

Report



Malaria Capacity Development Consortium

Strengthening Research Management and Support Systems (RMSS) in African Universities

**FINAL OVERVIEW REPORT FOR UNIVERSITIES IN GHANA, MALAWI,
SENEGAL AND TANZANIA: January 2015 – May 2016**

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Abbreviations

BSU	Building Stronger Universities
CHS	College of Health Sciences
CRU	Capacity Research Unit
DANIDA	Ministry of Foreign Affairs of Denmark
DRUSSA	Development Research Uptake in sub-Saharan Africa
ICT	Information and communications technology
KCCR	Kumasi Centre for Collaborative Research in Tropical Medicine
KNUST	Kwame Nkrumah University of Science and Technology
LSTM	Liverpool School of Tropical Medicine
MCDC	Malaria Capacity Development Consortium
MEPI	Medical Education Partnership Initiative
MoU	Memorandum of Understanding
OGR	Office of Grants and Research
PI	Principal Investigator
RMSS	Research Management and Support Systems
RSC	Research Support Centre
SoP	Standard operating procedures
URO	University Relations Office

1. Executive summary

A key aim of the MCDC programme was to strengthen the capacity of its African partner universities to provide academic, administrative and financial support for international quality research activities. In 2013 MCDC requested the CRU research team at LSTM to undertake a review of the research support systems and structures within four of MCDC's partner African universities and to identify gaps that could be addressed within the time scale of the project. This was known as the Research Management and Support Systems (RMSS) project (2014-16).

Baseline RMSS capacity was reviewed during visits to the universities in 2014 and university-specific reports as well as an overview report were produced. These reports contained recommendations for solving the capacity gaps. The solutions had been agreed during debriefing sessions which were held in each university the end of the visits. This 2016 overview report outlines progress made in strengthening RMSS capacity since the 2014 baseline visits and is based on information contained in each of the university's individual 2015-16 follow up reports. The information in these follow up reports is based exclusively on the MCDC principal investigators' self-reported progress and has not been independently verified. MCDC had allocated funds (of up to £25k) to enable the principal investigators in each university to fulfill some of the actions needed to address RMSS capacity gaps. The funds were to be awarded following submission of a justified budget by principal investigators but in practice justification proved difficult and in some cases minimal or no funds were transferred. The progress made by each university is therefore a useful indicator of what might be achieved by other research institutions in Africa who do not have external support.

To develop the data collection tools for the 2014 baseline study, CRU conducted a literature search and consulted with experts in various aspects of RMSS to reach a 'saturated' comprehensive list of all the structures and systems needed by research institutions to produce high quality research and be recognised as internationally successful. The list was converted into a data collection toolkit comprising three methods (i.e. interview guides, document reviews and observation guides for institutional research facilities) for use during visits to the four universities. The items in list were grouped into eight RMSS components to aid analysis of the findings:

1. Research Strategies and Policies
2. Institutional Support Services and Infrastructure
3. Supporting Funding Applications
4. Project Management and Control
5. Human Resource Management for Research
6. Human Resource Development for Research
7. External Promotion of Research
8. National Research Engagement

For the 2016 follow up reports, interviews were conducted over 15 months by Skype and telephone interviews with the MCDC principal investigator. Information obtained about progress against the 2014 recommendations was mapped against the eight RMSS components using a pre-prepared matrix. We used a rough scoring system to gauge whether the collective progress against the recommendations for the four anonymised institutions was 'good', 'moderate' or 'little/none'. This helped us understand which components of research support systems the universities found most easy to address and which were the hardest.

All of the universities had made substantial progress in addressing their RMSS capacity gaps within their departments, schools and colleges and also, more impressively, at university level. They made

most progress on components concerning support for research applications and project management. Least progress was achieved on components related to the development of research strategies and dissemination and uptake of research outputs. Intermediate progress was made on strengthening research infrastructure, research skills training and research-related management of human resources.

