

BRIEFING NOTE

Medical Education in Northwest Syria



November 2022



SAMS

Front cover:

Trainer Iman Hashem during her training for midwifery students at SAMS Medical Technical Institute -

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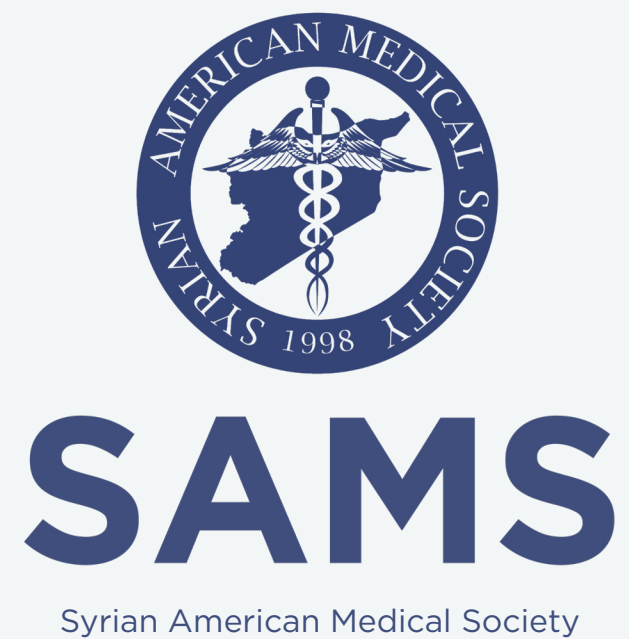
Back cover:

Entrance to SAMS Medical Technical Institute in Al-Atareb - © SAMS 2021, Aleppo governorate.

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The Syrian American Medical Society (SAMS) was founded in 1998 as a professional society to provide networking and educational opportunities to medical professionals of Syrian descent across the United States. The charitable arm of SAMS, SAMS Foundation, was launched in 2007. With the eruption of the conflict in Syria, SAMS Foundation has become one of the most active medical relief organizations working on the front lines of crisis relief in Syria, neighboring countries, and beyond.

Our Mission

is dedicated to delivering life-saving services, revitalizing health systems during crisis, and promoting medical education via a network of humanitarians in Syria, the US, and beyond.

Our Vision

is to strengthen the future of Syria's healthcare, delivering dignified medical relief where needed, fortified by a dedicated medical community.

Background

Almost 12 years since the conflict began, Syria’s health infrastructure has been debilitated due to attacks on health facilities, chronic shortages of medical supplies and equipment, and a dearth of qualified healthcare professionals. More than 50% of health care providers have fled the country according to the UN’s 2022 Humanitarian Needs Overview, and at least **942** medical professionals had been killed as of March 2022 according to Physicians for Human Rights. While the World Health Organization (WHO) recommends **22** health workers per **10,000** people, the average for northwest Syria is **9** health workers per **10,000** people. According to the Idlib Health Directorate, there is a 68% personnel gap within the general nursing profession alone.

As reported by SAMS in [2018](#), this scarcity of healthcare professionals carries serious consequences for both patients and providers. Clinical staff work incredibly long hours, seeing high numbers of patients – as many as 32 per day - and often assume responsibilities outside of their typical role due to the shortage of personnel. Combined with the stress of an already-demanding job and the conflict conditions under which they work, increased mental health issues are prevalent among healthcare providers. For patients, a lack of health specialists can have a significant impact on their health outcomes. As detailed in the 2018 report, healthcare providers described cases where, had a health facility been able to employ an anesthesiologist or OBGYN, patients would likely have experienced better treatment outcomes.

Opportunities for medical education in northwest Syria are currently limited, though local academic institutions and non-governmental service providers such as SAMS offer some programs for students to become healthcare professionals. Aside from the SAMS medical education initiatives described later in this brief, Aleppo University offers a full medical faculty at its campus in Mare’a, as well as dentistry and pharmacy programs, and courses on nursing, anesthesiology, and midwifery in Azzaz. Likewise, Idlib University offers a full medical faculty, as well as programs in dentistry, pharmacy, nursing, physiotherapy, anesthesiology, midwifery, emergency medicine, and medical equipment maintenance. Other organizations in the area offer similar courses and residency programs, including Antep University in Jarablus which offers ambulance training; and MIDMAR, which offers a dialysis diploma program, intensive care, and surgical assistant training at its facility in Qah. Overall, while training programs exist, they generally lack accreditation, and are subject to funding constraints.

