

## **Capacity Strengthening for Clinical Nutrition in Zambia: a roadmap for success.**

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Clinical nutrition is a complex science which constantly changes in response to the changing burden on disease and new evidence (Gallegos, 2020). An issue often ‘hidden in plain sight’ is that patients in hospital are at risk of under nutrition, and unless proactive nutrition assessments, such as the Malnutrition Universal Screening Tool (MUST) and interventions are made, this un-noticed problem will continue to be associated with increased complication, infections, longer length of stay, higher costs (both at micro and macro levels), and higher mortality (Blaauw et al., 2019. Stratton, 2023). For individuals and families in low-income countries (LIC), this is further compounded by chronic poverty and food insecurity. As the World Food Programme (2024) pointed out, an estimated 333 million people in 2023, experienced acute levels of food insecurity, with individuals not knowing where their next meal is coming from. In consequence, individuals admitted to hospital may already be under nourished and from the limited literature available in sub-Saharan Africa, Miyoba et al (2018) identified that over 60% of adult inpatients in Zambia were at nutritional risk.

In many countries there are few or no trained nutritional professionals (WHO, 2018), this is partly due to the limited number of education programmes that cover clinical nutrition topics, issues with registration and regulation of professionals and availability of protocols for practice (Chimera et al., 2020. Sodjinou et al., 2014. WHO, 2018). The limited number of nutritional professionals can be overwhelmed with high patient referrals and are expected to focus on international and national targets for example childhood malnutrition. They are therefore facing an almost impossible task with inpatient complexity increasing, life expectancy changing and the urban and rural lifestyles clashing.

The United Nations Sustainable Development Goal 3.c identifies the importance of increasing health financing, recruitment, development, training, and retention of the healthcare workforce

in LIC (United Nations, 2024). However, while a multi-disciplinary approach is needed to recognise and respond to undernutrition, it is crucial that nutritional professionals have extended knowledge and skills to prevent, lead and effectively manage clinical nutrition strategies. In response to these, the international health partnerships can be seen as a force for good offering an opportunity for knowledge exchange and transfer through virtual and in-country peer support.

The Ministry of Health (Zambia) through Levy Mwanawasa Medical University who are training clinical nutritionists, has partnered with Birmingham City University (UK) in an international health partnership with the aim to raise the profile of nutritionists as expert multi-disciplinary team (MDT) members and through that enhance nutritional practice and competency. To do this both education and practice need to be concurrently scaled up thereby making sure both move forward together. Activities will include the capacity strengthening through a Centre of Excellence for Nutrition, which will be based at Levy Mwanawasa Medical University. This centre will oversee activities that include the establishment of a virtual community of practice of nutritionists/dieticians and will act as an 'anchor' for the harmonisation of national clinical nutrition protocols for practice. For nutritionists in practice, the peer support and mentorship will be provided by NHS Dieticians in identified hospitals as well as a series of train the trainer courses. This development is only the first part of the clinical nutrition roadmap, because it is recognised that clinical nutrition is a relatively new speciality in Zambia and nutritionists are at varying stages of their careers. Therefore, it is essential that leadership skills are developed to allow nutritionists to develop such skills to become more visible in practice. In consequence, working with NHS dieticians who are working at different levels will allow for capacity strengthening and opportunities for a range for nutritionists in Zambia.

Patient care must always have a route for escalation, and in clinical nutrition, this includes referral to a nutritional professional. While it is accepted that there is an overlap in knowledge and skills between different professional groups, for example, nurses may complete admission and ongoing routine ward-based screening tools for under nutrition, they often refer onto other members of the MDT, such as nutritional professionals. Evidence shows that strengthening the role of the nutritionist in the MDT can improve patient centred care, enhance learning regarding nutrition and dietary issues, avert complications and costs due to early intervention and appropriate use of nutritional products (Hickson et al., 2023). Therefore, capacity strengthening nutritional professionals is crucial, to allow for effective and comprehensive nutritional assessment and plans to be made, shared, and implemented. Nutritional professionals need other professional groups such as nurses to protect their patients at risk. However, for nutritional professionals there is a wider remit and opportunity to make a case at strategic level for improved clinical nutrition for hospitalised patients. Highlighting the

importance and need for clinical nutrition at all levels, will result in policy makers hearing their voices, a first step in the process of change towards positive recognition. For as long as there no recognition, appropriate education and training of nutritional professionals, nothing will change, and patients will remain at risk of not receiving appropriate nutritional support, leaving the issue still 'hidden in plain sight'.

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