Examples of good practice and problem-solving were identified during the follow up since these could provide useful ideas for other research institutions and generated resources that might be shared. Common findings across the universities which could be useful learning points for future programmes included the need for:

- research capacity 'change' agents or teams which were able to influence university decision-making
- ensuring university-wide buy-in for the vision and actions for strengthening institutional research capacity
- a university-wide collaboratively-developed research strategy with actions and progress monitoring indicators
- forums for inter-university sharing of experiences, challenges and resources for strengthening research capacity

2. Introduction

The overall goal of the MCDC programme (2009-16) was to improve malaria research capacity in Africa. A key aim of the MCDC programme was to strengthen the capacity of the programmes' African partner universities to provide high quality academic, administrative and financial support for internationally-recognised research activities. To contribute to achieving this aim, LSTM's Capacity Research Unit (CRU) worked with MCDC between 2009 and 2012 to appraise practices, procedures and facilities for PhD students in the African partner universities. In 2013 MCDC requested CRU to broaden this approach to encompass the research support systems and structures within its partner institutions (see Appendix 1 for Terms of Reference). This required CRU to develop and implement a new set of tools that could be used to plan, monitor and evaluate activities that supported research across departments and institutions and became the Research Management and Support Systems (RMSS) project (2014-16). RMSS involved reviewing activities designed to strengthen the research support systems and structures within four of MCDC's partner African universities¹ and identifying gaps that could be addressed within the time scale of the project.

In 2014, at the beginning of the MCDC RMSS programme, CRU conducted a synthesis of published evidence to devise a list that encapsulated all the elements an institution needed to produce international quality research. This list was used to define the 'ideal' capacity needed within a university to manage and support international quality research and was used to guide the process and tools (interview guides, document reviews and observation guides for institutional research facilities) for data collection during the site visits. The CRU research team visited four MCDC partner universities in September and October 2014, using the pre-designed data collection process and tools to document the existing capacity in research support systems within the universities. Comparison of current capacity with the 'ideal' capacity enabled gaps to be identified by the CRU team and prioritized through discussions with the university staff. A list of recommendations for solving the capacity gaps was drawn up for each of the four universities and agreed during the debriefing sessions held at the end of the site visits.

Individual reports of the baseline findings in each institution, and an overview report² providing a summary across all the universities were completed in 2014. The overview report outlined how the baseline review of the universities' research support systems was designed and conducted during site visits to the four African universities between September and November 2014. It described how the methods and data collection tools were developed, and synthesised key findings, including examples of good practice. It also described gaps in the research support systems that were common across the universities. The individual institutional reports included recommendations to address any gaps in order to assist the universities to develop action plans. The overview report summarised these recommendations (see appendix 2) to help MCDC and other agencies plan and coordinate effective targeting of resources towards common weak areas in African universities' research support systems.

MCDC had allocated some funds (~£25,000/university) that the four universities could use to implement some of the recommendations from the 2014 reviews. Funds were awarded based on submission of a justified budget by the four Principal Investigators (PIs). PIs were asked to complete an award action plan template detailing their chosen action points from the RMSS report recommendations (with deliverables, proposed completion dates, resources and budget allocated) and

¹ College of Medicine, Malawi; Faculté de Médecine, Pharmacie et Odontostomatologie, Senegal; Kilimanjaro Christian Medical College, Tanzania; School of Medical Sciences, Ghana

² Available online at:

http://www.mcdconsortium.org/sites/www.mcdconsortium.org/files/MCDC%20RMSS%20overview%20report%20FINAL%20jan15_0.pdf

advised to select items that they believed they could deliver by December 2015 (later amended to February 2016). We followed the progress of each institution in implementing their action plans from January 2015-May 2016 with quarterly Skype or telephone meetings. To analyse data for this final overview report, results were inserted in a matrix which listed all the recommendations for each institution from the baseline 2014 RMSS report.

This 2016 overview report outlines our key findings of the follow up meetings across all four universities and complements the individual reports that we produced for each institution. In this final overview report we document progress in achieving the recommendations in the baseline overview report from 2014 and indicate, where possible, MCDC's contribution to strengthening institutional systems for research management and support in the partner African universities. The findings are organized around the same components of institutional research systems and structures components as in the 2014 RMSS baseline report, namely

1. Research Strategies and Policies
2. Institutional Support Services and Infrastructure
3. Supporting Funding Applications
4. Project Management and Control
5. Human Resource Management for Research
6. Human Resource Development for Research
7. External Promotion of Research
8. National Research Engagement

Since there is increasing international investment in the 'consortium' model for supporting capacity strengthening in poorer countries, we have also attempted to draw out challenges, solutions and potential lessons that could be shared to guide future similar programmes based on a consortium model.