Tackling the shortage of qualified healthcare providers is no easy feat in Syria, where on-going violence, resource deprivation, and displacement mean that the provision of direct services to beneficiaries is often prioritized above longer-term medical education and training programs. With no end in sight to the conflict, however, immediate attention must be paid to fund, develop, and deliver expanded medical education and training for the current and future generations of the health workforce in northwest Syria. Such programs must be offered based on the most urgent needs, as identified by routine needs assessments at the facility level, in coordination with local health coordination bodies. Furthermore, program design must consider ways to overcome access barriers to continued student enrollment. There must also be due attention paid to addressing gender disparities in the current health workforce, and to retaining skilled human resources in northern Syria.

Based on current needs in late 2022, taking into consideration international standards, existing data from the Health Cluster’s Health Resources and Services Availability

Monitoring System (HeRAMS), and clinical staff competencies, priority areas for medical education and training programs in northwest Syria include:

- Midwifery
- General Nursing
- Specialty Nursing
- Specialty Technicians
- Physician Sub-Specialties (neurology, ICU, pediatric oncology, etc.)
- Mental Health Specialists and Non-Specialists (psychiatrists, clinical psychologists, psychiatric nurses, and psychosocial support workers)

Medical Education Efforts

As part of efforts to address gaps in medical education, SAMS regularly assesses personnel gaps in the health sector. Based on these findings and subject to available funding, SAMS develops programs to increase the number of qualified medical professionals in the most-needed clinical fields. Currently, SAMS offers both in-person and remote training programs to maximize cost effectiveness and accessibility for students. The majority of in-person programs are taught at the SAMS Medical Technical Institute in Al-Atareb, Aleppo. Where needed, considering security concerns, SAMS also has the capacity to deliver intensive trainings in southern Turkey.

In the development and delivery of programs, aside from relying upon qualified specialists among its staff, SAMS also relies on the scientific expertise of volunteer technical committees, comprised of US-based, Arabic-speaking health specialists. These volunteers make themselves available to review curricula, deliver remote webinars on a variety of medical sub-specialties, and provide peer-to-peer support for frontline providers in Syria when it comes to management of complex cases.

In 2021 alone, remote peer-to-peer support from US-based volunteer physicians amounted to 1,350 hours at five COVID-19 facilities in Syria. Additionally, SAMS offered over 200 hours of interactive webinars on COVID-19 management, critical care, radiology, stroke, and obstetrical care. In these webinars, US-based specialists and field medical teams worked together to develop and implement case management protocols, treatment guidelines, assessment and prevention of complications, and discussions on lessons learned. The success of this interaction paved the way to extend it to other specialties. It resulted in developing a library of medical lectures in adult and pediatric ICU, OB/GYN, radiology, and neurology. All of these efforts significantly contribute to the high quality of SAMS’ medical education and training programs.

1. Midwifery Training:

In 2018, SAMS established two midwifery training programs in northwest Syria that align with global standards for reproductive health and midwifery education. These programs have been adapted to reflect the context in northwest Syria by SAMS specialists, and graduates of these programs have credentials that are recognized by WHO, UNFPA, and the local health sector. The first program is an **18-month** intensive course, during which students who already hold nursing degrees receive theoretical and practical training to become midwives. As of late 2022, a total of **75** new midwives, all of them women, had graduated from this program. The second program is a **three-year midwifery course** that students with a high school diploma are eligible to attend. These students receive theoretical and practical training that includes topics such as basics of nursing, anatomy and physiology, microbiology, and clinical assessment, as well as specialized courses in midwifery, including antenatal care, natural delivery, newborn care, and postpartum care. This program graduated its first class of 23 midwives in February 2021. The majority of midwifery graduates from both programs have found employment as midwives within northwest Syria’s health sector.



“...It is important to provide quality and effective services for women and newborns. We have a large discrepancy between the number of qualified midwives and the number of women giving birth, so to reduce this gap, we must sustain the training program, graduating well-trained midwives and re-integrating the top graduates into the program as qualified medical trainers once they establish themselves in the profession, allowing future students to benefit from the latest scientific research and evidence-based practice in teaching.”

