# Science Communication evaluation methods at MLW

## The case of the Samala moyo project

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# Presentation outline

- Introduction to Samala Moyo exhibition
- Evaluation of original project 2015-16
- Plans for future evaluation 2017 onwards

# lves

## Related activities: Internships

- 1 week internship at MLW for 12 students

# Existing gaps

HUGE DISEASE BURDEN

LACK OF ACCESS TO HEALTH INFORMATION

LACK OF SCIENCE INFORMATION

# Original exhibition objectives


1. Public to understand health, health research and engagement with health researchers
2. Enable teaching and discussion through objects and interactive exhibits (LCA)
3. Promote science careers in Malawi

# Key stakeholders

- Museum: facilitation, internships
- Health: ethics approval, content, discussions, community meetings
- Education: school curriculum, health clubs  identifying of schools, internships
- Wellcome Trust: provision of funding, exhibits

# Exhibition evaluation 2015-16: Methods used

Ongoing data collection during 2 year exhibition project (March 2015 – Sept 2016)

***Qualitative methods:***

- 4 Observational diaries with science club members in secondary schools
- 48 Focus group discussion with students and community members
- Video diaries with 12 interns

***Quantitative***

- Teacher evaluation forms- 48- responses coded on delivery
- Gave information on the number of students who visited
- Exhibition games with 1000 students. Helped us to know which theme had highest number of display/ was remembered most ( versus the other themes)

# Findings

- Indication of new health knowledge through attending the exhibition – students reported things that had learnt, especially on malaria
- Students wanted additional content e.g. on family planning
- People liked the exhibits – helps in remembering information
- Teachers felt exhibition increased student interest and performance in science
- Internship encouraged interest in science/medical careers, and girls valued female role models
- Students, teachers and community members said more time was needed to view the exhibition
- Science clubs lacked confidence and information to organise activities

# Strengths of past M&E

- Already existing networks with communities, schools
- Easy to use – parallel to programming
- Less costly

# Challenges of past M&E

- High numbers of people during outreach exhibition affected delivery and exhibition games
- Time factor for the games - to end by noon
- Risk of respondent bias with FGDs/interviews conducted by MLW staff member
- Choice of students for FGDs determined by teachers
- Assessment of impact on students limited to focus group and teachers' views – no wider or more objective assessment of the impact on education/career choices or understanding of MLW and research, or of variations in impact between children
- Time lag conducting FGDs meant recall issues for recounting experience (though benefit for assessing longer-term effect)
- No long-term follow up on students to understand their career choices.
- Internship undertaken after form fours had already made future education choices so limited potential for impact or to assess change
- Inability to respond to some of the M&E findings due to resource constraints

# New M&E plan 2016 onwards: design – theory of change

Aim:

- Enable M&E that shows whether we are moving towards intended outcomes

Process:

- Clarify intended outcomes - ethical research practice as ultimate goal
- Clarify how activities are going to lead to outcomes - asking the so that question

# Revised objectives

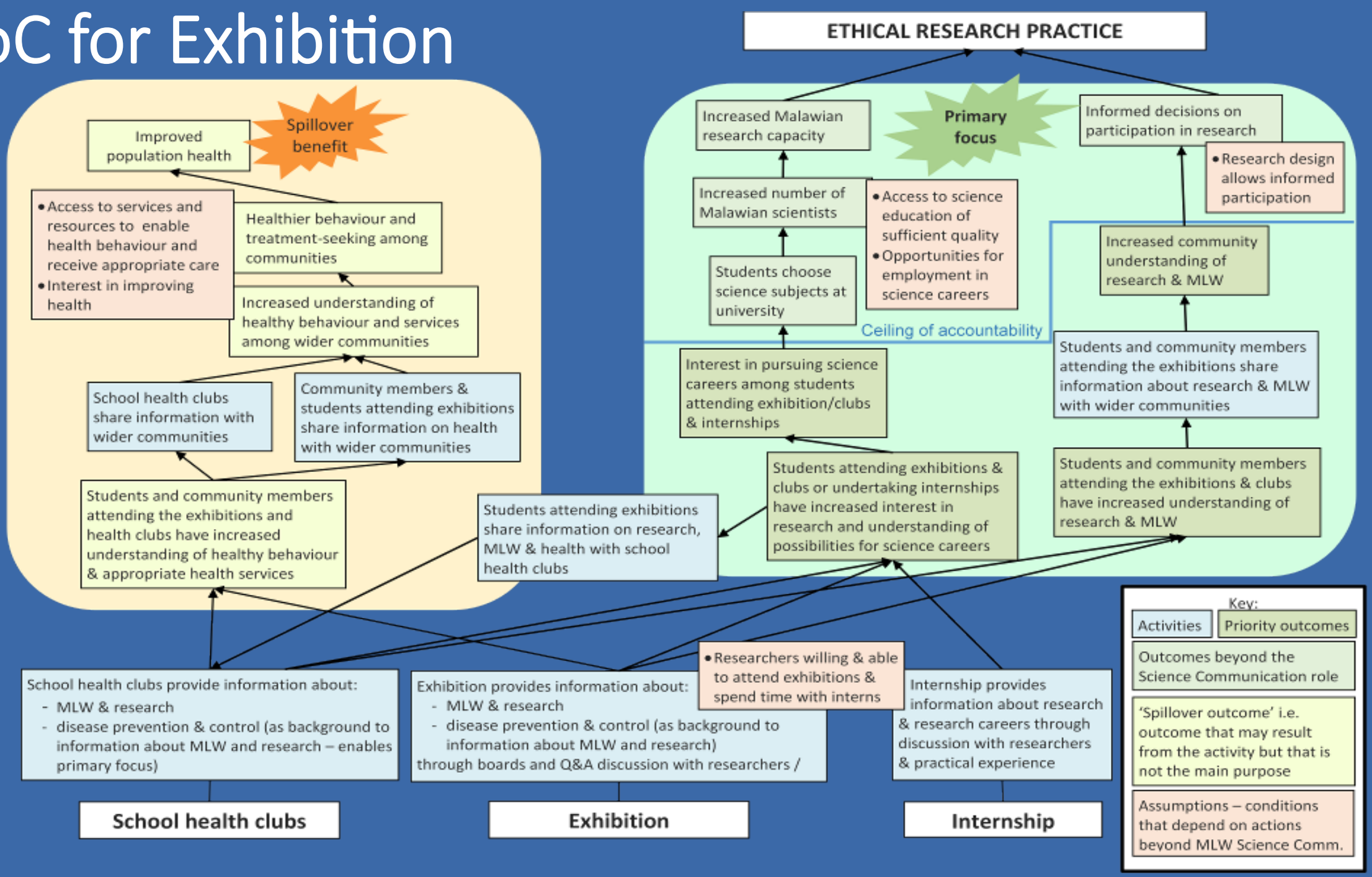
Broad understanding of ethical research practice:

