence of CVD risk factors (CVDRF), an increasing number of people are living with HIV who have CVD and CVDRFs such as diabetes, hypertensions, high cholesterol, and tobacco use.\(^2\) Because of this, communities are affected by the double burden of HIV and CVD.

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### CVDRF Definitions & Measurement

<table>
<thead>
<tr>
<th>CVD RF</th>
<th>Definition</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension (HTN)</td>
<td>SBP &gt;140 and/or DBP &gt;90</td>
<td>Average of two resting BP measurements ≥ 5 min apart</td>
</tr>
<tr>
<td>Diabetes (DM)</td>
<td>HBA1C &gt;6.5%</td>
<td>Point of care testing</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>&gt; 6.2mmol/L</td>
<td>Point of care testing</td>
</tr>
<tr>
<td>Smoking</td>
<td>Use of cigarette, cigar, and/or pipe in the last year</td>
<td>Self report</td>
</tr>
</tbody>
</table>

Photo provided by Maina. Photo demonstrated how CVDRF was defined in the study.
Description of the intervention:

Screening was offered to a nonrandom convenience sample of patients age > 40 years attending antiretroviral therapy (ART) visits at the HIV clinic from September 2015-June 2016.

- Phase One: Screening - CVDF screening conducted for patients on ART.
- Phase Two: Management - Patients with CVDRF were randomized to management in ART clinic vs. outpatient departments (OPD) for six months.

Country: Swaziland
Urban/rural/mixed: Urban
Study population:
Inclusion Criteria:
• HIV-Infected
• Enrolled in HIV care and receiving ART
• Age > 40 years

Exclusions Criteria:
• Acutely ill
• Known history of CVD
• Currently pregnant

Outcome/impact:
• During the study period, patients on ART and ≥40 years old made 14,207 visits to ART clinic.
• 1,826 (13%) were screened.
• 39% of the patients screened that were > 40 years on ART had at least one modifiable CVDRF.
• Screening yielded a large proportion of patients with diagnosed CVDRF.
• 2% of the patients screened had hypertensive emergencies.

Cost and cost-effectiveness: Not defined

Sustainable development goals:
• SDG 3: Ensure healthy lives and promote well-being for all at all ages.
• SDG 10: Reduce inequality within and among countries.

Policy recommendations:
• Recommend screening for CVDRF with patients who are infected with HIV.
• Create a standardized and universal risk assessment tool to identify CVD in HIV patients.
• Manage patients with CVDRF at ART clinics.

Study recommendations:
• Add cost and cost-effectiveness to data set.
• Describe the intervention, if any, for actual management of CVD in this study.

Links to important reports/articles/videos about intervention:


• Audio discussing how HIV-Positive Individuals Have Twice the Risk of Experiencing Heart Attack or Stroke- https://reachmd.com/news/hiv-positive-individuals-have-twice-the-risk-of-experiencing-heart-attack-or-stroke/1380576/

• Video entitled Coronary Heart Disease Risk in HIV: Clinical Research and Clinical Implications- https://www.prn.org/index.php/complications/article/coronary_heart_disease_risk_in_hiv_clinical_research_and_implications

Citations:


Section One: Implementation of an Integrated Multispecialty Poison-Control Center (Presented by Timothy B. Erickson, MD)

Global health problem:
- Hazardous chemicals in air, water, and soil
- Pollution and contamination
- Suicide

Description of the problem:
Globally there are 200,000 deaths are caused by unintentional poisoning annually.\(^1\) Unintentional poisonings can be a result of prescription drugs, carbon monoxide, and cleaning products.\(^1\) In addition, poison can also come from environmental contamination. This type of poisoning can occur as a result of lead poisoning from e-waste or industrial emissions.\(^1\)

Poisoning is a significant global public health problem. According to WHO data, in 2012 an estimated 193,460 people died worldwide from unintentional poisoning.\(^2\) Of these deaths, 84% occurred in low- and middle-income countries.\(^2\)

In addition to unintentional poisoning, nearly a million people die each year as a result of suicide, and chemicals account for a significant number of these deaths. For example, it is estimated that deliberate ingestion of pesticides causes 370,000 deaths each year.\(^2\)

Poisoning accounts for 30% of suicides in India, and accidental and environmental exposures to poisons are also frequent.\(^3\) Within India, the most common poisonings involve insecticides, rodenticides, snakebites, alcohols, sedative hypnotics, opioids, and pain medication.\(^3\)

As of 2017, few poison information centers exist within India. In addition, no regional integrated poison control and information centers exist that can be accessed by people in the community.\(^3\)
Description of the intervention:

- The intervention included the implementation of a multispecialty model for an integrated regional poison-control center in the city of Bangalore, Karnataka.