3. Methods

The methods for conducting the baseline RMSS study are described in the 2014 overview report. Briefly, since there was no single benchmark document which detailed all the support systems needed in a university to underpin the management and generation of research of international quality, we conducted a literature search and consulted with 'experts' to reach a 'saturated' list of all aspects of structures and systems needed by research institutions to become internationally successful. These were grouped into eight components (see introduction) and tools and methods developed to enable us to collect data interviews, by observing facilities and by reviewing the universities' documentation – these three methods made up the 'data collection toolkit'. A range of interview guides were developed for different interviewees (i.e. Heads of Department/Institute Deans or Principals; Principal Investigators; Research Support Staff such as administration, finance, human resources, communications, ethics and laboratories) making sure that all aspects of the eight themes were covered. Data was collected during site visits to each institution during 2014-15, and validated and accuracy checked during a de-brief session at the end of each visit. Each institution was provided with a confidential report and an open access overview report summarising common findings and recommendations across the universities was also produced.

Data for the final 2016 individual and overview reports were collected through Skype and telephone interviews only; no site visits were conducted. Approximately quarterly interviews were pre-arranged with the PIs and lasted 20-40 minutes. Any actions they had taken to strengthen RMSS or to implement the recommendations in their individual and the overview reports were discussed and their

responses documented. To be able to identify examples of good practice and to learn lessons that could be used in future programmes, particular attention was paid to any successes they had achieved or challenges they experienced and they were asked to identify reasons for these. Drafts of the final individual reports were sent to the PIs and the draft overview report was sent to the MCDC PI and secretariat. Comments received were incorporated into the final versions of the reports.

4. Limitations of the review

The information presented in this report is based exclusively on self-reported progress by the PIs and has not been independently verified. The use of Skype and phone interviews meant that sometimes the quality of the line was not always optimal which made it difficult to have lengthy conversations or to pursue specific topics in depth. Often several emails were needed to engage the PIs in the interviews. Overall 11 skype interviews were conducted during the 14 month follow up period, 4 interviews with institution 1, 1 with institution 2, 3 with institution 3 and 3 with institution 4.

A significant limitation on progress with activities in the institutions was the lack of funds. Although the initial plan was for each institution to receive £25,000 to fulfil aspects of their research strengthening action plans, there were several challenges which meant that one institution had received £9,990 (as of 25th May 2016), and two had received no funding³ (one of these institutions reported using institutional funds to underwrite the activities). The findings outlined below must therefore be interpreted in the knowledge that any progress achieved occurred with limited or no funds. This in itself is a useful indicator of what might be achieved by other research institutions in Africa who do not have external support.

5. Findings

Progress for each of the (anonymised) institutions against recommendations from their own individual baseline 2014 RMSS reports is summarised in table 1 and categorised under each of the eight themes. The information provided by the PIs has been interpreted subjectively using a rough scoring system to gauge whether the collective progress against the action plans for all four institutions was 'good', 'moderate' or 'little/none'. This information is provided in order to understand which components of research support systems institutions found most easy to address and which were the hardest. This is based only on four institutions but our preliminary observations from working with other research consortia in Africa suggest that findings may be similar in other institutions.

5.1 Themes with good progress

Themes where all institutions made good progress were 'Supporting Funding Applications' and 'Project Management and Control'. Examples of actions that had been taken for 'Supporting Funding Applications' included setting up research databases, developing guidelines for preparing proposals, and support for proposals from research grant office staff. Actions for 'Project Management and Control' included processes for formal sign-off of grant contracts, training on grants management or researchers and support staff, and dedicated research administrators.

5.2 Themes with moderate progress

Themes in which some progress had been made were 'Human Resource Development for Research', 'Institutional Support Services Infrastructure' and 'Human Resource Management for Research'. Under 'Human Resource Development for Research' mentoring for researchers had begun, and some courses for induction and research skills had introduced but in general these were not yet fully

³ No information was available for one institution

embedded in the institutions. Infrastructural improvements included establishing research support offices to help with proposals and project management, improvements to IT systems and moves towards accreditation and sustainable funding for research laboratories. For the 'Human Resource Management for Research' theme institutions had strengthened their recruitment and employment policies for research staff and were planning to formally develop and institutionalise post-graduate programmes and personal development plans.

