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# NNEdPro Global Centre for Nutrition and Health

Advancing and implementing nutrition knowledge  
to improve health, wellbeing and society



Subscribe to the MTK Cookbook launched at the  
University of Cambridge Festival in March 2021

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## The Mobile Teaching Kitchen Model from Local to Global

### Strengthening community resilience to mitigate the impact of food and nutrition insecurity on health

Since undertaking a nutrition education needs assessment in marginalised communities of Kolkata, India, during the World Congress of Public Health hosted there in 2015, the NNEdPro Global Centre for Nutrition and Health has developed, evaluated, and sustained a novel Mobile Teaching Kitchen (MTK) initiative in the area. In the September 2018 issue of CN, we described how the kitchen could be an effective classroom for nutrition education. One of our case studies on that occasion was the Kolkata MTK, describing the identification of women as key change-drivers within their communities and how to build a self-sustaining model.

The MTK aims to produce peer educators, who can impact local communities by providing hands on learning of basic nutrition and health related concepts through cooking. This has led to improvements among not only those trained, but also those impacted through subsequent steps of the project where the MTK champions trained as 'Culinary Health Educators'. These champions now use a mobile unit to sell low-cost, healthy, micro-nutrient rich and sustainable meals to all echelons of city workers and members of the public, alongside a serving of nutrition and health education. However, this relates to one of twelve regional networks in which NNEdPro operates across six continents, and with that in mind we consider some of the transferable elements of the MTK model from over the past 6 years and how these might be implemented around the world.

#### Defining an MTK

An MTK is a nutrition education tool to improve diet and health outcomes in underserved and marginalised communities. It can also serve as a community hub for malnutrition screening and prevention, health promotion and disease prevention. The MTK model uses a 'See One, Do One, Teach One' (SODOTO) train the trainers approach to create 'culinary health educators'. Qualified healthcare professionals,

including dietitians and nutritionists, undertake a nutrition needs assessment and subsequently train social volunteers to deliver culinary nutrition training to marginalised women. In this process, meals are prepared from several carefully formulated dietary templates that incorporate culturally relevant, safe, fresh, tasty, nutritious, locally sourced and low-cost foods. Each template meal is naturally rich in micronutrients and protein.

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## The multiplicative impact of an MTK

A group of formerly marginalised women become MTK champions who are trained to spread key health messages within their own community and to the wider public through cooking and serving meals. MTK champions also receive the necessary resources, training, and support to start a microenterprise, where their mobile kitchen sells healthy meals further afield, to generate income for themselves whilst promoting healthy foods and behaviours to the broader public. The MTK directly targets women and children, aiming to: a) improve knowledge, attitudes and practices of diet diversity and disease prevention; b) measure indicators of nutritional health; c) use cooking skills as a medium for education; d) provide resources and signposting for food security; e) promote social empowerment; and f) impact preventative health.

The MTK approach is based on the premise that educating and empowering women is key to improving the nutritional status of children, as well as the family unit. Tackling malnutrition in gestation and early years is a strong determinant of nutritional resilience in future generations. The MTK model not only directly impacts the lives and livelihoods of participating communities, but also strengthens community resilience by facilitating knowledge around access to lower cost healthy diets and associated information on adopting healthier dietary patterns, thereby improving food and nutrition security.

Alongside strengthening and sustaining the core model in India, plans are underway to adapt and pilot the MTK initiative globally. Through this adaptation, NNEdPro would develop a powerful scalable behaviour change tool for improved nutrition Knowledge, Attitudes and Practices (KAP), that will empower marginalised communities (in developing and developed countries) to gain livelihoods whilst improving nutrition and health outcomes for sections of society.

To complete adaptations, we have developed and conducted a Global Food and Nutrition Insecurity Survey of food and nutrition insecurity issues (e.g. target populations, geographical locations, main nutrition concerns, available resources) with active members of our twelve regional networks. Results are being discussed and used to set priorities for development of regional MTK adaptations. Recruitment, delivery, and evaluation strategies will be adapted to local context while retaining MTK core principles (e.g. participation and empowerment), strategies (e.g. SODOTO) and objectives (KAP, nutrition and health). Experiences, challenges, and innovative solutions developed from our work in India can be shared and used as a starting point. Considering the global and multicultural nature of our endeavour, we are also hoping to explore the added benefit of incorporating storytelling in training and the added impact of using linguistically adapted nutrition education resources.

Malnutrition, in all its forms, remains a major cause for concern across the world, creating an intertwining and overlapping burden on individual, public and economic health. It is estimated that malnutrition affects approximately 2.3 billion adults worldwide, including 462 million who are underweight and 1.9 billion who are overweight or obese. Additionally, in the wake of COVID-19, deep fractures in food systems have been exposed, and many more women and children have and will likely become food insecure and at increased risk of malnutrition worldwide. There is an urgent need for cost-effective, innovative, and adaptable actions to tackle inequalities in food and health aggravated by COVID-19. This creates a need for interventions aiming to promote good nutrition and health among women and children, but that also address food insecurity in broader society.

Considering the current, food, nutrition and associated economic crisis worldwide, over 2020 we already successfully completed the first stage of adaptation in rural Punjab in India. Over 2021 and 2022 we are aiming to expand our current MTK model further regionally (e.g. Nepal and Bangladesh) and globally in 10 candidate countries within our 12 regional networks (Brazil, Canada, Italy, Mexico, Nigeria, Singapore, Switzerland, UAE, UK and the USA).

We believe that nutrition education delivered through training using practical demonstrations and verbal communication, can help circumvent limitations in literacy. Based on this, the MTK can also upskill or retrain women who are currently excluded from the job market. In our flagship model we noticed improvements in important transferable skills that increase employability such as teamwork, leadership, and confidence. These are underpinned by strengthening of constructs, such as cognitive flexibility and mentalising skills, which can help with both internalisation as well as onward implementation of knowledge and skills.

In March 2021, the MTK Cookbook was launched at the University of Cambridge Science Festival, with a live cook along led by our Executive Chef along with multiple healthcare professionals. Furthermore, in April 2021, we also had the opportunity to present at policy level, alongside the UN Assistant Secretary General responsible for the Scaling Up Nutrition movement, as well as Food and Agriculture Organization leaders, including the Deputy Director-General, on the applicability of the MTK model in the context of food supply, and dietary choices, nutrition, and health as well as sustainability. This discourse forms part of the dialogue preceding and feeding into the UN Food Systems Summit. We are therefore poised and ready to adapt, pilot, spread and scale the MTK model over coming years to gain maximum impact from this innovation.