- A model was developed for a poison control center that includes specialists from emergency medicine, critical care, pharmacology, pediatrics, psychiatry, preventive medicine, and laboratory diagnostics.\(^3\)

- Services provided include referral and management advice for poisonings, drug information, psychosocial care with suicide prevention, forensic medicine, and poison education for the general public.\(^3\)

- Clinical needs are also treated. At the poison control center, patients can be treated and stabilized at peripheral hospitals and then transferred by paramedics to a toxicology center or hospital to be treated with the antidote therapy.\(^3\)

- Finally, computerized software treatment modules were developed to educate providers about the most common
Country: India
Urban/rural/mixed: Mixed
Study population: Not defined
Outcome/impact:
- No quantitative results exist at this time.
- After establishment of the Poison Center in 2016, the center has now linked to five peripheral hospitals.
- The Poison Center now serves the people on Bangalore, which includes 10 million people.
Cost and cost-effectiveness:
- According to US statistics, poison centers save money. Every dollar invested in the poison center system saves $13.39 in health care costs and lost productivity.¹
- Cost-effectiveness from this intervention within the context of India was not provided.
Sustainable development goals:

- SDG 3: Ensure healthy lives and promote well-being for all at all ages.
- SDG 6: Ensure access to water and sanitation for all.

Policy recommendations:

- Mandate poison control center to perform a core set of activities: (1) manage telephone-based poison exposure and information calls; (2) prepare and respond to all-hazards emergency needs; (3) capture, analyze, and report exposure data; (4) train poison control center staff, including poison information specialists and providers; (5) carry out continuous quality improvement; and (6) integrate their services into the public health system.
• Require poison control centers to collaborate with state and local health departments to develop, disseminate, and evaluate public and professional education activities.

• Develop indicators of quality and impact of poison control center services.

• Petition for the federal government to allocate funding for (1) studies on the epidemiology of poisoning, (2) the prevention and treatment of poisoning and drug overdose, (3) health services access and delivery, (4) strategies to improve regulations and facilitate researchers’ input into regulatory procedures, and (5) the cost efficiency of the new Poison Prevention and Control System on population-based outcomes for general and specific poisonings.

Study recommendations:

• Quantitative data demonstrating the utilization of the Poison Center should be added to the data.

• Cost and cost-effectiveness should be added to the data.

Links to important reports/articles/videos about intervention:

• Links to the research study featured in the lancet - http://www.thelancet.com/pdfs/journals/langlo/PIIS2214-109X(17)30127-4.pdf

• Link to the WHO International Programme on Chemical Safety - http://www.who.int/ipcs/poisons/en/

Citations:


Global health problem:

- Emergency care
- Injuries
- Road traffic accidents

Description of the problem:

According to the WHO, injuries are a neglected epidemic in developing countries. Injuries account for more than five million deaths each year, roughly equal to the number of deaths from HIV/AIDS, malaria and tuberculosis combined. At least 90% of injury deaths occur in low- and middle-income countries (LMIC), where preventive efforts are often limited, and health-care systems are not prepared to meet the challenge.

In addition to a negative physical impact, injuries contribute to a large socioeconomic impact as well. The socioeconomic impact of injury-related disability is magnified in low-income countries, where there is poorly developed trauma and emergency care. In addition, LMIC’s often lack rehabilitation systems and have little or no social welfare infrastructure.

Of all categories of injury, road traffic crashes have appropriately received the greatest attention. The highest road traffic injury death rates are in the African region. Economic development in low-income countries is accompanied by an increase in the number of vehicles, with the associated rise in traffic-related crashes, injuries, and deaths. Road traffic injuries accounted for 1.24 million deaths in 2015 and ranked as the tenth leading cause of death. The estimated annual cost of road traffic injuries is more than $500 billion, which exceeds the total global expenditures in developmental assistance. For every death from a road traffic crash, there are many more hospitalizations, emergency department visits, and injuries, often leading to permanent disability. In disability-adjusted life years, road traffic accidents were the tenth leading contributor worldwide and are increasing over time.

Description of the intervention:

- Funded by the Medical Education Partnership Initiative (MEPI), a partnership was formed with Ghana to create a cadre of specialty trained acute and emergency care providers.
- Participants included Kwame Nkrumah University for Science and Technology, Ministry of Health, Komfo Anokye Teaching Hospital, Ghana College of Physicians and Surgeons, Ghana National Ambulance Service, and the University of Michigan.
- The first step of the intervention included creating a training program in emergency care for physicians, nurses, Emergency Medical Technicians (EMT), and exposure to emergency medicine for medical students.
• The second step of the intervention included teaching the participants to identify, understand, and document what clinical emergencies were being seen. Mentors were provided at this time.²

• The third step to the intervention included training the clinicians in a culture of clinical research, accurately capturing information, and training faculty to disperse around the country.²

Country: Ghana
Urban/rural/mixed: Not defined
Study population: Not defined
Outcome/impact:
  • The program graduated 29 Specialists/Attendants.
The program graduated over 200 nurses who provide care in 9 out of 10 regions in Ghana.