5.3 Themes with least progress

Although Research Strategies and Policies', 'National Research Engagement' and 'External Promotion of Research' were the themes with the least progress some activities had been implemented. In some institutions consultations concerning research strategies had taken place but difficulties had been encountered in ensuring that departmental or college-level strategies matched those of the universities, some of which were also at the planning stage. External promotion of research and engagement of research users proved to be the most difficult themes on which to make substantial progress. Nevertheless there were some achievements including training in research communications for researchers, updating of research activities on websites, specific policies on research uptake, support to attend conferences, annual research reports and plans for specialist research uptake staff or units.

6. Examples of good practice and problem-solving

The following examples are from the four universities (anonymised) and may provide useful ideas for other research institutions and possibly, resources which may be shared.

Strategies and policies

- Through a broad consultative process an institution developed a research strategy based on a SWOT analysis by all departments and agreed during a workshop involving researchers, university officials, research support staff and representatives from external national agencies, the Ministry of Health and international research consortia.

Preparing grant proposals

- A user friendly "How-to" document has been produced with flow charts on key steps needed to develop research proposals.
- A framework for calculating a proportion of staff time to be included in proposals for grants management has been established
- Topic-specific research groups have been formed which can respond to funding calls and collaboration opportunities
- A legal unit has been set up to guide the contract review process and a contract template and checklist developed

Managing projects

- Standard operating procedures for expenses and account management have been developed and validated with PIs, finance and administrative officers.
- Quarterly meetings with PIs are used to address financial management of project grants

Research laboratories

- A Laboratory Committee has been formed and inventoried all key laboratory resources within the College and research affiliates

Research training

- An annual research training calendar has been developed for research staff based on a formal training needs assessment
- Regular training is provided by a university on the roles and responsibilities of PIs, administrators and finance staff throughout the grant life cycle

Research careers

- A College Career Development Centre has been established and stocked with training aids and other resources
- HR staff are included in planning for research staff development

Research dissemination and uptake

- A visually attractive and readable annual university research report has been made publically available on the university's website. It chronicles recent research activities from individuals, departments and colleges and includes information about MCDC as a major programme.
- A university research uptake strategy has been published
- Research is disseminated beyond universities through annual PhD symposia and by hosting a meeting of leading thinkers in science, policy, industry and civil society in Africa

7. Challenges, lessons and recommendations for funders and managers of future institutional research capacity strengthening programmes

Some of the challenges and lessons that could be used to inform future institutional research capacity strengthening programmes are highlighted in the following section. The initial entry point into the institutions' RMSS was through the MCDC's partner PI and their own department. However many of the capacity gaps occurred at supra-departmental level and required actions by, for example, the post graduate Dean or university information technology teams. In some cases the PI may have found it difficult to influence these actions since their ability to be 'change agents' was partly dependent on their own seniority and their personal interactions with senior institutional officials. Some of the findings had implications across the university but non-MCDC departments may have felt that the findings were not directly relevant for them since they had not been included in the process since this was beyond the scope and resources of the RMSS project. One of the institutions had convened a formal group to develop and implement an action plan with a strong focus on engagement at high institutional level which was effective in getting buy-in, action planning and effecting change.

Recommendations

An inclusive approach involving buy-in and active participation by all university departments and senior officials is needed to enable institution-wide changes to be implemented

The main contact person needs to be influential and well-connected if they are to act efficiently as a 'change agent' for improving RMSS across a whole institution. Alternatively, or in addition, they could be part of a 'change' team which has a direct communication channel to senior officials and which would have more weight in influencing action plans and budgets.

The approach to conducting the RMSS research capacity strengthening review was based on a comprehensive review of the global literature. This included, but was not restricted to, relevant information from Africa. It was transferable across these diverse institutions which had different levels of maturity and sophistication of their RMSS. However it is possible that the African institutions have particular needs with respect to such a review that were either not captured by our approach or that

needed special emphasis. The tools and methods we used were shared with the PIs in advance of the review but it is possible that at that early stage they were unclear about exactly what the review would entail. There were no specific areas of the review that either the review team or the participants noted as missing and it is hoped that this report may help to adjust some of the emphasis in future such reviews towards areas that the institutions commonly found to be particularly challenging.

