

Scotland Chikwawa Health Initiative

10 years of community health development in Malawi

The University of Strathclyde, University of Malawi (Polytechnic), Ministry of Health and Chikwawa District Health Office have had a long-standing relationship of cooperative research, academic exchange, capacity and implementation of health intervention programmes in the area of environmental health. This programme has focused on the Scotland Chikwawa Health Initiative since 2006, and partners have been working together to improve health from village to district level. This programme addresses the Government of Malawi Essential Health Package and maternal health and healthy settings needs therein, with a specific emphasis on preventive health.

Located in the rural District of Chikwawa, The Scotland Chikwawa Health Initiative (SCHI) began working Chikwawa District Health Office and 4 pilot communities in 2006. The programme, primarily funded by the Scottish Government International Development Fund, has now worked with over 150 communities and nine health facilities to develop a holistic approach to the prevention of disease, improved health access and maternal health.

The programme arose from the needs highlighted by communities during research in areas of diarrhoea disease control, water and sanitation and child health. Launched in 2006 the key objective of the SCHI was to achieve measurable reductions in the main causes of disease and death in Chikwawa District, while improving health access and the hospital environment for both patients and staff, an objective which continues to form the basis of the work today.

The SCHI has developed an integrated approach to training, community education and capital investment to maximise the impact of the District Health Office in the implementation of the Essential Health Package. All



of our work is conducted in partnership with the District Health Office and communities to develop sustainable interventions and programmes. The programme has concentrated on

addressing the determinants of health and improving maternal health services to address the high maternal and neonatal mortality rates in the area.

Specific areas of focus for SCHI

Since 2006 SCHI has worked with six traditional authorities implementing Scottish Government funded projects

- 2006 – 2009: To achieve measurable reductions in the main causes of disease and death in 4 pilot villages through preventative health measures.
- 2009 – 2010: Improve maternal health services for 35 villages in Chikwawa District.
- 2010 – 2013: To improve maternal health services in the remote rural areas of TA Chapananga.

- 2013 – 2016: Implement the healthy setting approach in Mfera Health facility catchment area.

The programmes consists of four primary components:

- Fully understanding the needs and priorities of community members we are working with.
- Training and education of community members to empower them to effect development and implement village action plans through a participatory approach.
- Training and development of health surveillance assistants and centre based health workers to improve access to services and support community members.
- Capital investment at community and health facility level to improve access to health services.

Summary of activities to date:

Capital investment:

- 6 staff houses for varying cadres of government health staff (DNO to HSAs)
- 5 community health posts and clinics.
- High Dependency Unit, Office extension and HIV clinic at Chikwawa District Hospital
- 3 guardian/ waiting mother shelters at remote health facilities.
- Provision solar lighting to 3 health facilities.
- Provision of solar powered water supply to 3 health facilities.
- 18 bed nutrition rehabilitation unit at Ngabu Rural Hospital with beds.
- Maintenance and repair of health facilities to improve health facilities.
- Medical equipment and uniforms including 80 hospital beds (various both donated and procured).
- Bicycle ambulances and bicycles provided to communities and HSAs to improve health access respectively.
- Provision of 4 motorbikes to health facility staff to improve services and supervision.
- Support of nursing staff to upgrade from diploma to degree qualifications.



These have facilitated improved health service provision at health facility and community level when integrated with training and education.

Training of facility based health workers and community based health surveillance assistants (HSAs) who now provide improved services at both facilities and at community level:

- Client care, record keeping, housekeeping and reception at health facilities.
- Leadership, governance and supervision training (District to community level across all cadres).
- Training and support in community mobilisation for maternal health and determinants of health.
- Supervision and management of voluntary committees to improve empowerment and accountability (e.g. village health and water point committees)
- Integrated management of childhood illnesses and community case management.
- HIV testing and counselling.
- Supervision and provision of family planning services.
- Supervision and management of maternal health programmes (CBMNH)
- Supervision and management of growth monitoring and supplementary feeding programmes.
- Youth friendly health services.



- Transformation leadership training and mentorship for traditional and religious leaders.
- Training and continuing development of village health, water point, and safe motherhood committees.
- Development of model houses for committee members from which to educate peers.
- Provision, repair and improvement of community water supplies.
- Training and provision of materials for committees to construct improved sanitation facilities.
- Provision of mosquito nets and water treatment through committees.
- Development of revolving funds for community health development.



Integration with other groups:

As the programme is based on a link between academic institutions and government, an important aspect of the SCHI has been the development and exchange of academic staff and professionals to improve capacity within the University of Malawi and the environmental health profession in Malawi.

These trainings and improved services are based on the needs identified by community members, and have been supported by the construction of associated health posts and HSA housing.

