Evidence Building and Synthesis Research Effective Health Care Research Consortium

Annual Report

Implementation Year 3: 15 May 2013 to 14 May 2014

Version: 12 June 2014 (Final)







Cover photo:

Sir Iain Chalmers and Professor Jimmy Volmink at the INDABA meeting in Cape Town during the 20th Anniversary Celebration of the Cochrane Collaboration in May 2013.

1. PROGRAMME DESCRIPTION

Title of RPC:	Effective Health Care Research Consortium
Reference number:	PO 5242
Period covered:	Year 3: 15 May 2013 to 14 May 2014
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Report Date/Version	12 June 2014 (Final)

This Consortium aims to increase evidence-informed decisions to improve health and health care for the poor in low- and middle-income countries (LMIC). We synthesise relevant and reliable research to contribute to a global evidence-base to make health care more effective, improve health, reduce illness and death, and avoid the public and providers wasting money on ineffective health care. We strive to build capacity of groups worldwide to prepare, interpret, and use these reviews.

The contributors are embedded in The Cochrane Collaboration: three lead large research networks in Africa, South Asia, and China; and two lead global teams synthesising research in infectious diseases and health service organization and financing. All have track records in preparing high quality, systematic reviews relevant to LMIC; all are skilled in effective dissemination and know how to influence policy; and all have highly effective working relationships with each other.

The grant enables these groups to invest in implementing the mission of The Cochrane Collaboration; in working together in advancing the science; and collectively helping ensure that the information influences policy. The DFID investment allows considerable innovation and development of good practice within the Consortium and this exerts considerable leverage on The Cochrane Collaboration as a whole, and is a formidable force in influencing policy.

The focus of the Cochrane Reviews are in infectious diseases, particularly malaria, tuberculosis (TB), and diarrhoea; HIV; mental health; reproductive health; and health systems; all relevant to the health of the poor, particularly women, in LMIC. The investment builds on DFID support since 1992 in building the science, the reviews, the networks, and the influence of The Cochrane Collaboration in Africa, Asia, China and globally, through the World Health Organization (WHO).

Lead and partner organisations

UK Lead:	LSTM: Consortium Co-ordination Team, and Cochrane Infectious Diseases Group.
Africa Lead:	South Africa Cochrane Centre & the Stellenbosch Centre for Evidence Based Policy
	Including partners in Nigeria, Kenya, Cameroon
India Lead:	South Asian Cochrane Centre
China partners:	China Evidence Network (Chongqing Medical University and Fudan Medical University)
Norway Lead:	Cochrane Effective Practice and Organization of Care Group

Budget

Actual expenditure by end-DFID financial year 3 was £1,043,184. Quarterly claims submitted to DFID as required within the financial year (annex 2).

2. OVERVIEW OF THE YEAR

Progress and achievements

IMPACT

Global Guidelines

WHO Technical Expert Group on Malaria Chemotherapy: Seventeen Cochrane Reviews used to guide the panel in drafting the new malaria guidelines. Our work helped clarify the evidence of toxicity with dihydroartemisinin-piperaquine (DHAP), interpretation of the large trial of pre-referral treatment, malaria prevention in pregnancy, and in primaquine for preventing transmission.

WHO HIV Consolidated Guidelines: A Cochrane Review on decentralisation of HIV treatment was used by the HIV Guideline Committee to recommend that HIV provision is decentralised to health centre level.

Xpert **TB diagnostic tests:** The updated diagnostic test accuracy (DTA) review was used by WHO in a policy recommendation for TB testing made in October 2013

WHO Guideline on malaria and iron: The WHO has issued a statement that iron can be used to help prevent anaemia in malarial areas on the basis of the Cochrane Review.

Guideline procedures in WHO: The Consortium's evaluation of Guideline Development has helped embed evidence-based guideline development more firmly in the organization.

ACHIEVEMENTS

Outputs

In the period, we published new Cochrane Reviews (23), updated Cochrane Reviews (8), other systematic reviews (4) and other primary research (12). All are free access in low-income countries, and more than half are Open Access (24/47). This is an extraordinary output. If all the entire DFID expenditure is apportioned to the systematic reviews only, this gives a total cost to DFID per review of £30K per review produced during this period.

Capacity development

LMIC first authors: The Consortium contributed to 28 peer-reviewed publications (including Cochrane Reviews) with someone from an LMIC as first author; 18/28 (64%) of these first authors were women.

First time as first authors on Cochrane Reviews: For Cochrane Review authors (irrespective of location)¹ who were first authors for the first time, we report 11 during the period, of which six were women.

Each of these publications is regarded by the UK Higher Education Funding Council as primary research and the current impact factor of *The Cochrane Library* is 5.7. This is higher than the *Malaria Journal* (3.4) or the *International Union against Tuberculosis and Lung Disease* (2.6).

Authors from Africa contributed to reviews used in WHO global guidelines development: A total of eight authors made substantive contributions to reviews that were used in global policy making.

The Centre for Evidence Based Health Care: This Consortium partner in Cape Town has developed a strategic plan, has recruited new staff, and has increased its profile and reputation in the country and region (see Box 6).

¹ This is a new metric. Because of increasing complexity, authors require experience as a member of a Cochrane Review team before they can lead a review.

Opportunities

- We recently published an article highlighting how little <u>Neglected Tropical Diseases</u> (NTDs) had used reliable research methods in determining policies. This was rebutted in the <u>same journal</u>, but at least the debate is in the public domain now. This provides us with an opportunity to seek additional funds for reviews in this area.
- Developing the Kenya Partnership. The emerging leadership in Kenya through the Wellcome Trust/KEMRI Collaboration with Newton Opioyo and Mike English and their request to work with us on the Guidelines Project was a real opportunity. With our "performance by results" there were savings elsewhere and allowed us to bring this team in as a project partner within the Africa Consortium Network, probably moving to full partnership (with a range of funded activities) in Years 4 and 5.

Challenges

Other priorities and lack of senior leadership for the Chongqing Programme led the Consortium to reduce the size of the programme and expectations for Year 3 onwards, but this provided an opportunity to expand the Kenya Programme, particularly with regard to capacity development.

Context

- The Cochrane Collaboration and Wiley have agreed a new publishing contract which facilitates Open Access publishing from November 2013. We have published six Cochrane reviews with Gold Open Access.
- The Cochrane Collaboration, with an estimated 31,000 people in over 100 countries, celebrated the twentieth anniversary in 2013.
- The Cochrane Co-ordinating Editors Board approved the appointment of Dr David Sinclair as Joint Co-ordinating Editor of the Cochrane Infectious Diseases Group (CIDG).

