

INNOVATX Global Health Case Competition 2023 – Presented by McMaster Friends of MSF



Alison Slade, BHSc Student [1]*, Shanzey Ali, BHSc Student [1],
Saismetha Visnukumar, BHSc Student [1], Iqra Chaudhry, BSc Student [2]

[1] Faculty of Health Sciences, McMaster University, Hamilton, Ontario, Canada L8S 4L8
[2] Faculty of Science, McMaster University, Hamilton, Ontario, Canada, L8S 4L8

*Corresponding Author: fomsf@mcmaster.ca



Abstract

McMaster Friends of MSF (FoMSF) is a student-led club at McMaster University that supports Medecins Sans Frontieres (MSF) Canada, a humanitarian relief-based organization that helps countries across the world. McMaster FoMSF organized the INNOVATX Global Health Case Competition to provide undergraduate students with the chance to problem-solve, enrich their skills, and above all, gain valuable exposure to global health. This year's competition focused on the health consequences of the Syrian civil war. In particular, participants aimed to tackle a specific health-related issue of their choosing, which is currently affecting approximately 1.5 million Syrian refugees living in Lebanon, especially those residing in one of the country's official refugee camps. After a round of written submissions and another round of live presentations, the briefing notes from the four winning teams have been published in this conference book. To learn more about McMaster FoMSF or the INNOVATX Global Health Case Competition, please visit our Instagram (@mac_fomsf) or Facebook (McMaster Friends of MSF) pages.

Disclaimer: The views expressed throughout this case competition and publication are solely those of the McMaster FoMSF team and INNOVATX participants and do not reflect those of MSF Canada, McMaster University, or any other organization.

Keywords: Global health; refugee healthcare; humanitarian aid; Syrian refugee camps; Lebanon healthcare

Table of Contents

| | |
|--|-------------|
| Winning Team..... | pg. A02-A02 |
| Improving women's reproductive healthcare in Syrian refugee camps in Lebanon; Um Al Shaab program برنامج أم الشعب..... | pg. A02-A03 |
| Second Place..... | pg. A02-A03 |
| Empowering Syrian refugees in Lebanon through a mobile app marketplace: Transforming employment and health outcomes..... | pg. A03-A03 |
| Third Place..... | pg. A03-A03 |
| Using social inclusion to improve the well-being of elder Syrian refugees in Lebanon..... | pg. A03-A03 |
| Fourth Place..... | pg. A04-A04 |
| Preventative measures against cutaneous leishmaniasis among Syrian refugees in Lebanon..... | pg. A04-A04 |

Conference Abstracts

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Winning Team

Improving women's reproductive healthcare in Syrian refugee camps in Lebanon; Um Al Shaab program | برنامج أم الشعب

Dhruv Dhall, BHSc Student [1], Nouran Kushnaw, BHSc Student [1], Megan Lee, BHSc Student [1], Zarah Rahman, BHSc Student [1], Lilian Vien, BHSc Student [1]

[1] Faculty of Health Sciences, McMaster University, Hamilton, Ontario, Canada L8S 4L8