Cost and cost-effectiveness: Not defined

Sustainable development goals:

- SDG 3: Ensure healthy lives and promote well-being for all at all ages.
- SDG 9: Build resilient infrastructure, promote sustainable industrialization, and foster innovation.
- SDG 11: Make cities inclusive, safe, resilient, and sustainable.

Policy recommendations:

Policy recommendations to prevent road traffic accidents:

- Reducing exposure to risk through transport and land-use policies
- Shaping the road network for road injury prevention, improving the visibility of road users
- Promoting crash-protective vehicle design
- Setting and securing compliance with road safety rules
- Delivering post-crash care
- Enacting and enforcing laws on alcohol impairment
- Enacting and enforcing laws on the use of seat-belts and child restraints
- Enacting and enforcing laws making the use of crash helmets mandatory

Policy recommendations for emergency care:

- Establish a training program in emergency care for physicians, nurses, and EMTs
- Globally establish a clear definition of roles and responsibilities of physicians, nurses, community health workers, and EMTs
- Establish a federal Emergency Medical Services (EMS) law that implements the framework of emergency medicine
- Establish a standard of care for post-crash care
- Require recording of information that will lead to quality improvement, patient outcomes tracking, and functional
evaluations

- Promote and verify adequate skill and knowledge of Emergency Department staff physicians and other emergency health care providers

Study recommendations:

- Define population studied
- Develop a tool to effectively monitor, track, and evaluate the intervention
- Add cost and cost-effectiveness to data
- Create policy recommendations based on research findings

Links to important reports/articles/videos about intervention:

- Video entitled Emergency care in India in need of resuscitation. This video highlights how unreliable emergency care systems means that tens of thousands of live are lost every year - https://www.youtube.com/watch?v=Ayeddm-2Q1I

Citations:


Global health problem: Gender-based violence

Description of the problem:

Gender-Based Violence (GBV) is a globally recognized public health problem. Data from the WHO shows that about one out of every three women globally have been raped, beaten, or otherwise mistreated, usually by a family member or intimate partner. The impact of this violence on the physical and mental health of women and girls is devastating and seriously limits their ability to participate fully and share in the benefits of development. In addition, according to The Joint United Nations Programme on HIV/AIDS (UNAIDS), women who have experienced violence are up to three times more likely to be infected with HIV than those who have not.

Within Mozambique, it is believed that 55% of women will be subjected to physical or sexual violence by an intimate partner or nonpartner during their lifetimes. In addition, due to GBV, 13.2% of women have HIV.

Description of the intervention:

The intervention had 7 areas of focus:

1. Development of guidelines - GBV screening and protocol for Health Care Workers (HCW)
2. Curriculum development and training - Curriculum was developed for nurses, police officers, and social workers. The curriculum addressed post-violence care for adults and minors.
3. Site implementation - Services were implemented in 42 Health Facilities, 7 of them demonstration sites (DM).
4. Information system - Data collection
5. Intersectoral Coordination - Coordination existed among sectors through monthly meetings to discuss implementation challenges
6. Community involvement
7. GBV screening in clinical setting
Photo provided by Baptista. Photo demonstrates the GBV intervention project focus.

Photo provided by Baptista. Photo demonstrates curriculum development and training.
Country: Mozambique
Urban/rural/mixed: Mixed
Study population: Not defined
Outcome/impact:

- Five of the seven demonstration sites that received prioritized support achieved a score of 80% or more in the achievement of standards for quality comprehensive GBV services. This is compared to 10% at baseline.
- From June 2011 to December 2014, a total of 3,818 survivors received GBV services in 42 health facilities supported by Jhpiego.
- Access to post-exposure prophylaxis for sexual violence survivors increased to 81%, up from 49% at baseline.
- Lay counselors reached 27,366 men with GBV messages through community outreach activities.
- 312,188 people were screened for GBV, of which 76% were women.

Cost and cost-effectiveness: Not defined
Sustainable development goals:
• SDG 3: Ensure healthy lives and promote well-being for all at all ages.
• SDG 5: Achieve gender equality and empower all women and girls.
• SGD 10: Reduce inequality within and among countries.

Policy recommendations:
• Take opportunities to integrate, monitor, and evaluate GBV sensitization as part of health education campaigns.
• Further evaluate the feasibility and cost-effectiveness of scaling up GBV demonstration sites.
• Integrate GBV case detection and first-line response with other existing services.
• Develop and include a GBV module for pre-service training in medical schools.
• Continually train and monitor health care providers and lay counselors to ensure that their delivery of GBV services prioritizes the needs, rights, and safety of the client.
• Test the viability of support groups for GBV survivors similar to groups for people living with HIV/AIDS.

Study recommendations: Further evaluate the feasibility and cost-effectiveness of scaling up the GBV demonstration site.