3. LOGFRAME OUTPUTS

OUTPUT 1: High quality, up to date Cochrane or related systematic reviews relevant to improving health outcomes in the poor

	Indicator	Target	Achieved
1.1	New Cochrane Reviews, relevant to the content and delivery of poverty- related health programmes	5	17
1.2	Updated Cochrane reviews, relevant to the content and delivery of poverty-related health programmes	5	4
1.3	Qualitative reviews, scoping reviews, overviews, systematic reviews relevant to the content and delivery of poverty related programmes	2	3

We dramatically over-performed on new Cochrane Reviews. This is because of a tremendous effort to complete a number of outstanding reviews in public health aspects of malaria related to elimination; and in response to the request from the WHO Technical Expert Group on Malaria Chemotherapy. We realised the importance of responding, and we worked extremely hard to deliver. WHO provided a grant and this allowed us to provide travel fellowships for mainly African authors to contribute to this.

- 1. Cochrane Reviews in malaria prevention: we completed reviews in home or community programmes for malaria; mosquito source control one in larviciding and one in use of fish as a larvicide; and mass drug administration. These were all complex reviews, and all but the first used observational data. This introduces complexity in the reviews, in assessing risk of bias, and in interpretation. The teams were :
 - London School of Hygiene and Tropical Medicine worked on the review of mosquito source control (larviciding);
 - Authors from Iraq, Australia and the UK worked on using fish as a larviciding agent;
 - Consortium Partners in South Africa worked on the home and community programmes;
 - Centers for Disease Control in Atlanta worked on a review of mass drug administration.

David Sinclair and Paul Garner in Liverpool mentored the teams with extensive conference calls and advice.

2. Cochrane Reviews in malaria treatment: we completed 17 GRADE tables and related Cochrane Reviews used by the WHO Technical Expert Group on Malaria Chemotherapy in November 2013. This included a review of pyronaridine-artesunate, a drug where the company were looking for early guideline adoption. We also completed a review examining clinical treatment protocols using rapid diagnostic tests (RDTs) compared with presumptive treatment; and we stratified the review of primaquine to prevent *Plasmodium falciparum* transmission by dose of primaquine. The latter analysis is due for publication later this year (see Table 1).

<u>Teams:</u> These were a joint, extensive effort between South Africa, Nigeria, Kenya, Uganda, India, and UK partners. The work was co-ordinated by David Sinclair and Anne-Marie Stephani in Liverpool, with oversight from Paul Garner, with a series of fellowships and regular distance support (see Box 1).

Box 1.

LMIC authors directly contributing to policy

The demand for Cochrane Reviews from the WHO Expert Technical Group in malaria chemotherapy led to an opportunity for mobilising trained authors to contribute to reviews to be used in policy. Through a grant co-ordinated by CIDG, combined with the Core DFID grant, through fellowships and intensive distance coaching, the following authors led or contributed to reviews that directly contributed to global policy:

Uganda	Hasifa Bukirwa	Artesunate plus pyronaridine for treating uncomplicated Plasmodium falciparum malaria
Nigeria	Ekpereonne Esu	Artemether intramuscular injection for severe malaria
The Gambia	Joseph Okebe	Pre-referral rectal artesunate for severe malaria
South Africa	Babalwa Zani	Dihydroartemisinin-piperaquine for treating uncomplicated Plasmodium falciparum malaria
Kenya	Michael Gathu	Artemisinin-napthoquine for uncomplicated malaria
Uganda	John Odaga	Rapid diagnostic tests versus clinical diagnosis for managing people with fever in malaria endemic settings
India	Nithya Gogtay	Artemisinin-based combination therapy for treating uncomplicated Plasmodium vivax malaria.

3. Cochrane Review of decentralisation in HIV treatment: This used observational studies, was produced at the request of the WHO, and was used to make a recommendation and change policy in the WHO Consolidated HIV guideline.

<u>Team:</u> South Africa partner Tamara Kredo co-ordinated this review, between Liverpool and Geneva (Nathan Ford).

- **4. Cochrane Review of ready to use food:** An important review on an expensive, widely used product. Team: led by the South Africa Consortium partner.
- **5.** Cochrane Reviews of mental health interventions: Non-specialist workers interventions for the care of people with substance abuse in LMIC.

<u>Team:</u> led from India Consortium partner.

6. Cochrane Reviews in TB: The Xpert TB review was updated, and several reviews updated or completed in fluoroquinoline drugs, treatment regimens, and prevention.

<u>Team:</u> India Consortium partner led drug reviews; diagnostic test review by the editor, Karen Steingart.

Other important reviews

7. Immediate fluid management for children with severe febrile illness: This review appraised and included all relevant studies, so was able to critically appraise the poor quality studies that led to bolus fluid policies, as well as the FEAST trial, which showed them to be harmful. Published in BMJ Open.

<u>Team:</u> led by Kenya team, with input from UK.

8. The Impact of Pyrethroid Resistance on the Efficacy of Insecticide-Treated Bed Nets against African Anopheline Mosquitoes: Five years in the making, this collaborative effort with Professor Janet Hemingway was published. It shows the need for entomologists to standardise their methods.

<u>Team:</u> day to day co-ordination by Paul Garner, oversight from Janet Hemingway, and led by entomologists from Iran and UK, and a Cochrane statistician.

Implementing the Strategic Plan

The Cochrane Collaboration now has a strategic plan, which includes targets for priority reviews, engagement with policymakers, an emphasis on communication and impact, and translation of reviews. These are all areas which CIDG has established within our own group over the last 10 years.

The CIDG Strategic plan 2011-16 objectives are in Box 2. The principles of the Cochrane Infectious Diseases Group plan also apply to Consortium Partners engaged in Cochrane reviews in other topic areas.

	Box 2
CIDG Strategie	c Objectives 2010-2016
A. Double the number of high impact reviews	D. Develop & implement methods to improve review quality
B. Become world leaders in TB and NTD systematic reviews	E. Obtain funding for diagnostic reviews including DTA reviews
C. Build the best quality authorship teams	F. Double our dissemination outputs and increase uptake

Double number of high impact reviews: Given the global focus on malaria eradication and control, and the impending WHO malaria guidelines, we gave these reviews attention. We made Summary of Findings (SOF) tables compulsory on all reviews, we insist on a logic framework for most reviews, and we expect at least one experienced Cochrane author on review teams.