Recommendation

The tools and approach for conducting an RMSS should be shared widely across the institution in advance of the review to obtain broad inputs and ensure that the review will achieve the outcomes desired by the institutions as well as by those commissioning the review.

Strengthening research capacity of institutions in Africa and other resource-constrained settings is gaining much momentum among development agencies and funders. Consequently it is not unusual, as in this case, to find multiple players working on RMSS and we found examples of potential duplication of activities within a single institution. Their inputs need to be coordinated across the institution to maximise the benefits and so that efforts can be targeted towards priority needs. Having a systematic and comprehensive review of all the RMSS can help to guide and monitor progress towards the overall goal of creating internationally-competitive, high-quality research institutions. All the institutions found it helpful to have an unbiased external team to assist with the review since this helped to deal equitably with sensitive issues and also facilitated meetings with difficult-to-access senior officials.

Recommendation

Institutions need to have their own strategy to enhance their research capacity based on a comprehensive, holistic review. The strategy should be based on an on-site review of existing research capacity using evidence-informed approaches and tools and involving an external independent team. Implementation of the strategy should be supported by an action plan with indicators so that progress can be monitored and demonstrated. Inputs from different agencies should be coordinated using the strategy and plan to avoid duplication and promote synergies.

Several challenges were common across institutions and there were several examples of innovative solutions. There is much to be gained through exchange or study visits between research institutions in Africa, or through joint workshops where experiences and solutions of institutions which all face similar resource constraints can be shared and new collaborations for research systems (rather than research projects) can be forged.

Recommendation

Future programmes for strengthening institutional research capacity should incorporate mechanisms for inter-institutional sharing of challenges and solutions through exchange visits and joint workshops

8. Quotes from interviewees

“It was very useful to get an overview of the whole system from an outside team”

“Senior staff are really engaging with this. They understand the importance of the MCDC/RMSS program so it's only funds (delay from MCDC) stopping things progressing but things will then move on”

“The follow up process was helpful to keep me focused on understanding the changes occurring across the college and in all areas of research management.”

“Certain areas that the overall report helped when I was presenting the sensitive issues that there are common problems - instead of feeling hopeless, we felt we were doing better in some areas. We knew most of the things knowing that here are political issues. If the recommendation had come from within that could have caused issues [feeling looked down on different departments]

“As an outside evaluation it simulated honest and fair discussion between us all. The report was very fair, it didn't just focus on admin or finance but had points for researchers. I presented the findings of the report at the strategy meeting, everyone felt the report was fair and demonstrated our strengths as well- moving in the right direction but gave areas as points of weaknesses. Everyone said it didn't say anything we didn't know but as an outside organisation produced it there were no biases. That's why everyone has agreed we need to move forward”

“A piecemeal approach would not be effective at all. If we are serious about improving RMSS we need to look at each area. We can then leverage funding from the college of medicine. We used this to make sure every area is funded.”

“It would help if the report was in French, with logos, stamp and signature so they know it is from you. An official version. Otherwise a translation is not taken seriously”

“The RMSS project definitely helped to raise awareness of all the challenges we are facing, that we need more funds and to improve the environment, it highlight difficulties and that all the partners are now really interested in helping African institutions. It enabled us to start some concrete actions and now we have institutional buy in, now they are engaged and committed to go further”

“RMSS was a useful project but the funding issues have detracted and stopped forward movement. We have had to use funds from other activities to cover projects and this has caused anxiety.”

“On-going follow up was helpful to keep on track with forward movement”

9. Table 1. Progress on action plans for each institution during 2015-16

A subjective assessment was made by the research team about overall indicative progress across all institutions based on pooling findings from each individual institution.