Links to important reports/articles/videos about intervention:
• Video Combating gender-based violence in Africa - https://www.youtube.com/watch?v=hjyzyWtcdqU

Citations:


Global health problem: Breast Cancer

Description of the problem:

Breast cancer is the most common cancer in women both in the developed countries and the LMICs.\(^1\) It is estimated that worldwide over 508,000 women died in 2011 due to breast cancer.\(^1\) Although breast cancer is thought to be a disease of the developed world, almost 50% of breast cancer cases and 58% of deaths occur in less developed countries.\(^1\)

Incidence rates vary greatly worldwide, from 19.3 per 100,000 women in Eastern Africa to 89.7 per 100,000 women in Western Europe.\(^1\) In most of the developing regions, the incidence rates are below 40 per 100,000. The lowest incidence rates are found in most African countries due to lack of services related to detection.\(^1\)

Breast cancer awareness and early detection are limited in sub-Saharan Africa. Resource limitations make screening mammography or clinical breast exams (CBE) by physicians or nurses difficult in many settings.\(^2\) This intervention is aimed to assess feasibility and performance of CBEs by laywomen in urban health clinics in Malawi.\(^2\)

Description of the intervention:

- The intervention has three aims:
  - Aim 1: To train laywomen as breast health workers to perform CBE screening and to educate patients on breast cancer in Lilongwe Health Clinics.\(^3\)
  - Aim 2: To assess feasibility and acceptability of CBE screening in Malawi as a possible future strategy for early breast cancer detecting in this setting.\(^3\)
  - Aim 3: To assess clinic outcomes for CBEs, including proportion of women with detectable abnormalities and subsequent pathologic diagnoses.\(^3\)

- Four laywomen were trained to deliver breast cancer educational talks and conduct CBEs.

- After training, screening was implemented in diverse urban health clinics. Eligible women were selected. The study population is defined below.
Photo provided by Gutnik. The photo demonstrates a laywoman being trained to perform a clinical breast exam.

Photo provided by Gutnik. The photo demonstrates how a clinical breast exam should be performed.
Country: Malawi
Urban/rural/mixed: Urban

Study population:

- Women who were more than 30 years old, with no prior breast cancer or breast surgery, and clinic attendance for reasons other than a breast concern.
- Women with abnormal CBEs were referred to a study surgeon. All palpable masses confirmed by surgeon examination were pathologically sampled. Patients with abnormal screening CBEs but normal surgeon examination underwent breast ultrasound confirmation.
- In addition, 50 randomly selected women with normal screening CBE underwent breast ultrasound, and 45 different women with normal CBE were randomly assigned to surgeon examination.

Outcome/impact:

- Among 1,220 eligible women, 1,000 (82%) agreed to CBEs.
- Lack of time (69%) was the most common reason for refusal.
- Educational talk attendance was associated with higher CBE participation (83% versus 77%).
- Among 1,000 women screened, 7% had abnormal CBEs. Of 45 women with normal CBEs randomized to physician examination, 43 had normal examinations and two had axillary lymphadenopathy not detected by a CBE.
- Sixty of 67 women (90%) with abnormal CBEs attended the referral visit. Of the 60, 29 (48%) had concordant abnormal physician examination.
- Thirty-one women (52%) had discordant normal physician examination, all of whom also had normal breast ultrasounds.
- Compared with physician examination, sensitivity for CBEs by laywomen was 94%.
- Of 13 women who underwent recommended pathologic sampling of a breast lesion, two had cytologic dysplasia and all others benign results.
- CBE uptake in Lilongwe clinics was high. CBEs by laywomen compared favorably with physician examination and follow-up was good.
Cost and cost-effectiveness: Not defined

Sustainable development goals:
- SDG 3: Ensure healthy lives and promote well-being for all at all ages.
- SDG 5: Achieve gender equality and empower all women and girls.
- SDG 10: Reduce inequality within and among countries

Policy recommendations:
- Provide funding for research to evaluate if a CBE is a low-cost approach to breast cancer screening.
- Mandate breast cancer education in primary and secondary school.
- Provide funding and incentives for public health clinics to train laywomen to deliver clinical breast exams.
- Develop a screening tool to assess feasibility and acceptability of CBEs.

Study recommendations: Add cost and cost-effectiveness to data.

Links to important reports/articles/videos about intervention:
- Link to Clinical breast examination screening by trained laywomen in Malawi integrated with other health services article on PubMed - [https://www.ncbi.nlm.nih.gov/pubmed/27451869](https://www.ncbi.nlm.nih.gov/pubmed/27451869)

Citations:


Global health problem: Cervical Cancer

Description of the problem:

Cervical cancer is the third most common cancer among women and the fourth leading cause of cancer-related deaths in women worldwide. Globally, it is estimated that more than 500,000 cases and 250,000 deaths occur annually as a result of cervical cancer, and greater than 85% of these cases occur in developing countries.