Build authorship teams: We increased the individual support to review teams, and have found that <u>visiting</u> <u>fellowships</u> of 2 to 4 weeks to work with Consortium centres of expertise, with 13 visiting fellows (see annex 4). This is an effective way of moving reviews forward. We have sought a variety of flexible models to complete reviews through <u>arranged marriages</u>. For example:

- We paired a new author from Ifakara with an experienced author from Cape Town, and both worked together in Liverpool with intense supervision from the Editorial team;
- With Cape Town, we employed a young doctor with Cochrane Review experience to sit alongside Taryn Young in Cape Town to lead the updating of the of community interventions in HIV;
- In managing a review team associated with a multi-million dollar Gates Grant on repellents, we added a public health doctor who has worked in conflict of interest to ensure good practice.

OUTPUT 2: Accessible products for knowledge uptake

	Indicator	Target	Achieved
2.1	Number of "push" products (summary series) (target 1; quantity 1).	1	1
2.2	Number of reviews, training or synthetic technical products commissioned by national decision makers or intermediary organizations or networks ("pull" products)	2	2
2.3	Consumer satisfaction (by survey year 3 or 4)		

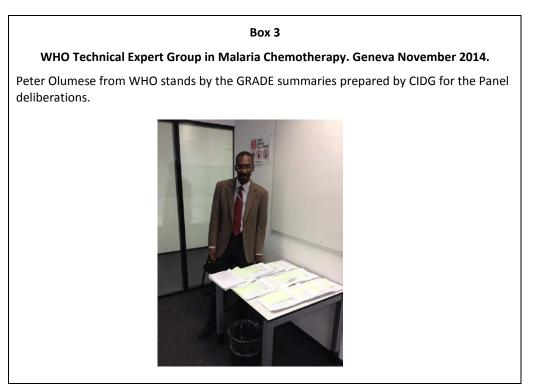
Malaria special collection (2.1)

The Cochrane Library commissioned a special collection of our reviews for <u>malaria prevention and control</u>, and <u>malaria diagnosis and treatment</u>. These are very neat summaries of our reviews, and highlight the recent reviews completed during this year. This was published on World Malaria Day.

Commissioned products (2.2)

WHO Technical Expert Group in Malaria Chemotherapy: At a meeting early in 2013, the WHO outlined the areas they wanted to consider in the malaria guidelines revisions for October 2014. As was expected, a number of the bigger topics being covered were areas where we already had ongoing reviews; others we had not started; and a few needed updating. We therefore mobilised all resources to respond to this request (Table 1).

At the meeting in Geneva, we presented the Malaria Technical Expert Group in Malaria Chemotherapy with a drop box containing 17 summaries of our Cochrane Reviews (abstract and SOF), plus the full review where possible. The summaries were used as the starting point for the discussion on each topic over the two days (Box 3).



DFID resources meant there are trained authors in place who could do these reviews; an intensive technical, editorial and expertise in logistics in Liverpool to then organize these resources and assure delivery of a quality product on time.

1. Diagnosis	
Rapid diagnostic tests versus clinical diagnosis for managing fever in malaria endemic settings	Pre-publication proofs
Rapid diagnostic tests for diagnosing uncomplicated <i>P. falciparum</i> malaria in endemic countries	Published 2012
2. Treatment of uncomplicated P. falciparum malaria	
Dihydroartemisinin-piperaquine for treating uncomplicated P. falciparum malaria	Pre-publication proofs
Artesunate plus pyronaridine for treating uncomplicated <i>P. falciparum</i> malaria	Pre-publication proofs
Artemisinin-naphthoquine for treating uncomplicated <i>P. falciparum</i> malaria	Draft analysis (pre- referees)
Artemisinin combinations: 3 days vs 1 day	GRADE table
Primaquine or other 8-aminoquinolone for reducing P. falciparum transmission	Published 2013
Safety of short course primaquine or other 8-aminoquinolones	Protocol (draft)
Home or community based programs for treating malaria	Published 2013
3. Severe malaria	
Artesunate versus quinine for treating severe malaria	Published 2012
Artemether for treating severe malaria	Draft analysis (pre-
Pre-referral rectal artesunate for severe malaria	referees) Draft analysis (pre- referees)
4. Non-falciparum malaria	
Artemisinin-based combination therapy for treating uncomplicated <i>P. vivax</i> malaria	Published 2013
Primaquine for preventing relapses in people with <i>P. vivax</i> malaria treated with chloroquine	Published 2013
5. Travellers	
Drugs for preventing malaria in travellers	Published 2009
Appraisal of existing chemoprophylaxis recommendations	Non-publication
6. Prevention	
Drugs for preventing the consequences of malaria in pregnant women: SP 3 doses vs 2	Draft update
doses	
Drugs for preventing the consequences of malaria in pregnant women: Any regimen	Draft update
Intermittent preventive treatment of malaria for children living in areas with seasonal transmission	Published 2012
7. Pre-elimination	
Mass drug administration	Pre-publication
	proofs

Kenya Paediatric Association Guideline Panel

In 2010, a group of clinicians and policymakers utilized the GRADE approach for the first time in Kenya during a "Child Health Evidence Week" organized by the KEMRI-Wellcome Trust Research Programme, in partnership with The Ministry of Health, the University of Nairobi, and the Kenya Paediatric Association. On that occasion, 70 participants deliberated the evidence and formulated recommendations around 11 priority topic areas.

Building on that first experience, the same partnership, with some additional methodological input from UK Consortium staff, three guideline panels were convened for priority topics identified by the Kenya Paediatric Association: rapid fluid bolus for children with septic shock; hospital umbilical cord care; and hydroxyurea in sickle cell disease. Academic staff produced evidence summaries based on systematic reviews, for debate and guideline development in April 2014.

This process followed best practice for transparent global guideline development, and, for some participants who had participated in WHO Guideline Panels in Geneva, the discussions were highly informed, the decision making transparent, and was probably better than procedures at global level.

The additional importance is that, in preparation for the panel, the secretariat had prepared a systematic review that included the FEAST trial, allowing, probably for the first time, a national evidence-based guideline to be made that took FEAST into account.

DFID funding made this panel happen by supporting the technical team that encouraged this group to focus on three guidelines (rather than 70 in the previous iteration); by providing input into the systematic review used by the panel; and by helping train the panel, and support the approach used in the three day meeting.