- promoting informed participation and avoidance of harm, but also
- supporting research capacity within Malawi
- promoting relevant research with an impact on policy and practice

Exhibition objectives:

- Support increased numbers of Malawian researchers by promoting interest in science careers
- Support informed decisions on participation in research by enhancing understanding of both MLW and the nature of research among communities and the general public
- Support the impact of MLW research by sharing information about healthy behaviour and treatment options

# ToC for Exhibition



# Information needed by engagement team

Supported by wellcome trust

**Activity level:**

- Attendance: which schools and students attend, barriers, gender and socioeconomic status
- Implementation: presence of researchers, time at exhibition, number of facilitators
- Exhibition and internship format/approach: enjoyment, interest and understanding among audience?

**Outcome level:**

- Do students gain more interest in science careers? Why/not? Variations?
- Do students gain more understanding of research and MLW? Why/not? Variations?
- Do students choose science subjects at school (MSCE level)? Why/not? Variations?
- Do students move to university science courses? Why/not? Variations?
- Do students move to science careers? (especially interns) Why/not? Variations?
- Any unexpected effects, positive or negative?

# Planned methods/sources of data – not finalised!

| Question | Methods | Timing |
|---|---|---|
| Attendance | Attendance monitoring template | Ongoing |
| Implementation:<br>Researcher presence<br>Time at exhibition<br>Facilitators | Exhibition reports | Ongoing |
| | Focus groups with students/ communities | 4-8 weeks after<br>1 year after |
| Format and approach: enjoyment, interest, satisfaction and understanding | Game & discussion at exhibition | At exhibition |
| | Focus groups | 4-8 weeks after<br>1 year after |
| Outcomes:<br>Interest in science careers<br>Understanding of research and MLW | Survey | One week before<br>4-8 weeks after<br>1 year after |
| | Focus group | 4-8 weeks after<br>1 year after |
| | Game & discussion at exhibition | At exhibition |
| | Video diaries and intern reports | At end of internship |

# Planned methods cont.

| Question | Methods | Timing |
|---|---|---|
| Choose science subjects at school | Survey | One week before<br>4-8 weeks after<br>1 year after |
| | FGD | 4-8 weeks after<br>1 year after |
| | Interviews with students | 1 year after |
| | School records | Annual tracking |
| Move to university science courses | School records | Annual tracking |
| | Interviews with school leavers | 1 year after |
| Unexpected effects, positive or negative | Interviews with teachers | 4-8 weeks after<br>1 year after |
| | FGD | 4-8 weeks after<br>1 year after |
| | Interviews with school leavers | Selected sample annually |

# Summary of revised M&E methods

- **Survey:** career goals, knowledge of research and knowledge of MLW.
- **Informal assessment at the exhibition:** what they know about MLW, research
- Game and discussion at the end of the exhibition can indicate any learning and changes in knowledge or aspirations. During this game, students demonstrate facts they have learnt from their exhibition experience.
- **Focus groups- 4 to 8 weeks after attendance**
- **Video diaries – before and after**
- **School records- For choices, admission into university**
- **Interviews with students on choices, career aspiration**

# Challenges in implementation and approach

- Resources to undertake M&E – too ambitious? (Time, material, financial, human resource)
- Response from the community to take part in the evaluation( fear, unavailability, bias)
- Impacts on careers take years – can we sustain long-term monitoring?
- Choice of subject at school/university does not necessarily indicate progress towards a science career - hard to identify intermediate outcomes.
- What count as a successful outcome – careers in health research, or research in other disciplines, or work in health beyond research, or more intangible outcomes e.g. confidence, or short-term enjoyment?

## Next steps:

Finalize and popularize the M&E strategy

Develop indicators

Baseline for indicators to set bench mark?

## Ongoing questions:

Feasibility of developing SMART objectives/indicators?

Too many methods- too ambitious?

Are objectives too narrow/unrealistic?

Link to informed consent as an impact – realistic?

# Thanks very much

- Questions, comments