In El Salvador, cervical cancer is the leading cause of cancer death among women. While most high-income countries have reduced cervical cancer incidence through widespread Pap smear testing (i.e., cervical cytology), Pap-based screening programs in low-resource settings have faced challenges achieving adequate population coverage, quality, and management of abnormal Pap results. In El Salvador, 68% of women from ages 15–49 reported being screened within the past two years, but a separate study found that only 24% of women with abnormal Pap smears received diagnostic follow-up with colposcopy. The WHO recently recommended the use of human papillomavirus (HPV) DNA testing in those regions and countries that have not already established an effective, high-coverage Pap-based program.

Description of the intervention:

The intervention was comprised of three phases. Each phase was tested for effectiveness and cost-effectiveness.

- Phase 1 resulted in the screening of over 2,000 women who previously had limited access to cervical cancer screening and treatment.
- Phase 2 enabled 8,035 women to access cervical cancer screening methods and technology.
- Phase 3 enabled over 17,000 women to access cervical cancer screening methods and technology.

Each phase compared three screening algorithms for women from ages 30–65:

1. Cohort A-HPV screening every 5 years followed by referral to colposcopy for HPV-positive women (Colposcopy Management [CM]).
2. Cohort B-HPV screening every 5 years followed by treatment with cryotherapy for eligible HPV-positive women (Screen and Treat [ST]).
3. Pap screening every 2 years followed by referral to colposcopy for Pap-positive women (Pap).
Country: El Salvador
Urban/rural/mixed: Mixed
Study population:
• 20,000 women in El Salvador
• Ages 30-49
• No history of screening in >3 years

Outcome/impact:
• 17,966 women were screening
• 17,966 samples were tested
• 2,209 positive results were obtained
• 1,949 women underwent VT
• 1,650 women received cryotherapy
• 299 women were referred to colposcopy

Cost and cost-effectiveness:
• Screening with careHPV provides greater health benefits than current Pap smear screening.
• Routine screening with careHPV (every 5 years) is cost-effective compared to Pap testing (every 2 years) at a cost-effectiveness threshold of 1x-3x GDP per capita.
• Screening with careHPV followed by visual triage (Cohort B) is more effective and less costly than careHPV with colposcopy triage (Cohort A).
• The screen and treat (ST) method has an incremental cost-effectiveness ratio (ICER) of $2,040 per years of life saved (YLS), therefore, ST would be considered very cost-effective given El Salvador’s per capita GDP of $3,777.2

Sustainable development goals:
• SDG 3: Ensure healthy lives and promote well-being for all at all ages.
• SDG 5: Achieve gender equality and empower all women and girls.
• SGD 10: Reduce inequality within and among countries.

Policy recommendations:
• Follow WHO recommendations and use HPV DNA testing in those regions and countries that have not already
established an effective, high-coverage Pap-based program.

- Require the use of the careHPV Test as a primary screening test in women 30 years and older to detect high-risk HPV infection.

Study recommendations: Comment on how this can apply to other low-income countries.

Links to important reports/articles/videos about intervention:

- Video describing the careHPV test - https://www.youtube.com/watch?v=x_8BkYXAMmo
- Video demonstrating how careHPV is bringing cervical cancer screening to women in poor, rural areas - http://www.aljazeera.com/programmes/thecure/2013/05/2013520142618755476.html

Citations:


Global health problem:

- Female empowerment
- Nutrition

Description of the problem:

Women’s empowerment and gender equity are globally recognized as essential for sustainable development. Women’s empowerment has been demonstrated to be a crucial component for women’s human rights. In addition, evidence suggests that empowering women improves nutrition outcomes for both mothers and their children.

A review conducted by Smith and Haddad estimates that improvements in women’s status and education account for more than half of the global reductions in underweight children from 1970–1995. In addition, literature suggests that increasing female secondary education contributed to almost one-third of reductions in child stunting in sub-Saharan Africa from 1970–2010.

It is evident that women’s empowerment is an important factor in improving nutrition outcomes for women and children; therefore, gender equity is an important component of the enabling environment.

Empowerment is often defined as having the “ability to define one’s goals and act upon them,” self-esteem, decision-making power, control over resources, and freedom of mobility. In addition, education also contributes to women’s status and empowerment. This is because education can promote access to resources and decision-making power. Women’s status, including women’s decision-making ability and societal gender equity, has been proven to have a “significant, positive effect on children’s nutritional status” in developing regions. This is because women with greater societal status tend to have better nutritional status and better prenatal and childbirth care.