Bespoke training

The Consortium carried out many different courses at the requests of clients. Particularly notable are:

- **PRIMER (Blantyre):** Four day primer on systematic reviews involving face to face teaching with online learning website for follow up; audience of 31 Malawian researchers and national technical policy staff. The course started on a public holiday but there were no absences! (Facilitated by Taryn Young and Paul Garner). This is likely to impact on the capacity in the MoH to use evidence in policy and practice, and in the researchers in Blantyre, who can now interpret reviews much better to inform their research.
- **INTRODUCTION (Maputo):** One day workshop, with 20 Mozambique participants (facilitated by Solange Durao). This was to initiate engagement with researchers and the Ministry of Health.
- **GRADE COURSE (Cape Town):** Two day bespoke workshop for policymakers (facilitated by Tamara Kredo and David Sinclair).
- **GRADE COURSE (Nairobi):** One day bespoke workshop for the Ministry of Health (facilitated by Newton Opoyo). This helps the Ministry use the evidence available from Cochrane reviews with Summary of Findings tables in their decision making.

Other courses were conducted in Nigeria, India, China, Kenya and UK and are documented in Annex 4 (section 6.3).

Review specific dissemination framework

In the last few years we developed the concept of a "review-specific dissemination strategy". This takes the premise that each Consortium review has a different target audience, and thus our dissemination strategy needs to be bespoke for each review or product.

We have contracted the Communications Team in LSTM to provide this service for us. Prior to publication of each new review, the Liverpool Management Team meet with the Media Office and assess the importance of the review and how best to disseminate the findings. This includes a series of routine procedures for every review (which did not happen before) and then special activities that we might carry out, either by the Communication Team or by Consortium staff.

Impact: Consortium partners have all adopted this approach, with successful examples from India (reviews in TB) and South Africa (decentralisation of treatment in HIV review). Cochrane are now investigating how to adapt and implement this framework across the Collaboration as a whole.

Multimedia

There are 20 videos about The Cochrane Collaboration produced for the twentieth anniversary year. Consortium members were featured extensively in these videos, which recount the challenges and experiences of being part of the Collaboration. Box 4 contains links to a) the first video in the series; b) a profile of Consortium partner, Prathap Tharyan; and c) a video that includes Joseph Okebe, an editor with CIDG and supported by the Consortium.





Cochrane Profile: Prathap Tharyan

The Cochrane Collaboration in low- and middle-income countries

The Consortium has fully embraced multimedia to disseminate review findings and activities, particularly in South Africa and India. An impressive range of blogs, effective use of Twitter, and routine use of Facebook is common; and partners are also making videos to disseminate some reviews (see annex 4).

Demand projects in South Africa

BUDDIES: Taryn Young is leading a project in South Africa and in Cameroon with Pierre Ongolo-Zogo exploring health policymakers' needs and then responding to them. The baseline of this project has been completed, and workshops with individuals involved in local decision making have been completed. This was a competitive grant awarded by the WHO (see Box 5).

Box 5. "Buddies" research and policy project

Researchers that listen

This project started with researchers spending 3 months going to policymaker's offices and talking to them to understand their jobs and understand their information and research needs. This is unusual: researchers and authors of Cochrane reviews usually assume that policymakers require their products, and that all they need to do is "educate" the policymakers into using them!

In the next phase the researcher "buddies" with the policymaker to prepare information derived from reliable research that will contribute to their informed decision making.

HEART AND STROKE FOUNDATION: The demand project with the Heart and Stroke Foundation, on healthy diets, is developing further. The systematic review of low carbohydrate diets and their impact on weight loss and cardiovascular health is complete. Impacts include:

- An anticipated press release in July 2014 of the work on low carbohydrate diets in South Africa will increase the public awareness that there is very little evidence these diets are any better for weight loss or avoiding cardiovascular disease than balanced calorie restriction diets.
- Celeste Naude has been made part of the National Obesity Task Force in South Africa.

Demand in Asia

NEPAL NATIONAL HEALTH PLANNING: The South Asia Cochrane Network and Centre participated in National Health Policy Planning Workshops in Nepal, leading to uptake of evidence in national policy.

SRI LANKAN MEDICAL ASSOCIATION: The Centre is being asked for advice on guideline development by Sri Lankan Medical Association, and more recently by the National Council for Medical Research in India in relation to TB, malaria and drug resistance to ensure "National guidelines ...are backed by systematic reviews of studies already done"

COCHRANE COLLOQUIUM: The South Asia Cochrane Centre, part of the Consortium, is the host of the annual Cochrane Colloquium in 2014, entitled 'Evidence informed public health: opportunities and challenges'. This is a phenomenal undertaking, and will:

- Provide huge profile for Cochrane in India.
- Give the South Asian Cochrane Centre and Network gives India, and the work supported by DFID in India through this Consortium, a high profile in Cochrane.

Demand in China

The Consortium supported the Shanghai partner in an EvipNet workshop with national and provincial policymakers with the WHO.

OUTPUT 3: Consortium partner institutions and researchers in the South have increased competence for research

Verifiable indicators

3.1	Indicators of progr	Indicators of progress			
3.2 (editors)	New Cochrane editors from developing countries: none in this period				
	0 new editors		Note: Yemesi Takwoingi appointed to CIDG (from a developing country but currently not based in a developing country institution).		
3.2 (authors)	Cochrane review a	uthors who	are 1 st authors for	the 1 st time	
	Canada:	2	1 Woman ²	1 Man ⁸	
	India:	2	1 Woman ³	1 Man ⁹	
	Nigeria:	1	-	1 Man ¹⁰	
	South Africa:	1	1 Woman ⁴	-	
	Uganda:	1	-	1 Man ¹¹	
	UK:	3	2 Women ⁵⁶	1 Man ¹²	
	USA:	1	1 Woman ⁷	-	
3.3	Grants				
China:	Chongqing University 50,000 RMB. Study on association between environmental risk factors exposure and early puberty timing in children s early adolescence – Support the field study. Granted No: cstc2013jcyjA10001 (1 July 2013 to 30 June 2016)				
South Africa:	SACC/CEHC £30,000	SACC/CEHC £30,000 GESI grant for Chronic Diseases Initiative Reviews.			
South Africa:	CEBHA: ZAR 6,923,16	CEBHA: ZAR 6,923,160 (over 3 years) SAGE project funded by MRC.			
India:	SEACC: £30,000 GESI	SEACC: £30,000 GESI grant for reviews.			
India:		SACC: US\$102,350 Cochrane Collaboration to cover sponsored group registration for participants to attend the Cochrane Colloquium being held by SACC, India; plus an additional £2,000 start up funds.			
υк:	CIDG £31,578. APW project to undertake the retrieval, systematic and the development of GRADE tables based on the agreed areas of review following the Guidelines scoping meeting. WHO, 26 September to 31 October 2013.				