RMSS Theme (and overall progress)	PROGRESS WITH ACTION PLANS 2015-16			
	Institution 1	Institution 2	Institution 3	Institution 4
Research Strategies and Policies (little progress)	<p>University level strategy being approved but College level not yet developed.</p> <p>A new university-wide research database now in place. A small University research fund has been set up.</p>	<p>Consultation on the strategy has taken place. A draft document is being written to submit for management approval.</p> <p>Research management software has been installed to manage the research database</p>	<p>A research grant office is planned for early 2016 and a research database will be created within this office.</p>	<p>Strategy is on-hold as wide-scale institutional constitutional change is underway.</p>
Institutional Support Services and Infrastructure (moderate progress)	<p>Work is on-going to coordinate inputs to proposals and grant management by PIs and finance staff. Workshops took place in 2015.</p>	<p>MoU and SoP in development for grant related activities.</p> <p>ICT policies for marketing and staff engagement are being developed.</p> <p>Sustainability planning for lab resources and budgeting is underway.</p>	<p>Instalment of high speed internet (DSL) at the Department of Biology, the PhD dedicated space and the Faculty library.</p> <p>Steps towards formal accreditation of quality assurance processes and certification for the department labs has begun.</p>	<p>Progress has been made in establishing a research support office (grants unit) with administrators and financial staff appointed.</p>
Supporting Funding Applications (good progress)	<p>A university-wide database has been implemented.</p> <p>The finance office is now involved in proposal development and joint training has taken place.</p>	<p>Information about the RSC's services has been disseminated.</p> <p>"How-to" guideline on developing research proposals with a budget framework and checklists has been launched.</p> <p>A research careers development webpage has been</p>	<p>Implementation of a research grant office and recruitment of a research coordinator has been agreed.</p>	<p>Administrators from the research/grants office have been assisting the PIs during processes of proposal development, registering projects and tracking implementation and management.</p> <p>The Grant office has been registered to several "calls</p>

		developed with materials for fledgling researchers		application portals" and a database of researcher interests is being created.
Project Management and Control (good progress)	<p>Contract review, sign off and risk management procedures have been strengthened with contracts signed off by Provosts or Deans of Colleges.</p> <p>Need for in-house training for admin to support PIs identified.</p>	<p>New systems for pre- and post-award management have been developed.</p> <p>A new policy for compulsory post-award "Grants Management" inductions for all successful Principal Investigators is available.</p> <p>A Grants administrator has now been appointed. A legal unit has been set up in the Research Support Centre</p>	SOPs for expenses and account management have been developed and validated with PIs, finance and administrative officers	<p>Project management procedures are now overseen by an administrator who manages the grant and liaises with the PI on the implementation of the project.</p> <p>The financial management system PASTEL is being used but staff need training to upload project data.</p>
Human Resource Management for Research (moderate progress)	<p>HR recruitment policies and procedures for project staff have been reviewed and developed.</p> <p>A new staff development programme (which assessed staff needs and created a training schedule) has been launched</p> <p>On-going meetings are continuing to discuss the need to develop a post-graduate program</p>	<p>A training needs assessment for research support staff has been completed and training plans developed.</p> <p>Procedures for hiring post- doctoral fellows have been established and terms and conditions of service defined.</p>	<p>Project management training courses and cross site visits for administrative staff and early career researchers have strengthened human resource management.</p> <p>Staff needs for personal development have been identified but there is yet to be a plan to address these.</p>	<p>A team has been formed to develop a research scale based on a national scale for Researchers.</p> <p>Post- doctoral programmes are not yet institutionalised</p>
Human Resource Development for Research (moderate progress)	Work is still on-going to plan a formal research-based induction process for project staff and fledgling researchers.	Work has begun towards a comprehensive competency- based capacity building programme for	<p>Progress made towards adaptation and institutionalisation of the doctoral research courses for researchers.</p> <p>An external funder is working with the</p>	<p>The role of HR teams in research staff development has been reviewed and defined.</p> <p>More work needs to be done to build a</p>

	Mentorship training and pairing has taken place.	junior and senior researchers. A research capacity gap validation workshop and a training needs assessment for research staff have been conducted. An annual research training calendar has been developed.	institution to plan personal development and leadership courses.	structured programme of capacity development for new and existing staff in research skills
External Promotion of Research (little progress)	Some training and mentoring in research communication provided by an external agency. Some improvement of the research projects on the College website but more needs to be done to encourage researchers to add their details. The academic board are to incorporate research uptake and the management of research outputs, into the university's centralised research policy.	Research profiles of faculty are being posted on their webpages. The separate research office website is under construction. There are plans for a Knowledge Management Unit to help achieve better visibility of research activities.	The Faculty of Medicine website has been updated with current research projects. The recruitment of a communication officer is planned, who will be responsible for supporting the publicising and dissemination of research activities and uptake.	The institution has a strong external collaborative network including an annual PhD symposium. The planned new research strategy will embed research dissemination and uptake as a high priority area. Work is ongoing to restructure the website
National Research Engagement (little progress)	Mechanisms still need to be established at College and departmental level to promote, monitor and record communication and to share opportunities for engagement between projects. The institution's work with multi-national partners on national research engagement will feed into the	Key national health policy making forums have been targeted with specifically-designed materials. A local travel grant system is being established to support researchers to attend national meetings. A template has been developed for annual research reports, to highlight successes,	Currently participating in national tailored monitoring and evaluation training courses for medical district officers and health supervisors where research results and experience will be shared	Several researchers attend a national research conference in 2015 to disseminate their projects. Promotion of their research into policy and practice is not yet stated in the research strategy as a core element of a researchers' responsibility