Description of the intervention:

- The intervention adopting the national Community Infant and Young Child Feeding (C-IYCF) Counseling Package in Kajuru, Nigeria.
- The intervention was adopted for the local context and implemented at scale in one local government area (LGA), Kajuru LGA, Nigeria.
- The C-IYCF program contains training tools to equip community workers (CW) for counseling mothers and families on nutrition.
The intervention uses an interactive and experiential adult learning approach, with relevant knowledge and skills on the recommended breastfeeding and complementary feeding practices for children from birth up to 24 months. The intervention also enhances their counselling, problem solving, negotiation and communication skills, and it prepares them to effectively use the related counseling tools and job aids.5
Country: Nigeria

Urban/rural/mixed: Not defined

Study population: Not defined

Outcome/impact:

- At the end, more leaders, health workers, and volunteers agreed or strongly agreed that women should be able to express their opinions regarding child feeding. The number of community leaders who strongly agreed increased from 12% to 42%. The number of health workers who strongly agreed went up from 29% to 54%, and the number of community volunteers who strongly agreed went up from 23% to 54%.

- Pregnant women and mothers were also more likely to strongly agree that women should be able to express their opinion regarding child feeding. The number of pregnant women who strongly agreed went up from 33% to 54%.

- Women who ate more during their pregnancy increased from 36% at baseline to 50%.
• Children under 6 months of age who were exclusively breastfed increased from 31% to 50%.\textsuperscript{6}
• Children from ages 6-8 months who received solid food in the previous day increased from 56% to 64%.\textsuperscript{6}
Cost and cost-effectiveness: Not defined

Sustainable development goals:

- SDG 3: Ensure healthy lives and promote well-being for all ages.
- SDG 5: Achieve gender equality and empower all women and girls.
- SDG 10: Reduce inequality within and among countries.

Policy recommendations:

- Provide hospital- and health facilities-based capacity to support exclusive breastfeeding, including revitalizing, expanding, and institutionalizing the baby-friendly hospital initiative in health systems.
- Provide community-based strategies to support exclusive breastfeeding, including the implementation of communication campaigns tailored to the local context.
- Significantly limit the aggressive and inappropriate marketing of breast-milk substitutes by strengthening the monitoring, enforcement, and legislation related to the International Code of Marketing of Breast-Milk Substitutes and subsequent relevant World Health Assembly resolutions.
- Empower women to exclusively breastfeed by enacting six-months mandatory paid maternity leave, as well as policies that encourage women to breastfeed in the workplace and in public.
- Invest in training and capacity-building in exclusive breastfeeding protection, promotion, and support.

Study recommendations: Cost and cost-effectiveness should be added to the data.

Links to important reports/articles/videos about intervention:

- C-IYCF Counselling Package - https://www.unicef.org/nutrition/index_58362.html

Citations:


Section Five: An Intervention to Reduce Sexual Violence on a University Campus (Presented by Sarah Rominski, Ph.D. MPH)

Global health problem: Sexual Violence

Description of the problem:

Sexual violence occurs globally. In many countries there has been little research conducted on the problem; however, available data suggests that in some countries nearly one in four women may experience sexual violence by an intimate partner, and up to one-third of adolescent girls report their first sexual experience as being forced. Sexual violence has a profound impact on physical and mental health. Sexual violence can be associated with physical injury; however, it can also be associated with an increased risk of a range of sexual and reproductive health problems, with both immediate and long-term consequences.

Sexual violence is a serious public health and human rights problem with both short- and long-term consequences on women’s and men’s physical, mental, sexual, and reproductive health. Sexual violence can occur in the context of an intimate partnership, within the larger family or community structure, or during times of conflict.

In addition, global sexual assault is a significant challenge for universities worldwide, affecting the health and academic success of students. Although sexual violence prevention programs are common at universities in the United States, they are nonexistent in Ghana. The intervention below examines and adopts a sexual violence prevention program to students at the University of Cape Coast (UCC), Ghana.

Description of the intervention:

- The intervention adopted a sexual violence prevention program created at the University of Michigan, USA, for use at UCC, Ghana.
- Initially, a focus-group was conducted discussing the creation of a program called Relationship Tidbits.
- Seventy-one students at UCC enrolled in the program. Throughout the intervention, students interacted with the program in small groups of six. The participants were encouraged to think aloud and ask questions related to sexual violence, rape myths, and gender equality.
- Participants completed a pre-program and post-program survey that included demographic information and measures of attitudes towards sexual violence and gender equity.
Photo provided by Rominski. The photo demonstrated the timeline of the intervention.

Photo provided by Rominski. The photo demonstrated participants discussing questions related to sexual violence and gender equality.
Country: Ghana
Urban/rural/mixed: Not defined

Study population:
- 71 students in total
- 36 men
- 35 women
- Mean age of 22.9 years

Outcome/impact:
- Measurements used to determine attitude and change in attitude regarding sexual violence included the Illinois Rape Myth Acceptance (IRMA) scale, the Gender Equitable Men (GEM) scale, and the Sexual Relationship Power Scale (SRPS).4
- Male participants showed improvements in several measures, including an increase in the overall mean IRMA scale score (from 60·1 (SD 13·1) to 73·4 (18·3); p<0·0001) as well as the “she asked for it” (p<0·0001), “he didn’t mean to” (p=0·004), and “she lied” (p=0·001) subscales.4
- Men also showed an increase in mean GEM score (from 54·5 to 59·5; p=0·011), suggesting more gender equitable attitudes after the training, as well as increases in the violence and reproductive health and disease prevention domains of the GEM (p=0·004 and p=0·021, respectively).4
- Scores for female participants did not change significantly after the program.4

Cost and cost-effectiveness: Not defined

Sustainable development goals:
- SDG 3: Good health and well-being for all at all ages.
- SDG 5: Gender equality and empower all women and girls.
- SDG 10: Reduce inequalities within and among counties.