² Wong T, Stang AS, Ganshorn H, Hartling L, Maconochie IK, Thomsen AM, Johnson DW. Combined and alternating paracetamol and ibuprofen therapy for febrile children. Cochrane Database of Systematic Reviews 2013, Issue 10. Art. No.: CD009572. DOI: 10.1002/14651858.CD009572.pub2 ³ Bose A, Kalita S, Rose W, Tharyan P. Intermittent versus daily therapy for treating tuberculosis in children. Cochrane Database of Systematic Reviews 2014, Issue 1. Art. No.: CD007953. DOI: 10.1002/14651858.CD007953.pub2

⁴ Zani B, Gathu M, Donegan S, Olliaro PL, Sinclair D. Dihydroartemisinin-piperaquine for treating uncomplicated Plasmodium falciparum malaria. Cochrane Database of Systematic Reviews 2014, Issue 1. Art. No.: CD010927. <u>DOI: 10.1002/14651858.CD010927</u>

⁵ Tusting LS, Thwing J, Sinclair D, Fillinger U, Gimnig J, Bonner KE, Bottomley C, Lindsay SW. Mosquito larval source management for controlling malaria. Cochrane Database of Systematic Reviews 2013, Issue 8. Art. No.: CD008923. DOI: 10.1002/14651858.CD008923.pub2

⁶ Walshe DP, Garner P, Abdel-Hameed Adeel AA, Pyke GH, Burkot T. Larvivorous fish for preventing malaria transmission. Cochrane Database of Systematic Reviews 2013, Issue 12. Art. No.: CD008090. DOI: 10.1002/14651858.CD008090.pub2

⁷ Poirot E, Skarbinski J, Sinclair D, Kachur SP, Slutsker L, Hwang J. Mass drug administration for malaria. Cochrane Database of Systematic Reviews 2013, Issue 12. Art. No.: CD008846. DOI: 10.1002/14651858.CD008846.pub2

⁸ Ahmed T, Bhuiyan TR, Zaman K, Sinclair D, Qadri F. Vaccines for preventing enterotoxigenic Escherichia coli (ETEC) diarrhoea. Cochrane Database of Systematic Reviews 2013, Issue 7. Art. No.: CD009029. DOI: 10.1002/14651858.CD009029.pub2

⁹ Sharma SK, Sharma A, Kadhiravan T, Tharyan P. Rifamycins (rifampicin, rifabutin and rifapentine) compared to isoniazid for preventing tuberculosis in HIV-negative people at risk of active TB. Cochrane Database of Systematic Reviews 2013, Issue 7. Art. No.: CD007545. DOI: 10.1002/14651858.CD007545.pub2

¹⁰ Adamu B, Abdu A, Abba AA, Borodo MM, Tleyjeh IM. Antibiotic prophylaxis for preventing post solid organ transplant tuberculosis. Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD008597. DOI: 10.1002/14651858.CD008597.pub2

¹¹ Odaga J, Sinclair D, Lokong JA, Donegan S, Hopkins H, Garner P. Rapid diagnostic tests versus clinical diagnosis for managing people with fever in malaria endemic settings. Cochrane Database of Systematic Reviews 2014, Issue 4. Art. No.: CD008998. <u>DOI: 10.1002/14651858.CD008998.pub2</u> ¹² MacGillivray S, Fahey T, McGuire W. Lactose avoidance for young children with acute diarrhoea. Cochrane Database of Systematic Reviews 2013, Issue 10. Art. No.: CD005433. <u>DOI: 10.1002/14651858.CD005433.pub2</u>

Institutional development

The current indicators have not fully captured performance in research development capacity. In both India and South Africa, there has been considerable institutional development (see Box 6 for South Africa).

	Box 6		
Dev	velopment of the Centre for Evidence Based Health Care, Stellenbosch University <u>www.sun.ac.za/cebhc</u>		
2004- 2005	Taryn Young, a Cochrane author, starts work with the South African Cochrane Centre. Taryn obtains a grant to build capacity of Cochrane authors from the Commonwealth/Nuffield fund with Paul Garner and colleagues in Liverpool		
2005- 2010	Taryn partner on RPC Consortium Taryn establishes Clinical Epidemiology Masters at Stellenbosch (2008)		
2010-	Taryn lead partner on RPC Consortium responsible for Africa Cochrane Network		
2011-	Taryn establishes Centre for Evidence-Informed Health Care, Stellenbosch University Two main grants: DFID RPC, and SURMEPI Grant from PEPFAR. About 6 staff.		
2012-	Celeste Naude obtains MRC Fellowship; Policy BUDDIES Grant awarded from WHO; EVISAT TB grant from National WHO Office.		
2013	Stellenbosch Faculty of Medicine and Health Sciences establish Biostatistics Unit within the Centre for Evidence Based Health Care run by Rhoderick Machekano.		
2013-	Charles Wiysonge starts as fulltime Professor and Deputy Director of the Centre. About 15 staff.		

Fellowships

As the complexity of reviews increases, across the Consortium we have moved to bespoke mentorship of author teams, rather than standardised courses.

- **South Africa:** SACC ran a review progress school with five participants in November 2013, and a fellowship programme, with a further five participants.
- UK: CIDG had a substantive fellowship programme to move forward the malaria reviews, with over 13 during the period (see annex 4).

Progress to date

LMIC first authors: The Consortium contributed to 28 peer-reviewed publications (including Cochrane Reviews) with someone from an LMIC as first author; 18/28 (64%) of these first authors were women.

First time as first authors on Cochrane reviews ¹³**:** For Cochrane review authors (irrespective of location) who were first authors for the first time, we report 11 during the period, of which six were women.

Research Integrity Project

After our initial work with Liz Wager (see Box 7), we have simply had insufficient time or human resources to carry out the research integrity work. Cape Town has identified Anke Rohwer to work on this project. From the 14 May for three months, Anke will carry out a literature review, and develop a draft outline to delineate the problems.

