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Engaging public primary schools with practical science: Developing a curriculum resource kit for primary school practical science activities in Kenya

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Introduction – Embedding schools’ engagement with health research is increasingly adopted across institutions, underscoring its potency as a novel community engagement approach. There is growing literature focusing on intrinsic and aspirational goals of engagement with little attention to practical science learning in LIMCs schools. We describe processes, methods, and outputs during delivery of after-school practical science club activities for primary schools in the coast of Kenya, with a view to developing a curriculum to support student-led interactions.

Methodology: Drawing from locally available resources, researcher-time, and world-class biomedical infrastructure, we implemented practical science club activities aligned to the primary school syllabus. Activities were piloted among 130 pupils from 5 public primary schools in Kilifi County, purposively sampled and delivered through mixed-methods participatory action research approach. Activity packs were carefully designed in close liaison with Kilifi county department of education officials and contact teachers from the five (5) participating schools. The engagement ties into wider community engagement goals while promoting interest in locally conducted research and positive attitudes towards science.

Results: Discussions and reflections from consultative teachers’ workshops informed the curriculum design and led to a matrix of topics and hands-on activities. Themes include respiration, nutrition, blood disorders – sickle cell disease etc. These materials fed into the development of a practical booklet. 2000 copies of practical primary science activities booklets will be published in the first instance. The publisher will produce pupil’s booklet and teachers’ guide, facilitate book approval by the Kenya Institute of Curriculum Development (KICD) aligned to the new competency-based curriculum (CBC) in Kenya.

Conclusion: Engaging schools in complementary practical science activities linked to the primary education curriculum inspires learner’s interest in school science. It is also a useful tool in engaging the school ‘public’ translating research findings into knowledge pupils can understand. The project deepens uptake of practical science engagement in local schools.