Policy recommendations:
- Adopt a comprehensive legislative approach, encompassing not only the criminalization of all forms of violence
against women and the effective prosecution and punishment of perpetrators, but also the prevention of violence and the empowerment, support, and protection of survivors.

- Call for the enactment in legislation of broad definitions of all forms of violence against women in accordance with international human rights standards, and provide specific recommendations as to how domestic violence and sexual violence should be defined.

- Recommend that the law prioritize prevention and provide for a range of measures to be undertaken to this end, including awareness-raising campaigns, sensitization of the communications media, and inclusion of material on violence against women and women’s human rights in educational curricula.

- Establish that specific legal provisions should be enacted to guarantee the rights of immigrant women who are victims/survivors of violence.

- Establish equal application of legislation to all women and measures to address multiple forms of discrimination. Legislation should protect all women without discrimination as to race, color, language, religion, political, national or social origin, property, marital status, sexual orientation, HIV/AIDS status, migrant or refugee status, age, or disability.

- Mandate the formulation of a plan, which should contain a set of activities with benchmarks and indicators, to ensure a framework exists for a comprehensive and coordinated approach to the implementation of the legislation; or where a current national action plan or strategy exists, reference the plan as the framework for the comprehensive and coordinated implementation of the legislation.

- Establish training and capacity-building for public officials. Legislation should mandate regular and institutionalized gender-sensitivity training and capacity-building on violence against women for public officials. In addition, there should be specific training and capacity-building for relevant public officials when new legislation is enacted, to ensure that they are aware of their new duties and competent to use them; and to ensure that such training and capacity-building be developed and carried out in close consultation with nongovernmental organizations and service providers for complainants/survivors of violence against women.

Study recommendations:

- Cost and cost-effectiveness should be added to the data.

- Future work should include a more rigorous evaluation of the outcomes of this program with respect to sexual violence attitudes and behaviors.

- Links to important reports/articles/videos about intervention:
• Article published by University of Michigan regarding intervention program- https://record.umich.edu/articles/u-m-shapes-sexual-violence-prevention-program-ghanate

• TED talk discussing how sexual violence is a man’s issue - https://www.ted.com/talks/jackson_katz_violence_against_women_it_s_a_men_s_issue/up-next

Citations:


Global health problem: Exclusive Breastfeeding

Description of the problem:

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; it is also an integral part of the reproductive process with important implications for the health of mothers.\(^1\) A review of evidence has shown that, on a population basis, exclusive breastfeeding for 6 months is the optimal way of feeding infants.\(^1\) Thereafter infants should receive complementary foods with continued breastfeeding up to 2 years of age or beyond.\(^1\)

A review of data demonstrates that the deaths of 823,000 children and 20,000 mothers each year can be averted through universal breastfeeding, along with economic savings of $300 billion.\(^2\) In addition, exclusive breastfeeding is linked to multiple health benefits, including reduction in infections, increased intelligence, probable protection against obesity and diabetes, and cancer prevention.\(^2\)

In addition, breast milk promotes sensory and cognitive development and protects the infant against infectious and chronic diseases.\(^3\) Exclusive breastfeeding reduces infant mortality because of common childhood illnesses such as diarrhea or pneumonia, and it helps for a quicker recovery during illness.\(^3\)

Description of the intervention: Mothers exclusively breastfeed their child for 6 months or greater.

Photo provided by Victora. This photo demonstrates a mother breastfeeding.
Country: Brazil
Urban/rural/mixed: Urban
Study population: Not defined
Outcome/impact:
Data from Pelotas 1993 birth cohort study

- Infants receiving formula/cow milk exclusively were 14.2 times more likely to die from diarrhea than infants exclusively receiving breast milk.\(^4\)
- The prevalence of obesity at the age of 4 years was 10.2%. The lowest prevalence (6.5%) was observed among children breastfed for >11 months.\(^4\)
- Among those breastfed for less than 3 months, the prevalence of obesity was approximately 9.5%.\(^4\)
- No linear trends were detected in the association between breastfeeding and anthropometric indicators.\(^4\)
- No interactions were detected between breastfeeding and the variables sex, birth weight, socioeconomic status, skin color, and pregestational in body mass index.\(^4\)
Cost and cost-effectiveness: Not defined

Sustainable development goals:
- SDG 3: Ensure healthy lives and promote well-being for all at all ages.
- SDG 5: Achieve gender equality and empower all women and girls.
- SDG 10: Reduce inequality within and among countries.
- SDG 17: Revitalize the global partnership for sustainable development.