Box 7

Pilot investigation of research integrity with Consortium partners: A web-based survey produced 13 responses from 11 institutions.

The most relevant ethical issues were identified as plagiarism, biased reporting, authorship, and inappropriate data analysis and data ownership. Other issues produced a mixed response (ie important to some but unimportant to others). Factors most often identified as contributing to misconduct were lack of supervision and poor supervision. Responses probably depended on whether institutions have an effective research integrity policy. This needs further clarification, but it appears that 7/11 institutions have a research integrity policy. Nearly all respondents consider that training researchers (both junior and senior) and introducing screening (eg for plagiarism) would be helpful. Tutorials are regarded as the most effective method of training.

Liz Wager, 9 August 2012

¹³ It is rare for a person who has not done a Cochrane Review before to be first author. We usually bring new authors in as assistants to gain experience. First authorship shows people have fully internalised the review process, and can handle overall responsibility for the academic integrity of the review. Although a complicated indicator, we think it is a good measure of impact.

4. RESEARCH OUTPUTS IN BRIEF

Published research outputs

Ind	icators and definitions	N	Notes
Α.	Published research outputs	50	New Cochrane Reviews (23) Updated Cochrane Reviews (8) Other systematic reviews (4) Original research (15)
В.	Peer reviewed publications	50	
C.	Peer reviewed publications which comply with DFID Open Access policy	24	New Cochrane Reviews (6) Updated Cochrane Reviews (1) Other systematic reviews (3) Original research (14) Note all Cochrane Reviews published have totally free access in all <u>low-income countries</u>
D.	Peer reviewed publications with a Southern researcher as the primary author	18 women, 10 men Total 28	
E.	Peer-reviewed publications explicitly addressing gender issues or women/girls	4	Mainly reproductive health Cochrane Reviews
F.	Data sets made openly and freely available to external researchers	None	

Technologies

Indicators and definitions	N	Notes
New technologies/products released or, where required, achieving regulatory approval	None	
Technologies halted during development stages	None	

Highlight(s)

A number of systematic reviews have been highlighted through this report. A few articles that have not been mentioned but are important include:

- A survey of adverts in South Africa women's magazines showing health claims of nutrition supplements in adverts that cite research is often erroneous.
- An article mapping out the bold translation plans for *The Cochrane Library*.

5. UPTAKE / ENGAGEMENT WITH BENEFICIARIES

South African Cochrane Centre	Twice invited to the Department of Health to share information on work the Centre is doing. This is in contrast to previous years.
	Chronic Diseases Initiatives in Africa: grant awarded by the Cochrane Collaboration Global Evidence Synthesis Initiative to produce relevant reviews in chronic non-infectious diseases.
Centre for	Heart and Stroke Foundation: low carbohydrate diets*
Evidence Based Health Care, Stellenbosch	BUDDIES project with Western Cape Government-developing dialogue around evidence
Stellehbosch	EVISAT project: with National Departments of Health supplying summaries of TB reviews.
	Celeste Naude invited to join the National Obesity Strategy Consultative Group in National Government
Wellcome/KEMRI	Ministry of Health and Kenya Paediatric Association*
Calabar, Nigeria	Cross River State Guidelines Committee technical support
Cameroon	Rapid responses completed at the request of national policymakers in topics that include malaria vaccine, HIV support, telemedicine, vaccine coverage and giving antivirals to mothers to prevent transmission of HIV: engagement in national tasks forces for maternal and child health, cancer and hospital hygiene.
South Asian	Participating in National Health Sector Plan-III development in Nepal
Cochrane Network and Centre	Nepal Health Research Council
	Sri Lanka Medical Association in Evidence Guidelines
Fudan Medical University	Hosted EvipNet seminar: with Ministry of Health, and the WHO to promote evidence into policy
CIDG	WHO Malaria Guidelines*
	Briefing to Child Investment Fund on deworming
	Presentation at DFID health advisers retreat
* Engagement led to	specific commissioning or production of systematic reviews

6. OUTCOMES AND IMPACTS

Evidence of Demand

Malaria Guidelines use Cochrane review summaries

We delivered over 17 GRADE summaries of systematic reviews with the accompanying structured "summary of findings" to the WHO Technical Expert Group on Malaria Chemotherapy in November 2013. This was a large effort involving over 20 authors, five editors, and the entire Liverpool editorial team solidly working for over nine months (see Table 1 for full list). Impacts include:

- The **Cochrane dihydroartemisinin-piperaquine (DHAP) in uncomplicated malaria** review carefully summarised the adverse ECG effects that concerned the European regulators, and reassured the panel. DHAP is likely to become the most widely used treatment for malaria in LMIC over the coming years.
- The **Cochrane artesunate-pyronaridine in uncomplicated malaria review** summarised the adverse effects on liver enzymes across all the trials of pyronaridine. The panel draft recommendation is not to use this drug except in multidrug resistant areas where no other options are available. This decision is important as the problem of MDR malaria is emerging in Southeast Asia.
- The **Cochrane pre-referral treatment in malaria review** assisted the panel in making sensible recommendations in pre-referral treatment. Severe malaria at primary health care level is a common problem and resolving the ambiguity over pre-referral treatment caused by debate in the literature is likely to help save lives.
- The **Cochrane single dose primaquine to prevent transmission of malaria review** is an update. This demonstrated the lack of direct evidence of the effect of low dose primaquine on gametocyte prevalence and gametocyte infectiousness. This is unlikely to influence the recommendation, however, as there are strong beliefs and indirect evidence that it is effective.

The Cochrane Infectious Diseases Group WHO Collaborating Centre status was renewed for another three years (2014-8), based mainly on our inputs to malaria and the guidelines process.

Other WHO Guidelines Panels

The WHO consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection required Summaries of Systematic reviews prepared by the HIV/Aids Cochrane Group. The Consortium prepared one Cochrane Review of studies examining quality of care and patient outcomes when treatment was delivered through health centres. This was directly used in forming a recommendation decentralising treatment programmes to this level.

Xpert TB diagnostic tests: Karen Steingart, with our support, rapidly updated this review. In October 2013, WHO issued updated policy recommendations.² An excerpt from the policy update states that "Xpert MTB/RIF should be used rather than conventional microscopy, culture and drug susceptibility testing as the initial diagnostic test in adults suspected of having MDR-TB or HIV-associated TB (strong recommendation, high-quality evidence)".

WHO Guideline on malaria and iron: The WHO has issued a statement that iron can be used to help prevent anaemia in malarial areas on the basis of our review (see Table 2).