Training and development of communities:

The SCHI approach to community development is based on full community participation, taking into consideration the priorities and needs of community members from all socio economic groups. This approach looks at all determinants of health without a specific agenda and looks to then empower community members to address their needs and use resources available to them effectively. Our community evaluations have been thorough and based on two-way communication, to ensure energy is focussed in the key areas, and that a steady sustainable level of development can be achieved. SCHI work has identified many barriers to effective community participation and development, not least the lack of social capital within communities to support development. Therefore, capacity building and support at community level has focussed on the following:

- Joint development of community structures to support development and improve governance and communication.
- Empowerment and mobilisation of communities through all groups and leadership.

Since 1997, the Department of Environmental Health has been involved in three British Council Higher Education Links and DeIPHE programmes, as well as professional and academic scholarships from the Association of Commonwealth Universities. This led to the establishment of a degree programme in environmental health, and has culminated in the development of the Centre for Water, Sanitation, Health and Appropriate Technology (WASHTED) at the Malawi Polytechnic, and the re-establishment of the Malawi Environmental Health Association.

SCHI has played an integral role in these developments. Academics from the University of Malawi have based their research at both PhD and Masters level on the work undertaken by the programme, (2 graduated PhD, 2 graduated MPhil, 2 graduated MPH, 3 currently undertaking PhD, 2 undertaking MPhil). These have included departments of environmental health, mathematics, and engineering. The environmental health professionals from Chikwawa District have also had an opportunity to visit Scotland for professional fellowships.



In addition to the capacity building within partner organisations, SCHI is aware of the importance of working with other organisations within the same field and geographical area. With this in mind, SCHI assisted Chikwawa District Health Office in the development of their Safe Motherhood Task Force, which allowed all organisations to work together with a coordinated approach to ensure best use of resources. The programme also links with other organisations which have linked activities but by subject and geographical location. For example, Water for People, Malawi Liverpool Wellcome Trust, Centre for Victimised Women and Orphaned Children (CAVWOC), SSDI, Millennium Development Villages, Johns Hopkins, DAPP etc. The renewable energy programme from University of Strathclyde also integrated with SCHI to develop solar systems to assist with the provision of health services in community based health facilities.

Current Projects:

SCHI is continuing to work with the District Health Office and Ministry of Health to achieve its goals in Chikwawa. The current area of concentration the development of a Healthy Settings Approach which can meet the needs of the Health Sector Strategic Plan for preventive health targets <http://www.strath.ac.uk/malawi/projects/chikwawaproject/healthysettings/>.

This is being implemented in a pilot area on the East Bank of Chikwawa District around Mfera Health Facility. Targeting a population of 7500 people in 18 villages, the project is exploring the assessments of community needs using both qualitative and quantitative methods and with a concentration on both social science and environmental health.

In addition to healthy settings in the village setting, the SCHI programme is also targeting the need for healthy environments within the schools and markets in the area. A recent RE:ACTIVE programme with Mfera CDSS and surrounding communities named "My Life, My Choice" aimed to encourage young people to aspire to healthy life decisions, university education and future careers through drama, sport and reciprocal visits between students from the school and the Malawi Polytechnic. This was supported by University of Strathclyde <http://www.strath.ac.uk/malawi/projects/chikwawaproject/healthpromotingschools/>.



All work is being implemented hand in hand with the Chikwawa District Assembly and Health Office to increase opportunities for scale up through the

development of village action plans in conjunction with community empowerment to identify their resources and needs.



This project is overseen by a steering group in Malawi composed of Ministry of Health staff from central, Zonal and District level, academics from University of Malawi and partners from organisations also working in Chikwawa District to ensure information sharing and support.

Impact of projects:

Various reports are available which outline the specific outcomes and impact of the SCHI programmes since 2006. These are also documented in professional and peer reviewed publications (list attached). As a result of the work conducted by SCHI, we have also been involved in the development of policy informing documents at National level, such as:

- National Health Research Agenda (Gap analysis for environmental health) (https://pure.strath.ac.uk/portal/files/30734483/Environmental_Health.pdf).
- Policy brief for Towards and Integrated Approach for Diarrhoeal Disease Control in Malawi in partnership with the Ministry of Health and PATH (http://www.path.org/publications/files/VAC_malawi_policy_fs.pdf)
- Situation Analysis for Food Safety in Malawi in partnership with the Ministry of Health and WHO.