Safaa Al-Saleh, Midwifery Trainer at SAMS Medical Technical Institute in Al-Atareb, Aleppo

2. Midwifery Fellowship:

In 2020, SAMS piloted a fellowship program for newly graduated midwives in northwest Syria, which sees graduates recruited by local health facilities, with their salaries supported by SAMS for a finite period, in the hope that they will secure longer-term employment. Fellowships carry multiple benefits for new graduates, employers, peers, and patients; fellowships provide opportunities for acquiring additional hours of practical training and work experience among new graduates, which is often requested by employers. Fellowships also fill critical gaps in reproductive health service provision at facilities (often greater than 50%) and support employment of new graduates. Finally, the deployment of new graduates promotes dissemination of up-to-date knowledge and best practices across facilities. Each midwifery fellow receives 6 to 12 months of supervised practice and technical support while also receiving a source of income. The program places emphasis on trainees’ communication and administrative skills, as part of efforts to improve the patient experience. To date, 70 midwives have been employed through the fellowship program.

98
MIDWIFERY GRADUATES

70
MIDWIVES WERE EMPLOYED

3. Medical Residency and Fellowship Programs for Physicians:

Due to lack of available specialists, patients are often denied life-saving treatment or are forced to travel long distances, crossing borders or lines of control in order to receive care. As part of efforts to improve access to more advanced medical care in northwest Syria, **in 2021, SAMS continued its investment in developing residency training opportunities for medical graduates who could not complete their specialization due to conflict.**

30
RESIDENT DOCTORS

In collaboration with other health actors in northwest Syria, **SAMS’ Resident Doctors Program** provides financial and technical support for physicians in training within different specialties. The resident doctors are supervised at SAMS-sponsored facilities, adhering to the Syrian Board of Medical Specialties (SBOMS) academic, training, and curriculum standards. SAMS technical committees of US-based specialists also support the program by conducting periodic lectures and clinical case management sessions. SAMS supported **more than 30 medical residents** across 20 medical specializations throughout 2021. Specializations include: Cardiology, Endocrinology, ENT, Gastroenterology, General Surgery, Hematology and Oncology, Internal Medicine, Nephrology, Neurology, Obstetrics and Gynecology, Ophthalmology, Orthopedic Surgery, Pediatrics, Urology, and Vascular surgery, among others.

SAMS also offers two-year fellowship programs in Intensive Care Medicine and Pediatric Oncology for physicians, given high demand for these specializations. These programs are designed with flexibility in mind, to allow doctors to continue their day-to-day work as healthcare providers, while exposing them to the latest theory and best practices in their chosen specialization. A total of **nine** fellows are currently enrolled in these training programs – two in Pediatric Oncology and seven in Intensive Care Medicine. Training takes

at the ICU and oncology center at Idlib Central Hospital, as well as the ICU at Bab Al Hawa Hospital. Both fellowship programs consist of remote technical supervision, case presentations, morbidity and mortality conferences, interactive webinars, research projects, and lecture series delivered by US-based volunteer specialists. Training programs draw upon guidelines from US-based fellowship programs and professional medical societies, such as the Society of Critical Care Medicine and the American Society of Oncology.

4. Nursing

SAMS has delivered nursing programs since 2015, starting with a six-month certificate program that graduated 93 nursing assistants. In 2018, after observing nursing shortages across health facilities, SAMS began offering **a two-year nursing program** that had graduated a total of **106** fully-qualified nurses between 2018 and 2021 – 50% men and 50% women. The nurses in this program receive training on pediatrics, nutrition, anatomy, psychology, and basic practical nursing. Nursing graduates receive diplomas recognized by the Idlib Health Directorate. **97%** of the program’s graduates are employed in hospitals and medical centers in northwest Syria.

As of late 2022, SAM has developed the curriculum for a specialist nursing diploma in Adult ICU Care, which is currently lacking in Syria. Once implemented, the Adult ICU Diploma curriculum will be made available across the region, as a reference and building block to promote standardization within this field of nursing.

“As nurses, we face daily challenges in caring for children who suffer from health complications. This is due to lack of academic nursing education, combined with an increase in the number of sick children compared to the number of nurses available, and lack of knowledge around best practices in this field. It is necessary to build the capacity of nurses theoretically and practically to improve the health care provided for children especially.”