Living conditions of Syrian refugees in Lebanon have deteriorated since the country's recent economic collapse, an issue exacerbated by its privatized healthcare system. Women's health has been neglected, resulting in reproductive health being a prevalent issue. Lack of antenatal care [ANC] services, primarily due to cost, contributes to unfavourable pregnancy outcomes, including unacceptably high rates of maternal mortality and C-sections. Government-enforced barriers, such as high renewal costs, policies banning UNHCR registration, and fear of backlash, result in ~80% of Syrian refugees being unregistered and ~20% living in poor conditions within Informal Tented Settlements [ITS]. Unregistered women are only eligible for one UNHCR ANC visit, limiting them to unaffordable privatized services for further care. These populations are increasingly vulnerable to deportation, regularly missing clinic appointments due to fears of encountering registration checkpoints. Our proposal aims to enhance existing ANC services and establish trust among patients by introducing a mobile clinic program called "Um Al Shaab," meaning "Mother of the People" in English. Free, daily ANC services will be available through RVs that resemble gynecologist offices, circulating around community hubs, allowing for accessible care without needing to pass checkpoints. Our initiative focuses on the Bekaa region which hosts the largest population (39%) of refugees in Lebanon and the highest concentration of ITS. Nurse-developed classes will support parents with education (e.g. postpartum care) in a culturally sensitive manner. Providing accessible healthcare to vulnerable populations without considering registration exemplifies MSF's principle of impartiality. Expectant mothers will be connected to a pro-bono legal team that aids in registering new births, incentivizing clinic participation. MSF aims to decrease the rates of unregistered Syrian refugee births in Bekaa while preventing future ramifications of statelessness. Our team would collaborate with local mukhtars and Nofous to streamline the registration process. We decided to tackle the issue of reproductive health by expanding on current resources: using RVs as mobile clinics. Other pre-existing accessible healthcare options presented positive outcomes regarding patient experiences, with cost-saving opportunities and increased ratings of trust among patients and providers. All team members will be fluent in Arabic and undergo cultural sensitivity training to streamline quality communication and meet refugee needs. Our pilot program is cost-effective, amounting to ~\$800k USD for 5 years of operations. The annual cost is 0.59% of MSF's annual Lebanese programme costs. Aligning with MSF's principle of independence, UAS is expected to be financed through private donors. We aim to ascertain the program's impact using quantitative (e.g. abortion rates, births registered and C-section rates) and qualitative measures (e.g. participant surveys). Nurses will facilitate data collection on-site, anonymizing relevant data from patient records, where statistical analysis will be conducted centrally using the ANC-specific approach outlined by ENSANUT. UAS would be a valuable model of care in targeting reproductive healthcare for unregistered Syrian women. The cost-effective program promotes robust, consistent patient-to-provider relationships, expanding the accessibility of ANC services through community inclusion, in consideration of economic and political barriers.

Second Place

Empowering Syrian refugees in Lebanon through a mobile app marketplace: Transforming employment and health outcomes

Maya Lekhi, HBSc, HBA Student [1,2], Golnaz Mokhtar-Sasani, BSc Student [3]

[1] Department of Computer Science, Western University, London, Ontario, Canada N6A 3K7

[2] Ivey School of Business, Western University, London, Ontario, Canada N6A 3K7

[3] Department of Interdisciplinary Science, McMaster University, Hamilton, Ontario, Canada L8S 4L8

Of the 1.5 million Syrian refugees in Lebanon, 92% lack work contracts, with 40% earning less than the minimum wage. Due to the harsh working conditions and absence of labor market regulations, Syrian refugees must engage in exhaustive labour for meager earnings, resulting in significant health consequences. Half of working refugees report suffering from back and

joint pain or extreme fatigue, and two-thirds report extensive exposure to dust and fumes in the workplace. Additionally, 56% of Syrian refugees struggle with psychological distress, including depression and post-traumatic stress disorder (PTSD), further exacerbating chronic health conditions. To address these challenges, we propose leveraging the 86% mobile phone ownership and 87% internet capability among Syrian refugee households to launch a dedicated job marketplace mobile app exclusively designed for Syrian refugees. The development of this application will be realized through collaborations with pro-bono programming groups and continuous consultation with the refugee community. The job board application will encompass a range of features, including incentives such as wage subsidies or tax deductions for employers of Syrian refugees, a verification system for employers adhering to social responsibility standards and equitable labor practices, and the ability for employees to rate their work environments. Furthermore, female participation in the workforce will be promoted in a culturally sensitive manner via gender-specific job listings, wage transparency, an enforced minimum wage, and the use of gender-inclusive language in job listings. By mitigating burnout and providing a gateway to improved living conditions, we anticipate a substantial alleviation of the physical and mental strains faced by Syrian refugees. The transformation of the employment infrastructure for Syrian refugees in Lebanon will serve to combat overworking, minimize exploitation, and facilitate meaningful employment, leading to greater holistic wellbeing and health outcomes for all.