The work of the SCHI has also been recognised by the UK Collaborative on Development Sciences as one of the Top 20 impact studies in 2014 <http://www.ukcds.org.uk/the-global-impact-of-uk-research/clean-water-and-healthcare>

The work of the current healthy settings programme (2013 – 2016) has developed community toolkits to support the implementation of the EHP. These toolkits are currently being finalised with the Ministry of Health, after which time it is hoped they will be endorsed and adopted for national scale up. These toolkits include:

- Community mobilization for healthy settings
- Updated village health committee training manual
- Training for market committees and market vendors.
- Health promoting schools

All current tools are available on <http://www.strath.ac.uk/malawi/projects/chikwawaproject/healthysettings/>

For further information on the Scotland Chikwawa Health Initiative please contact Dr Tracy Morse (tracythomson@africa-online.net).

Publications for Scotland Chikwawa Health Initiative

Peer reviewed publications

Knowledge, attitudes and practices on use of Fossa Alternas and double vault urine diverting dry (DVUDD) latrines in Malawi (2016). Save Kumwenda, Chisomo Msefula, Wilfred Kadewa, Bagrey Ngwira, Tracy Morse, Jeroen H. J. Ensink *Journal of Water, Sanitation and Hygiene and Development*. 6 (4) 555-568

Care-Seeking for Diarrhoea in Southern Malawi: Attitudes, Practices and Implications for Diarrhoea Control (2016) Salule Masangwi, Neil Ferguson, Anthony Grimason, Tracy Morse and Lawrence Kazembe. *Int. J. Environ. Res. Public Health* 13(1140); doi:10.3390/ijerph1311140

Is manure from ecological sanitation latrines safe to fertilize crops? A review of evidence from literature. Kumwenda S., Msefula C., Kadewa W., Ngwira B. and Morse T. (2014) 37th WEDC conference, Hanoi, Vietnam.

The Pattern of Variation between Diarrhea and Malaria Coexistence with Corresponding Risk Factors in Chikhwawa, Malawi: A Bivariate Multilevel Analysis Salule Masangwi, Neil Ferguson, Anthony Grimason, Tracy Morse and Lawrence Kazembe (2015) *nt. J. Environ. Res. Public Health* 2015, 12(7), 8526-8541; doi:10.3390/ijerph120708526

Problems Associated with the Health Management Information System at District Level in Southern Malawi (2014) Kasambara, A., Kumwenda, S., Kalulu, K., Lungu, K.K., Morse, T.D., Masangwi, S.J. *Malawi Medical Journal* (under review)

Knowledge, awareness and practice of hand-washing amongst primary school children attending State run Primary schools in rural Malawi. Grimason, A.M., Morse, T.D., Jabu, G.C., Taulo, S.C., Lungu, K.K., Beattie, T.K. and Masangwi, S.J. *International Journal of Environmental Health Research* 2013; DOI:10.1080/09603123.2013.782601

Physico-chemical quality of borehole water in Chikhwawa, Malawi. Grimason, A.M., Morse, T.D., Masangwi, S.J., Beattie, T.K., Jabu, G.C., Taulo, S.C., Lungu, K.K. *Water SA* 2013; 39 (4): 563-572. doi.org/10.4314/wsa.v39i4.16

Classification of borehole water supplies in Chikhwawa, Malawi. Grimason, A.M., Morse, T.D., Beattie, T.K., Jabu, G.C., Taulo, S.C. Masangwi, S.J., Lungu, K.K. *Water SA* 2013; 39 (4): 573-582. doi.org/10.4314/wsa.v39i4.17

Community knowledge variation, bed-net coverage, the role of a district health care system and their implications for malaria control in southern Malawi. SJ Masangwi, AM Grimason, TD Morse, NS Ferguson, LN Kazembe. *South African Journal of Epidemiology and Infection*. (2012) 27(2):00:00.

Barriers to maternal health service use in Chikhwawa, Southern Malawi. Kambala, C. Morse, T.D., Masangwi, S.J., Mitunda, P. *Malawi Med J*. 2011 March; 23(1): 1-5.

Pattern of maternal knowledge and its implications for diarrhoea control in southern Malawi: Multi-level thresholds of change analysis. Masangwi, S.J., Grimason, A.M., Morse, T.D., Kazembe, L.N., Ferguson, N.S. and Jabu, G.C. (2012). *International Journal of Environmental Research and Public Health*, 9, 955 – 969.

