

Supplementary Information in Additional file 2. Barriers and road blocks encountered during the development of this task shifting program

1.Support for Liberian National Public Health Service: Critical in a low resource country is support for the work force in the Liberian National Public Health Service (NHS). Unfortunately, private practice in Liberia has increased with more doctors involved in this form of care, despite the continued and worsened poverty for most families.

2.Adequate salaries for midwives and nurses: who are functioning as obstetric, neonatal, and paediatric clinicians are needed urgently. Most have not received the enhanced salaries promised after the completion of their training from the MOH, despite their major contribution to hospital care. Their current salaries are 250 USD per month. This was a condition of entry for all trainee clinicians. However, for 2 paediatric clinician trainees, The Family Health Division Director of the MOH did not honour their promise to place these two trainees on the Government payroll . This cost MCAI 25,000 USD.

An educational incentive of 150 USD per month should have ended soon after qualification when the MOH would enhance their salaries to match the advanced and essential work the clinicians would be undertaking. Unfortunately, although this enhancement was provided until 2019, thereafter it was not made available by the MOH and so, MCAI with donor support, has found it necessary to continue to fund qualified clinicians at 150 USD per month in addition to their basic salary.

The clinicians are undertaking similar work to doctors and are paid around only around 15% of their monthly salaries. Enhanced salaries for qualified clinicians were recommended in the international evaluation (Additional file 1) of the task shifting program undertaken jointly by the World Health Organisation and Ministry of Health in April 2019.

3.BSc qualification for clinicians: Following the recommendation of the international WHO evaluation in 2019, plans were prepared to institutionalise all three specialties of the National Task Sharing Programme within a Liberian University. With additional support from The University of Edinburgh, this approach aimed to provide an accredited BSc degree for all qualified graduates of the task-sharing programs. The former MOH blocked this development wanting MCAI to work with a private university in Bong County which could not be supported by the University of Edinburgh, MCAI or WHO. Curricula have now been completed and plans are now underway to begin a part-time BSc course for each trainee within the University of Liberia and Tubman University (both are foremost national universities in Liberia). The part-time structure allows the clinicians to continue with their clinical work.

4.Lack of emergency drugs and supplies: One of the findings of the program has been the consequences of the delays induced by a major nationwide lack of essential emergency drugs and supplies in all public hospitals in Liberia over the last years 2020 to 2024. Families were frequently required to go with their own funds (often impossible because of poverty), to private pharmacies near to each hospital to buy drugs and supplies before, for example, a Caesarean section for obstructed labour could go ahead.

5.Training of nurse anaesthetists: Following a needs assessment by Dr Watson, (MCAI obstetric anaesthesia trainer) see Additional file 60, the Liberian Minister of Health proposed that there should be a trained nurse anaesthetist as part of the EmONC team in each rural facility. Funding for this from the MOH has not been forthcoming, and the training of more nurse anaesthetists willing to work only in the Public National Health Services has not been completed.