Third Place

Using social inclusion to improve the well-being of elder Syrian refugees in Lebanon

Abdullah Masudi, BHSc Student [1], Musa Talha Yuksel, BHSc Student [1], Thaqib Hossain, BSc Student [2]

[1] Department of Biochemistry and Biomedical Sciences, McMaster University, Hamilton, Ontario, Canada L8S 4L8

[2] Department of Biology, McMaster University, Hamilton, Ontario, Canada L8S 4L8

Despite existing services that primarily target individuals with mental health issues, elder refugees (ER) in Syrian refugee camps in Lebanon are consistently and systematically overlooked in aid efforts, exacerbating poor overall health. This is supported by reports of 57% of ER in Syria describing negative emotions (anxiety, depression, loneliness, etc.) restricting their ability to carry out some daily tasks, with 32% reporting severe restrictions. The lack of social inclusion programs condemns the ability to build social connections and be involved in the community, causing physical problems and mental challenges such as social isolation and loneliness, among others. These issues can be detrimental to individuals in the camps that depend on the roles of elders, who hold significant importance and respect in Middle Eastern countries. To avert this crisis, Médecins sans Frontières (MSF) must follow the recommendation of global health literature and incorporate community-based, donor-independent, and preventative mental health care solutions for ER in refugee camps within Lebanon. Our solution aims to integrate Syrian ER into the community by recruiting them for community-based activities that allow them to become more active and establish social relationships, facilitating improved well-being of the elders and the community. Previous social inclusion efforts suggest that participation in social activities, community-dwelling and mobility enhance overall health and reduce cognitive decline. MSF aids in the camps will first conduct surveys to identify the skills, expertise, and interest of ER to match them with appropriate activities in the camps requiring elder support. Those that have the relevant competencies may be able to assist in surveying. Aids will determine what opportunities may be available in the camps for elders. These activities can reflect roles that Middle Eastern elders traditionally fulfil, such as childcare, passing on cultural traditions, resolving conflicts, and more. Survey data will be collected and monitored in a database to facilitate the matching process. Once a suitable match is determined, aid will assist in the onboarding process to ensure a smooth transition. After ER begin their activities, aids will conduct regular meetings with all parties to assess progress, address challenges, and make necessary adjustments. The surveyors will use van Brakel et al.'s The Participation Scale (TPS) to measure ER participation and mental health outcomes on a biannual basis. TPS is recognized as a promising indicator of social inclusion globally, with proven effectiveness across cultures. The use of a peer comparison allows the assessment to be relevant to the region. Additional surveys will assess retention rates and physical health outcomes to enhance our understanding of the solution's effectiveness. Community-based initiatives like this can take the load from already strained healthcare systems, potentially avoiding funding related barriers. Although MSF acknowledges the significance of addressing inadequate treatment for all vulnerable groups, its global humanitarian efforts have shown insufficient consideration for older people. Prioritization of ER will also manifest through their inclusion in data collection incorporated in this solution, another limitation in the efforts of MSF and other humanitarian organizations.

Fourth Place

Preventative measures against cutaneous leishmaniasis among Syrian refugees in Lebanon

*Krishna Basani, BHSc Student [1], Christina Tam, BHSc Student [2], Matthew Hammond, BSc Student [3],
Andrea Braccio, BSc Student [4]*

[1] Department of Biochemistry and Biomedical Sciences, McMaster University, Hamilton, Ontario, Canada L8S 4L8

[2] Faculty of Health Sciences, McMaster University, Hamilton, Ontario, Canada L8S 4L8

[3] Faculty of Science, McMaster University, Hamilton, Ontario, Canada L8S 4L8

[4] Department of Chemistry and Chemical Biology, McMaster University, Hamilton, Ontario, Canada L8S 4L8