Reem Ezz El Din, Nursing Trainer at SAMS Medical Technical Institute



201
NURSES AND NURSE
ASSISTANTS GRADUATED

7

5. Mental Health and Psychosocial Support

As of October 2021, there were reported to be only two qualified psychiatrists and six psychiatry residents in northwest Syria, in addition to 20 practicing psychologists, and 300 persons performing the role of a Psychosocial Worker (PSWs).

Throughout 2022, SAMS has worked with a team of researchers and technical specialists to: 1) conduct an assessment of the existing MHPSS workforce and needs for advanced quality learning initiatives; and 2) develop a set of strategic guidelines related to clinical psychology, psychiatric nursing, and psychosocial work in northern Syria, as part of efforts to standardize roles and responsibilities for these specialists. Based on the assessment findings, SAMS and its academic partners will develop and deliver three professional diploma programs in these fields, with the aim of standardizing cadres, developing trainers, and graduating more than 200 MHPSS providers over the next two years.

At the community level, SAMS has also piloted the Child Common Elements Treatment Approach (CETA), with the goal of training non-specialists - predominantly women - to provide evidence-based mental health support for youth within their communities, thus reducing the burden on higher-trained professionals. This system offers continuous supervision by Arabic-speaking CETA trainers until counselors demonstrate competency. At the time of writing, 13 women have been certified as counselors and supervisors. In the coming years, SAMS will expand the number of women trained as counselors in Syria, while also piloting a Training of Trainers component, whereby existing counselors can lead trainings for others in their communities to achieve a lower-cost, self-sustaining approach to mental health. In addition to successfully building capacity and reducing mental health symptoms, the CETA system also strengthens equity by bringing women into the workforce. In northern Syria, women have a higher rate of unemployment than men and less access to training opportunities. CETA empowers women by bringing them into the workforce and providing them with financial compensation and technical training to advance their careers. It is also designed to allow for flexibility in scheduling so they can work around their household or childcare responsibilities.

6. 6. Scholarships for Refugee Students and Medical Residents

Outside of Syria, since 2016, SAMS has provided scholarships and living stipends to undergraduate and post-graduate students whose medical studies in Syria were disrupted by the conflict. Since 2016, at least **35** students have received support to complete their medical, dental and pharmacy degrees studies in Turkey, as well as **6** in Bosnia and Herzegovina. In 2022, SAMS has also begun funding the tuition of Syrian undergraduate students in Jordan, Turkey and Lebanon, who require financial support to pursue university degrees in nursing, nutrition, psychology, physical therapy, psychology, and physical rehabilitation. **33 students currently receive SAMS support, with plans to expand this number contingent on funding and the success of this pilot program.** Finally, SAMS provided financial support for 5 Syrian physicians to complete their residencies in

35
STUDENTS SUPPORTED
IN TURKEY

6
STUDENTS SUPPORTED
IN BOSNIA AND
HERZEGOVINA

8

pediatrics, anesthesiology, internal medicine, emergency medicine, and ophthalmology at hospitals in Jordan.

Recommendations

- **Support a systematic, in-depth needs assessment of the health workforce in north-ern Syria.**
- **Establish specialized training opportunities for nurses** in Adult ICU nursing, pediatric nursing, and Operating Room nursing.
- **Offer training for specialized hospital technicians**, including radiology technicians, physical therapy technicians, audiology technicians, cardiac catheterization lab techni-cians, and hemodialysis technicians.
- **Establish specialized training opportunities for physicians in** neurology, nephrolo-gy, vascular surgery, interventional cardiology, ICU medicine, and neonatology, among others.
- **Promote opportunities for training of community-based, non-specialist providers:** one way to improve access to care at the community level is to disburse additional funding for innovative programs such as Child CETA. This program is not only key to improving early identification, treatment and referral for young people with mental health concerns - particularly among conflict-affected youth – it can also reduce the burden on facility-based mental health specialists that are currently in short supply.
- **Increase support for on-the-job fellowship programs** that provide opportunities for fresh graduates to gain additional practical training in their field – especially ICU med-icine, midwifery, generalized and specialized nursing, and neurology.
- **Review, update and strengthen curriculate** to ensure the latest technical standards and best practices are incorporated into the health sector in Syria. These updates are critical in existing programs for which there remain an urgent need for more qualified professionals, such as nursing, midwifery, and anesthesiology. Efforts to update curricula should also go hand in hand with efforts to standardize cadres across the health and MHPSS workforce in Syria.
- **Increase access to education through innovations in technology:** both the conflict and the COVID-19 pandemic has proven that remote training opportunities are low-cost and effective means of overcoming access barriers to education and transferring knowledge in low-resource, conflict settings, where lack of qualified educators and students’ inability post serious challenges. Medical education providers in Syria could benefit from additional technical and financial support in online pedagogy, to enhance the quality of hybrid and/or remote learning programs.
- **Invest in northwest Syria-based educators and practicum supervisors**, through de-livery of Training of Trainer programs and opportunities to participate in remote or in-person pedagogy programs that are offered by universities in the region.
- **Strengthen recognition and accreditation for medical education and training pro-grams in northwest Syria**, in order to attract more young people to pursue medical and nursing degrees, and to remain in the area once they have graduated. Crossing lines of political control is not a safe option for most students in northwest Syria, as their risk of detention is high, and even if they successfully complete their studies in