Policy recommendations:
- Disseminate accurate information on the value of breastfeeding.
- Foster positive social attitudes toward breastfeeding.
• Demonstrate political will to support breastfeeding.
• Regulate the breastfeeding substitute industry by implementing, monitoring, and enforcement of the Code.
• Scale up and monitor breastfeeding interventions.
• Enact policy interventions to ensure that the maternity protection and workplace interventions are implemented.

Study recommendations:
• Add cost and cost-effectiveness to data.
• Provide more detail and background into Pelotas study.

Links to important reports/articles/videos about intervention:
• Cesar Victora describing research conducted on exclusive breastfeeding (video)- https://www.bing.com/videos/search?q=cesar+victora+exclusive+breastfeeding&view=detail&mid=0B7914E5CCB89E4F6E670B7914E5CCB89E-4F6E67&FORM=VIRE

Citations:
Global health problem: Tuberculous and tobacco use

Description of the problem:

Communicable diseases continue to play a crucial role in the global health landscape. In addition, there continues to be a rising trend in the prevalence of noncommunicable diseases. Several countries are facing this “dual burden of disease” in which they are forced to manage communicable and noncommunicable diseases. Because of this, a need exists to find ways to integrate the prevention and control of noncommunicable diseases into the current health agenda.

Tobacco treatment interventions in patients suspected with tuberculosis (TB) offer one such opportunity for a linked health care response. Many countries with a high incidence of TB are doubly burdened by an epidemic of tobacco use and tobacco-related diseases. Tobacco use increases the risk of TB infection and is associated with poor treatment compliance, increases in relapse rates, and higher secondary mortality. In countries where TB is epidemic, this modest relative risk of infection leads to a significant attributable risk.

Regular clinical contact with patients suspected of having TB during the diagnosis and treatment phases provides considerable opportunity for health promotion to influence their tobacco-related behavior. Consequently, treating tobacco addiction in patients suspected of having TB is likely to improve the control of TB and prevent tobacco-related diseases.
Description of the intervention:

Pharmacotherapy

- Nicotine patches, gum lozenges over-the-counter
- Inhaler and spray (Nicotrol) by prescription
- Bupropion (Wellbutrin, Zyban)
- Varenicline (Chantax)
Country: Taiwan
Urban/rural/mixed: Not defined
Study population: Not defined
Outcome/impact:
  • After quitting smoking, the risk of death from TB reduced by 65%.²
  • 37.7% of TB mortality in Taiwan is accounted for by smoking.²
Cost and cost-effectiveness: Not defined
Sustainable development goals:
  • SDG 3: Ensure healthy lives and promote well-being for all at all ages.
  • SDG 10: Reduce inequality within and among countries.
Policy recommendations:

- Establish surveillance system for tobacco use among TB.
- Actively provide referral, counseling, and tobacco pharmacological treatment to all TB parents as a part of protocols.
- Involve family, community, and health center teams in tobacco control.

Study recommendations:

- Add cost and cost-effectiveness to data.
- Describe tools used to measure and track data.

Links to important reports/articles/videos about intervention:

- Video entitled Study Says Tobacco Smoking Fuels TB epidemic- https://www.youtube.com/watch?v=P6cu0avJdh

Citations:


We would like to invite you to attend the Consortium of Universities for Global Health’s (CUGH) 9th Annual Conference, which will take place at the Hilton Midtown Hotel, New York City, March 15-18, 2018 (satellite sessions will be on March 15). This year’s theme, Health Disparities: A Time for Action, reflects one of the world’s great challenges. The increasing gap in opportunity, security, health, and prosperity between the poor and middle class, and the rich, continues to grow and threatens to undermine the gains in development we have seen over the last few decades.

The conference will be a forum for engagement, learning, and collaboration to strengthen our efforts to impact the enormous challenges before us. We will have continuity with previous sub-themes: Planetary Health, One Health, Environmental Health; Governance and Institution Strengthening; Infectious Diseases; Noncommunicable Diseases, and the Social Determinants of Health, and we will introduce new ones.

CUGH’s annual meeting has become the world’s leading academic global health conference. It will bring together leaders from academia, nongovernmental organizations, think tanks, the private sector, and government. Over 1,700 professionals, educators, and students from diverse fields including medicine, nursing, public health, veterinary sciences, engineering, business, law, public policy, urban planning, natural sciences, environmental studies, and more will explore ways we can address the global health challenges before us.

As co-hosts for the conference, Columbia University (United States), Stellenbosch University (South Africa) and University of Peradeniya (Sri Lanka) warmly invite you to join us in New York to teach, learn and collaborate to reduce disparities around the world.

For more CUGH events and activities, go to https://www.cugh.org/.