



Training medical students and nursing staff on maternal nutrition service delivery protocols

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Harnessing the potential of India's medical colleges to bring maternal nutrition services to scale

Dr Sebanti Ghosh is Programme Director with Alive & Thrive (A&T), India.
Dr Kaushal Kishore is a member of the Indian Administrative Service (IAS) and Joint Secretary, Department of Health & Family Welfare, Bihar.
Dr Vinita Das is a Professor and Head of the Department of Obstetrics & Gynaecology and Dean of Medical Science at King George's Medical University (KGMU), Lucknow, Uttar Pradesh.
Dr Kiran Pandey is a Professor and Head of the Department of Obstetrics & Gynaecology at GSVM Medical College, Kanpur, Uttar Pradesh.
Dr Shailesh Jagtap is Senior Technical and Programme Advisor with A&T, India.

Background

India has a policy environment that is conducive to maternal nutrition (MN), with clear commitments to improve the nutrition and health status of women and children. However, 38% of India's children under five years of age are stunted, half of women of reproductive age suffer from anaemia, and almost a quarter of women and 45% of adolescent girls are underweight¹. Antenatal care (ANC) services are sub-optimal; for example, 30% of Indian women consume iron and folic acid (IFA) tablets for at least 100 days during pregnancy, while 83% receive two or more tetanus toxoid immunisations during antenatal check-ups², highlighting a missed opportunity to increase IFA coverage.

Antenatal care is provided in various tiers of India's health system, including outreach through village health and nutrition days and by various cadres, including doctors and midwives. Through their academic, research and service-delivery facilities, medical colleges offer an untapped opportunity to build the knowledge and skills of medical practitioners on maternal nutrition. To harness this under-utilised potential, partnerships have been forged between Alive & Thrive (A&T)³ and eight government medical colleges (and attached hospitals) in the states of



India Fact Sheet

Women's nutrition 15-49 years

THINNESS (2016) Women who are thin (BMI < 18.5kg/m²)



OVERWEIGHT OR OBESE (2016)
 Women who are overweight or obese (BMI ≥ 25 kg/m²)



ANAEMIA (WRA) (2016) Anaemia among women of reproductive age



130 MATERNAL MORTALITY (2016) per 100,000 live births

25 NEONATAL MORTALITY (2015) per 1,000 live births

¹ National Family Health Survey (NFHS 4) 2015-16; Rapid Survey of Children (RSoc), 2013-14.
² National Family Health Survey (NFHS 4) 2015-16.
³ The Alive & Thrive initiative, managed by FHI 360, is funded by the Bill & Melinda Gates Foundation, Irish Aid, the Tanoto Foundation and UNICEF.

Uttar Pradesh (UP) and Bihar to support the integration and prioritisation of maternal nutrition in the undergraduate curriculum for doctors and in the antenatal service-delivery platform of the medical college hospitals.

The broader aims of the initiative include: integrating maternal nutrition in undergraduate medical teaching (doctors); improving the quality of MN services in the hospitals attached to medical colleges; facilitating an increased role for medical colleges in supporting state and district health systems in capacity building, monitoring and reviewing maternal nutrition programming; and undertaking relevant implementation research to inform policy and programming. The initiative is unique in maximising the expertise and experience of medical colleges by prioritising undergraduate teaching and influencing the curriculum to have a better integration of maternal nutrition, thus creating a well-trained future generation of medical practitioners for both the public and private sectors with a basic grounding in MN.

Assessing medical training in maternal nutrition

In 2017 A&T carried out a baseline survey (n=1,491) across the eight partner medical colleges (from a sample of medical college faculty staff, undergraduate and postgraduate medical students, nursing staff, beneficiaries, etc.) to assess three key areas: the degree to which maternal nutrition is currently covered in the undergraduate medical curriculum of medical colleges, including the attached nursing colleges; how MN interventions are delivered in routine service provision by the departments of obstetrics and gynaecology (OBGY) across the eight medical college hospitals (four in UP and four in Bihar); and how medical colleges support state and district health systems in capacity building and the monitoring of maternal nutrition programmes.