WHO Guideline Development evaluation published

The evaluation of the WHO guidelines process was published in May 2013, and in under a year has had a staggering 1057 pdf downloads (and 4141 views).

The impact of the evaluation included strengthening of the rigor and adherence to good practice for guidelines development in the WHO. In addition, we know that this was used by the WHO to strengthen other quality control processes and systems beyond guidelines.

Kenya revises fluid guidelines

The Consortium (Kenya and UK partners) worked with the Paediatric Association of Kenya in using explicit, transparent guideline development procedures on three important topics in the country. They made clear recommendations about stopping bolus fluids in shocked children based on the totality of the evidence (including the large trial in Africa evaluating this, known as FEAST), something that the WHO has not yet implemented. The impact of this is:

- On improving the clinical care in Kenya: with reduction in bolus treatments, this will save lives.
- On fluid management in Africa: countries are impatient with WHO for their failure to amend guidance on fluid management after FEAST was published 3 years ago. The leadership shown by the Kenya Group is being picked up by other national bodies: Malawi have recently convened a similar meeting to make their own recommendations.

See: www.idoc-africa.org

Routine deworming policy engagement

The 2012 update of the review evaluating the effect of routine deworming of children continues to have impact:

- The biggest drug trial ever conducted, the DEVTA trial, was published last year, and included both Vitamin A and deworming neither intervention demonstrating benefit. There has been considerable international debate about the Vitamin A findings in particular, and staff of the Consortium wrote the Editorial accompanying in the Lancet.
- 3ie have commissioned a fresh analysis of the controversial Kenya trial by Miguel and Kramer.
- Nepal is one country that has started a staged disinvestment programme in its national plan. We
 know that the Nepal five year health plan is currently being written. We understand that routine
 deworming is going to be phased out, although this may include some surveys initially to
 demonstrate worm loads are light. The current cost of albendazole donation to Nepal is about US\$
 216,000 for shipment (2014 figures), excluding the cost of delivery and administration.

Influencing Cochrane

CIDG has shown leadership in Cochrane in relation to:

- a) Prioritising topics to those that are policy relevant;
- b) Developing a classification system that "retires" reviews when the topic is no longer policy relevant;
- c) Advocating for all reviews to have Summary of Findings Tables;
- d) Demanding reviews are readable;
- e) Demanding Open Access (because of UK government requirements).

This is having some evidence of effects on the Collaboration. For example, in November 2014, the review classification system is being rolled out to the whole of Cochrane.

We have led the way with translations in past years. Now Cochrane has a strategy to develop this <u>world</u> wide across all reviews.

outine iron supplements in malarial areas		WHO Consolidated Guidelines on the use of antiretroviral dru for treating and preventing HIV infection
بع عبي World Health Organization	igiisn França	9.4.3 Decentralizing HIV treatment and care 🏻 🏝 🕈
Addia centre Publications Countries Programmes About WHO		New recommendations
e-Library of Evidence for Nutrition Actions (eLENA)		The following options should be considered for decentralization of ART initiation and maintenance.
Intermittent iron supplementation in children in malaria-endemic regions	Share	 Initiation of ART in hospitals with maintenance of ART in peripheral health facilities (strong recommendation, low-quality evidence).
Iron deficiency is the most common nutritional deficiency in the world. It affects over two billion people and can lead to serious health outcomes such as anaemia and developmental delays. Children need more iron than adults (per kilogram of bodyweight), and are therefore particularly uninerable to iron deficiency. Some studies in young children have suggested that iron supplementation may increase the risk of malaria and death in children living in malaria-endemic regions. However, recent evidence suggests that iron supplementation does not adversely affect children when regular malaria surveillance and treatment services are provided. WHO recommends that in malaria-endemic areas where the prevalence of namemia in preschol (24–25 months) or school-age (5–12 years) children is 20% or higher, the intermittent use of iron supplements as a public health intervention to improve iron status and reduce the risk of anaemia in grevent, diagnose and treat malaria.	Last update 9 May 2014 1 Catego Guidelines approved Review C - More ± interve Implem - Impler interve - More ±	 Initiation and maintenance of ART in peripheral health facilities (strong recommendation, low-quality evidence). Initiation of ART at peripheral health facilities with maintenance at the community level (that is outside health facilities in settings such as outreach sites, health posts, home-based services or community-based organizations) between regular clinical visits (strong recommendation, moderate-quality evidence).
GRC-approved guidelines Intermittent iron supplementation in preschool and school-age children Publication date: 2011 Process for developing nutrition guidelines at WHO <u>V</u> Evidence Systematic reviews used to develop guidelines Intermittent iron supplementation for improving nutrition and development in children under 12 years of age <u>C</u> Related Cochrane reviews – Oral iron supplements for children in malaria-endemic areas	Related - eLEN/ suppli presci childre - Nutriti deficie - Health	

Impact on entomological research

The entomological resistance paper published in January 2014 called for standardisation across entomological studies in drug resistance. This is impacting on methods already:

- LSTM academics are working through IVCC to set up a series of standard operating procedures (SOPs) for experimental hut studies, and the WHO pesticide evaluation team is considering adopting them.
- a working group of the Vector Control Advisory Group (VCAG) set up which met in Liverpool last month to prepare draft guidelines for product claims on resistance.
- a Gates group is also looking at this for evaluation of repellents and is due to report back in the next couple of months. Gates have also commissioned a major piece of work through Bill and Melinda Gates Foundation to standardise and streamline the pesticide regulatory pathways for public health.

HEFC Research Excellence Framework

The Public Health Return for Warwick-Liverpool as part of HEFC Ref included carefully documented case studies of research having an impact on public health over the last 10-15 years. The work of the Consortium with the malaria guidelines panel was submitted, along with two others. The REF assessment will be available at the end of the year.

Gender monitoring

In Year 1 the Consortium Director decided to use **gender monitoring** as a strategy to implement change. We articulated this in our policy of January 2012 and discussed it at our annual meeting with lead partners. There is some evidence that this is having an effect:

- **1.** Nigeria: previously most authors were men. This year, Emmanuel Effa and Martin Meremikwu report that:
 - Three of our five ongoing priority reviews have 50% or more of the authors as women.
 - Three out of the five lead authors on these reviews are women.
 - Three of the four Reviews for Africa Programme (RAP) Interns on the last RAP Nigeria Fellowship were women.
- 2. India: preferential allocation of support for Colloquium participation to women, and have recruited women as senior research scientists. The Director reports, "we have effectively integrated gender-equity into our work culture".
- **3.** Across the Consortium: As noted elsewhere, the Consortium contributed to 28 peer-reviewed publications (including Cochrane reviews) with someone from an LMIC as first author; 18/28 (64%) of these first authors were women.