	College's research strategy.	failures and opportunities for policy engagement		
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Appendix 1. Terms of Reference: research management support systems: review of capacity in MCDC's partner institutions (RMSS) follow up (Jan 2015-Feb 2016)

Objective

To review progress on RMSS action points since October 2014 and identify and document opportunities for strengthening research support systems and structures within MCDC partner institutions

Methods

Through regular (e.g. quarterly) skype/telephone contact with PIs (or delegated person), document progress against the action plan (written after the initial baseline assessment in October 2014), identify challenges and successes with reasons, and support problem-solving and revisions to the action plan.

Outputs RMSS Follow up

The output will be a report which includes progress and developments since the baseline needs assessment and conclude with a series of prioritised recommendations, short and long-term objectives and a suggested way forward for each institution. A separate report with common needs identified across all four institutions will also be produced.

Appendix 2. Recommendations from the 2014 baseline RMSS overview report

Research Strategies and Policies

- Departments/universities need an accessible research strategy with policies and guidelines to support its implementation
- Electronic research management support systems are needed to track proposals and projects and to document research income and disbursement including overheads

Institutional Support Services and Infrastructure

- The roles and relationships between university level research coordination and 'one-stop shop' research support offices at Faculty or College level need to be clarified
- The strategy for research support offices at Faculty or College level (i.e. should they develop research policies, systems and procedures? provide support for proposal development, contract issues, research training, procurement, project management?) needs to be clarified and mechanisms found for long term sustainability and buy-in by the researchers
- Achieve international laboratory accreditation for the institution's own laboratories; harmonise research laboratories' activities with those of affiliated organisations and establish clear processes and costs for researchers wishing to access these facilities
- Pro-actively plan the future of book libraries in the context of the shift to increasing use of e-resources, including their possible integration with ICT facilities
- Improve incorporation of existing training opportunities (e.g. provided by library and ICT staff) into a core skills training programme for researchers

Supporting Funding Applications

- Set up mechanisms for timely, multi-disciplinary (e.g. finance, legal, ICT, laboratory, library, procurement) input into proposal development
- Set up a formal process for quality assurance and authorisation of proposals before submission and for tracking the outcome of submissions

Project Management and Control

- Establish an electronic research information system to systematically manage and track all aspects of projects including the project agreement, protocol, budgets, funding requirements, accounting and audit, and to maximise recoupment of overheads
- Establish a formal project approval process, including and contract review and sign off
- Encourage researchers to include and budget for experienced administrators to help reduce the time they spend on project administration and to actively include other relevant inputs such as procurement expertise
- Provide joint training in financial management for researchers and finance officers and increase clarity and understanding about their various roles and responsibilities in relation to each other, the institution and the research funders

Human Resource Management for Research

- There is a need to strengthen HR skills and structures so that they can better support researchers and research projects, and to ensure that project staff are university

employees with access to the protection and facilities of the institution where this is not currently the case

- Formal post-doctoral training programmes need to be established to develop and retain talented researchers

Human Resource Development for Research

- Provide a formal induction programme and training needs assessment for new research staff
- Establish an institutional programme of skills training for researchers, possibly through a dedicated unit, that includes non-technical skills such as leadership, supervision and project management

External Promotion of Research

- Review research aspects of the website to ensure information is current and that hyperlinks are working
- Consider setting up a unit specifically to enhance the visibility of institutional and/or departmental research activities and outputs
- Provide training in research communication to improve researchers' ability to write "jargon-free" communications such as press releases and policy briefs

National Research Engagement

- Explore options for improving researchers' ability to impact on national health research priorities and practices
- Universities and departments should systematically document national and international uptake and utilisation of the research findings they have generated