Cutaneous leishmaniasis (CL) is a parasitic disease that may cause skin ulcers, scars and disability. Syria, historically, has one of the highest rates of CL worldwide, with the Syrian Civil War exacerbating CL's prevalence by severely limiting access to healthcare and initiating mass population movement into various countries, including Lebanon. A case study set in Bekaa, Lebanon, the city with the highest population of Syrian refugees, investigated the relationship between academic accomplishment and leishmaniasis. The communicable disease caused 79.8% of infected students to have lower attendance relative to their noninfected peers, and students' post-infection scored below class and cohort averages. Addressing the leishmaniasis endemic among Syrian refugees in Lebanon can improve academic ability and subsequently the quality of life of this vulnerable population. The proposed solution includes preventing initial exposure to the parasite, while simultaneously increasing awareness of the disease so that patients may take personal prevention measures. In effort to prevent initial transmission, an insecticidal intervention will be implemented, including indoor residual spraying (IRS) and long-lasting insecticidal nets (LLINs). A cluster-randomized control trial in Morocco serves as a basis for the intervention. A composition of IRS with α -cypermethrin covering all indoor surfaces and shelters, and LLINs with Permanet2® which cover the sleeping accommodations. The planned intervention avoids the peak sandfly months to circumvent planning difficulties noted in preceding preventive treatment for other parasitic disease studies. The country's recent economic crisis and collapsing healthcare sector is taken into consideration as well, reinforcing the need for a partnership with MSF and other humanitarian aid networks. Establishing a leishmaniasis record to document the number of cases will be used to measure the outcome. Individual IRS coverage and LLINs use will be monitored to evaluate usage as this is variable, emphasising the need for education campaigns that will increase awareness of leishmaniasis. It is important to consider that IRS and LLINs act as short-term remedies. A survey in Bekaa area schools revealed that 20% of students demonstrated a complete lack of knowledge on the disease. To facilitate long-term results, the MSF should partner with Lebanon's Ministry of Public Health (MOPH) to run health awareness campaigns in refugee sites. A similar campaign catered towards locals was done between UNICEF and MOPH to successfully increase routine vaccination in Lebanese children. This campaign was recently initiated, making it an accurate representation of how an educational campaign will be received in Lebanon's current political landscape. A campaign focused on leishmaniasis will educate on symptoms, avoidance measures, and may promote health-seeking behaviours. Socially, Syrian refugees are hesitant to access medical services with fears that they will be deported. With improved understanding of the health system and communicable disease, they will be encouraged to seek out essential health services as needed. Ultimately, mitigating the impact of leishmaniasis through short-term and long-term measures can improve education levels among Syrian children, elevating their quality of life and forging a promising trajectory for their future.

Conflicts of Interest

All authors declare that they have no conflict of interests.

Authors' Contributions

AS: founded the 1st annual INNOVATX Global Health Case Competition, served as a planning committee for the conference, drafted the conference abstract booklet, and gave final approval of the version to be published.

SA: founded the 1st annual INNOVATX Global Health Case Competition, served as a planning committee for the conference, drafted the conference abstract booklet, and gave final approval of the version to be published.

SV: founded the 1st annual INNOVATX Global Health Case Competition, served as a planning committee for the conference, and gave final approval of the version to be published.

IC: founded the 1st annual INNOVATX Global Health Case Competition and gave final approval of the version to be published.

Acknowledgements

We would like to acknowledge the entire McMaster Friends of MSF team, particularly the Case Competition subcommittee, and all judges and guest speakers for their contributions toward the INNOVATX Global Health Case Competition. In addition, we would like to acknowledge MSF Canada for their support throughout, as well as the McMaster University Campus Store for sponsoring the third-place gift card prize.

Funding

The INNOVATX Global Health Case Competition was funded by the McMaster Friends of MSF club budget, as provided by the McMaster Student Union. The third-place prize was donated by McMaster University Campus Store.

Article Information

Managing Editor: Jeremy Y. Ng

Article Dates: Received Aug 27 23; Published Sep 08 23

Citation

Please cite this article as follows:

Slade A, Ali S, Visnukumar S, Chaudhry I. INNOVATX Global Health Case Competition 2023 – Presented by McMaster Friends of MSF. URNCST Journal. 2023 Sep 08: 7(9). <https://urncst.com/index.php/urncst/article/view/537>

DOI Link: <https://doi.org/10.26685/urncst.537>

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