Sixty per cent of the faculty staff across the eight colleges reported that MN topics were not adequately covered in the pre-service curriculum of medical colleges, although around 40% of the faculty had delivered lectures on maternal nutrition for undergraduate

medical students. The existing curriculum does have an MN component, but content needed to be updated and it was essential that teaching became more focused on the area. Less than one third of undergraduate students knew about maternal dietary diversity and less than one in five students could state the correct dose of iron supplementation during pregnancy.

Just 53% of faculty staff had provided nutritional advice to pregnant women attending antenatal clinics at the medical colleges. Availability and awareness of government-standard MN intervention protocols remained low at these clinics, resulting in sub-optimal service delivery, including a low coverage of iron (46%) and calcium (37%) supplementation. About one third of nursing staff reported availability of standard protocol for nutrition counselling of pregnant women during ANC, with a similarly low proportion (36%) aware of written guidelines on discharge counselling on maternal nutrition. Only one in five pregnant women were counselled on iron supplementation and diet. Counselling on nutrition in the postpartum period was provided by two out of five postgraduate students and one in five nursing staff.

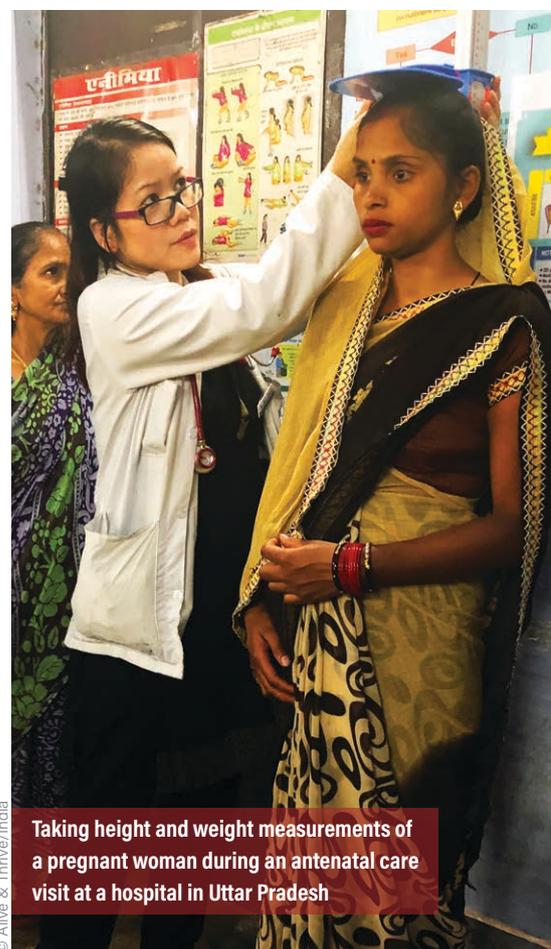
Roadmap to strengthen curriculum and services

To address the gaps identified in the survey baseline, a roadmap and implementation plan were developed to strengthen MN integration in the undergraduate curriculum and service delivery in the eight medical colleges and hospitals in the two states, in consultation with the partner colleges, the Directorate of Medical Education and the State Health Missions⁴. A&T is currently providing technical support to integrate maternal nutrition in undergraduate medical curricula, updating service delivery protocols for the medical college hospitals, and increasing the technical support role of the selected institutions to state and district health systems in UP and Bihar.

⁴ State Health Missions have been set up in all states within the Directorate of Health for the effective implementation of the Government of India's National Health Mission, which includes a component on reproductive maternal-neonatal-child and adolescent health.