government-held areas, graduates face stigma in their home communities, due to per-ceived association with the government and lack of trust.

- **Prioritize women and displaced persons** in existing medical education and training programs and scholarships opportunities. When designing programs, considerations around promoting access for these sub-groups are critical – for example, distribution of stipends to support cost of living, transportation, and/or stationary; physically ac-cessible training facilities; and appropriate hours of instruction, etc.
- **Remove barriers that prevent Syrian students from accessing medical education** across borders, through provision of visas and scholarships to study overseas, for as long as opportunities do not exist in Syria

Finding Purpose in Displacement



Safaa Al-Saleh, a midwifery trainer, provides a lesson in childbirth at the SAMS Medical Technical Institute - SAMS © 2022, Aleppo governorate

Medical Education in Northwest Syria

“After the forced displacement from Homs, my life started from scratch. My husband and I searched for work, but we could not find it. There were days when we did not find anything to feed our children. I read about a request for nursing graduates to study at a SAMS-supported Midwifery Institute in Termanin for 18 months, with a reasonable monthly stipend for students. I submitted my application and passed the entrance exams.

This had always been my goal, but because of the conflict conditions, I could not complete my education. The incentive of receiving a monthly wage was also a strong motivation to join this program because it covered our household needs, and allowed my husband to stay with our children until I could finish my education.

There was a memory that motivated me to continue my studies, about a woman who was giving birth during the siege in Homs, who could not find a midwife to deliver her child. So many women have been subjected to this suffering without qualified health workers to help. This program was an opportunity for me to graduate from the first midwifery program of its kind in northwest Syria.

When we started studying, there were 20 students. It was a new program, and most of the references were in English and not translated. The semester contained 12 subjects. One of the conditions for qualifying for the next semester is not to fail in any subject. This was a great challenge for me, but I overcame the language barrier after I received a tablet to help with translation, research, and access to the electronic library.

Becoming an academic midwife was an important motivation for me. I used to see many incorrect and narrowly-focused practices from old midwives. But in this program, I learned that the field of midwifery is broad, including pre-and post-natal care, obstetrics, newborn care, administration, counseling, family planning, field visits, and more.

When we started with the practical portion of our training, we worked eight-hour shifts, accompanied by our trainers. I was afforded the opportunity to work in the labor and delivery department for a period of three months. This opportunity gave me more self-confidence and space to master what I had learned, provide academic guidance to the hospital administration, and introduce them to our work and program. I also acquired several skills, the most important of which was communication.

I started looking for a job as a midwife, and ended up working in the same hospital, because they had a vacancy for a midwife. I was very happy to be selected.

Later, an internal announcement for female midwifery instructors was issued by the SAMS Medical Technical Institute in Aleppo, to teach students of a three-year study program. It was an opportunity to become a midwifery trainer. My colleague and I were selected, and we continued for a year in training, before graduating a cohort of 23 students with a high level of theoretical and practical experience.

After that, I was chosen as a Scientific Officer for the midwifery department, as I was a graduate of the SAMS Medical Technical Institute, which allowed me to obtain greater administrative experience.

It is important for this midwifery training program to continue because of its opportunities in areas that benefit working women, allowing them to develop their professional experience and provide for their families. My studies at the Medical Technical Institute was a turning point in my life, and it improved every aspect of my life - social, practical, and economic.”

Further Reading

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