Household and community variations and nested risk factors for diarrhoea prevalence in Southern Malawi: A binary logistic multilevel analysis. Masangwi S.J., Ferguson N.S., Grimason A.M., Morse T.D., Zawdie G., Kazembe L.N., *International Journal of Environmental Health Research* Vol 20, No. 2, pp. 141-158 (2010). <http://dx.doi.org/10.1080/09603120903403143>

Care-seeking behaviour and implications for malaria control in Southern Malawi. Masangwi SJ, Ferguson N, Grimason AM, Kazembe L.N., Morse T.D., (2010) *Southern African Journal of Epidemiology and Infection* Vol 25(4):22-26

Behavioural and environmental determinants of childhood diarrhoea in Chikwawa, Malawi. Masangwi S.J., Morse T.D., Ferguson N.S., Zawdie G., Grimason A.M., Namangale J.J., (2010) *Desalination* Vol 248:684-69

Incidence of cryptosporidiosis in paediatric patients in Malawi: species and transmission routes. T.D. Morse, R.A.B. Nichols, A.M. Grimason, K.C. Tembo, H.V. Smith. (2007) *Epidemiology and Infection*. 135(8): 1307 - 15

Policy Briefs

Towards effective diarrhoeal disease control and treatment in Malawi (2010/11) PATH.

Gap Analysis for Environmental Health in Malawi conducted on behalf of the National Commission for Science and Technology, (Government of Malawi) to inform the National Health Research Agenda (2011)

Situation Analysis of Food Safety in Malawi (2014) Ministry of Health and WHO (Malawi).

Toolkits <http://www.strath.ac.uk/malawi/projects/chikwawaproject/healthysettings/>

Community Mobilisation for implementation of health settings approach (in press)

Health Promoting Schools <http://www.strath.ac.uk/malawi/projects/chikwawaproject/healthpromotingschools/>

Healthy Markets and Informal Vendor Training <http://www.strath.ac.uk/malawi/projects/chikwawaproject/healthymarkets/>

Village health committee training manual (under finalization)

Published in Professional Journals

A Preliminary analysis of the Scotland Chikhwawa Health Initiative on Morbidity. Masangwi S.J., Morse T.D., Ferguson N.S., Zawdie G., Grimason A.M., *Environment & Health International* Vol 10, No. 2, pp. 23 (2008) http://www.ifeh.org/magazine/ifeh-magazine-2008_v10_n2_Congress_Edition_2008.pdf

Scotland Chikwawa Health Initiative – improving health from community to hospital. T.D. Morse, K. Lungu, S. Masangwi, S. Makumbi, A.M. Grimason, J. Womersley, P. West. *Environment and Health International* (2008) May: 23 – 29. Congress Edition. ISSN 1683-3805

Ecological Sanitation - Implementation Opportunities and Challenges in Chikwawa, Malawi. Lungu, K., Morse, T.D. and Grimason, A.M. (2008). *Environment & Health International. Magazine of the International Federation of Environmental Health*, 10 (2), 1-7.

Epidemiology of Cryptosporidiosis in Rural Malawi. T.D. Morse, R.A.B. Nicholls, A.M. Grimason, H.V. Smith. *Environment and Health International* (2008) May: 36 – 44. Congress Edition. ISSN 1683-3805

Epidemiology of diarrhoeal disease in Malawi – a case study of cryptosporidiosis. T.D. Morse, A.M. Grimason, H.V. Smith (2008) April. Proceedings of the 33rd WEDC Conference, Accra, Ghana.

Presentation and Facilitation at Conferences

Plenary and session presentations at the IFEH World Congress on Environmental Health. May 2016, Lilongwe, Malawi.

- Community Health Approaches – the healthy settings approach.
- Developing health promoting schools
- Using village action groups to engage a healthy settings approach
- Developing model healthy markets
- Can mHealth enhance impact of health improvement programmes in developing countries: a Malawian case study

Invited plenary speaker at the Pan African Chemistry Network (Royal Society of Chemistry), PACN Congress on Sustainability, December 2013, Africa Hall, Addis Ababa.

Healthy settings approach to improving health in Malawi – case study of Malawi. Ministry of Health EHP-TWG (2016) National Ministry of Health Sector Wide Approach Annual Review (2013) and Social Science in Health Conference, Malawi Liverpool Wellcome Trust, September 2013.

Interface between environmental health and higher education. Workshop facilitator at the HERS-SA Academy, Cape Town. (2010). HERS-SA is an annual conference for female academics which was attended by 83 women from 30 Universities across Africa, Europe and the USA. www.hers-sa.org.za

Scotland Chikwawa Health Initiative – Holistic Community Health. 2nd All Africa Environmental Health Congress. Lilongwe, Malawi. May 2010.

Gender Parity in Environmental Health Higher Education. 2nd All Africa Environmental Health Congress. Lilongwe, Malawi. May 2010.

Holistic approach to diarrhea control in Chikwawa District. T.D. Morse, A.M. Grimason, S.J. Masangwi, S. Makumbi, P. West. October 2009. 13th College of Medicine Annual Research Dissemination Conference, Blantyre, Malawi.

Developing links in environmental health between Scotland and Malawi – 12 years of experience. T Morse, A.M. Grimason, T. Bell. June 2009. Scotland Malawi Partnership Health Conference 2009. Edinburgh, UK.