A mid-line internal status review (carried out by A&T) reported a number of achievements:

- Development of an maternal nutrition-focused curriculum and updated standard protocols (in line with national and WHO guidelines) for MN service delivery in the two states by a technical expert committee, comprising senior faculty from the departments of OBGY and preventive and social medicine (PSM), national experts and government officials. The modified integrated curriculum is aligned with the current teaching plans of OBGY and PSM, as approved by the Medical Council of India;
- Addition of new topics in the medical curriculum, including:
 - tools/techniques for anthropometric measures and diet assessment during ANC;
 - prevention of anaemia in pregnancy;
 - maternal diet and micronutrient supplement counselling in ANC services;



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Role play to improve service delivery for nutritional care of pregnant women during training of healthcare staff and medical students

- management of nutrition requirements for medical conditions such as gestational diabetes mellitus and hypertensive disorders; and
- Development of updated protocols integrating evidence-based MN interventions, including counselling, as recommended by WHO and national guidelines during ANC visits (including first and subsequent ANC visits). These are now available as a handbook and posters for display at critical service-delivery points. The protocols focus on appropriate anthropometric measurements to assess nutritional status, counselling on healthy eating (dietary adequacy and diversity), micronutrient requirements (iron and calcium supplementation), and gestational weight-gain monitoring, along with assessment of nutrition-related risks and appropriate management of nutrition for pregnant women, including a focus on the elevated nutritional and obstetric risk of adolescent pregnancy.

Rolling out the new curriculum and service protocols

Interdepartmental coordination committees with OBGY, paediatrics and PSM departments have been constituted in the colleges under the chairmanship of the principals to undertake the pilot rollout of the integrated curriculum and ensure that the MN service-delivery protocol is implemented at the medical college hospitals. Approximately

900 faculty and hospital staff are being trained in both states under the supportive leadership of the State directorate of Medical Education, State Health Mission and the Ministry of Health & Family Welfare (MoHFW). An internal supervision and monitoring framework has also been developed.

A&T has leveraged its partnerships with professional medical associations, such as the Indian Association of Preventive and Social Medicine (IAPSM), the Indian Academy of Paediatrics (IAP) and its IYCF Chapter, and the Federation of Obstetricians & Gynaecologists in India (FOGSI), to enhance links between professional medical associations and the medical colleges to undertake a number of activities. These include ongoing upskilling and knowledge enhancement of medical college faculty and health providers (doctors and nursing staff, frontline workers) on MN; supportive supervision and monitoring of national programmes; and focused research/evidence generation to influence policy and programme decisions.

Overcoming barriers

The initiative has benefitted from an open dialogue and sharing of global scientific evidence with the state's medical education directorate, heads of medical colleges and the faculty on the critical importance of maternal nutrition in improving maternal and newborn health and wellbeing. This helped to overcome initial resistance to prioritising maternal nutrition (especially preventive and promotive components)

in undergraduate teaching and clinical antenatal practice. The approach of prioritising and integrating MN content into existing approved curriculum format allayed concerns related to treating nutrition as a separate area for teaching and helped to ease the adoption process. Ownership was generated by the active engagement of the state's Directorate of Medical Education, heads of medical colleges and the faculty from inception in drafting the integrated curriculum and development of protocols, and proactive leadership from these bodies was also critical.

Next steps

A&T is advocating with the Directorate of Medical Education and the State Health Mission for scaling up across all government medical colleges in the two states, UP and Bihar, based on the learning emerging from the current work. Plans are to organise progress-sharing sessions involving all key stakeholders, one-to-one discussions and sensitisation of other government medical colleges. Opportunities are also being explored to expand the model across more colleges in other states through partnerships with other development partners.

At the national level, A&T is undertaking advocacy with the MoHFW, Government of India, representatives from key medical and public health institutes, professional medical associations, UN agencies, development partners and technical support organisations on a possible pathway for scale-up across all medical colleges. A pool of experts from academia is also being created as champions to sustain medical college leadership in integrating maternal nutrition.

Moreover, MoHFW and State Health Missions in UP and Bihar have, in principle, agreed to the roadmap for engaging medical college faculty to support state and district health systems through capacity building, supportive supervision and monitoring on MN. Recent activities include the engagement of two colleges in supportive supervision and mentoring of maternal nutrition programmes through health and nutrition service providers in selected high-burden districts.