For Cochrane review authors (irrespective of location) who were first authors for the first time, we report 11 during the period, of which six were women.

7. COSTS, VALUE FOR MONEY AND MANAGEMENT

Performance based funding

In the annual report of 2013 we described out across Consortium monitoring of partner outputs against their plans, our six monthly reports to partners, and the value for money assessment made.

We can now report this has clearly led to changes in the initial allocation of resources across partners. In the light of Chongqing's poor performance, their budget was reduced from:

£70K in 2012/3, to £10K in 2013/4

The funds re-allocated to an emerging strong team in Kenya. There are additional funds for China being held in reserve, but will be contingent on completing existing outputs, and more extensive documentation of how the money will be used.

This would simply not have been possible without the work plans, careful monitoring and feedback to the Chongqing team, as well as to the Dean of the Institution in which this work is carried out. Chongqing still have a contract, but negotiation of this took considerable time. Some resources have been shifted to Shanghai, who had a relatively small budget earlier, but who have a strong leader and good potential.

Contracting communications

We now have a contract with an in-house media team in Liverpool; other partners are drawing on media teams associated with their institutions on an ad hoc basis (Cape Town, Nairobi). In addition, the Cochrane Collaboration Secretariat is considerably strengthening central communication activities, and facilitating groups in taking this forward.

We have found the contract very helpful. We have immediate and responsive service from a high level team with a variety of skills. Every single published review is disseminated through a standard multimedia package, and then special activities are implemented for some reviews.

The contract has dramatically reduced the work load of the Director in providing leadership and supervision for communications work. The contract has saved money:

The cost is only 60% of the previous full time member of staff, a saving of over £17K.

Advances in sustainability

The links to The Cochrane Collaboration, the influences on the Collaboration, and our management philosophy are really enhancing the stability and sustainability of this Consortium.

- 1. The Consortium overlays partners working together as part of The Cochrane Collaboration. This Consortium adds tremendous value to their work, but the Cochrane Centres in India and in South Africa have separate funding, and the organization of the review work is within Cochrane Systems.
- The Consortium Director has purposefully striven to develop and embed principles developed by his leadership and with DFID support into The Cochrane Collaboration, and into our partners in the Collaboration in particular. This is becoming institutionalised in Cochrane procedures, including:
 - **Priority setting** with Cochrane reviews: we were one of the first groups to do this, and now it is included in the Cochrane Strategic plan.
 - **Carrying out reviews in response to WHO guidelines needs.** We highlighted this approach with malaria guidelines, and there is now a broader understanding of this in the Collaboration, and a WHO-Liaison Group, chaired by Lisa Bero, that is cascading this approach out across other groups.
 - **Review specific dissemination strategies.** Developed by our group, this is now being developed into a Cochrane wide policy.
- 2. We have vigorously pursued a highly decentralised approach focusing on independence and capacity development. With partners, we have engaged on specific capacity building, including editor training, dissemination training, and careful mentorship of the key leaders in the Consortium in being responsive to policymakers' needs. This is with the aim to making these aspects of the Consortium more decentralised and self-sustaining. With colleagues in India, we are already exploring partnerships with colleagues of the Director, who is due to retire; and opportunities with iccdr,b in Bangladesh look promising.
- 3. With CIDG, Dave Sinclair is now joint Co-ordinating Editor with Paul, in a truly equal partnership; and CIDG are working hard with an editorial and capacity development strategy with partners in the Centre for Evidence Based health Care in Stellenbosch and in the Kenya KEMRI/Wellcome Unit.

With these developments in sustainability within Cochrane and within the Consortium, we continue to play a senior leadership role for the senior partners, and substantive technical and academic input, advancing the science and ensuring our partners are at the cutting edge of this field, and making a difference with their reviews.

Other value for money issues

As we reported in 2013, international air travel is minimised by use of electronic communications. Air travel is by economy, in line with DFID procedures. We aim for each partner to have internal assessment processes on going to conferences, so that perhaps one person can represent the team at a meeting, rather than have several traveling.

Our savings have allowed us to purchase open access for some Cochrane Reviews.

Outcome monitoring

In our planning for Year 3 with partners, we spent considerable efforts in planning at outcome level, rather than output level. There had been a tendency to deliver at output level only, and we are refocusing efforts of all partners to work at outcome level. We are working with partners on case studies of impact.

8. WORK PLAN & TIMETABLE

Each partner, including CIDG, has a detailed annual work plan as part of their contract from 2013 to 2016. This includes number of Cochrane Reviews to be completed by partner, and details of capacity development and dissemination activities. Below we note briefly our priorities across partners. More detailed work plans can be supplied if required.

Liverpool management office

- Evaluate progress with communications, and plan next steps, including assessing training needs.
- Set up fellowships with other groups.
- We want to identify further national policy initiatives to support (similar to Ghana and Kenya).
- Work with Cape Town on building editorial capacity.
- Work with Nairobi on building synthesis capacity.
- Set up links with iccdr,b.

CIDG

- Develop the priorities in reviews in T.
- Obtain new grants for DTA reviews and NTD reviews.
- Develop new advanced training courses.

South Africa

- Build capacity in meta-analysis in the region.
- Continue to implement work with policymakers at provincial and national level (BUDDIES, conducting relevant reviews, finding and promoting use of relevant reviews).
- Provide support and mentorship to review teams.
- Develop advanced training course in knowledge translation.
- Evaluation of mentorship, fellowship and training activities.

Nigeria

- Deliver on contracted reviews.
- Hold partners meeting.
- Engage at national level in malaria and paediatrics.

Kenya

- Focus on capacity development of existing staff.
- Build on national guidelines work.

India

- Host a successful Cochrane Colloquium.
- Develop links with the Government of India in policy in infectious diseases.

China

• Complete existing contracted reviews.

9. RISK

The Consortium level register is organized around the outcome and outputs related to the log-frame, and the current version (September 2012) was reviewed in 2013, with no change. It is due to be updated in September 2014.

Partners have their own risk registers. We are currently going through a round of updating partner risk registers.

10. MONITORING AND EVALUATION

In the existing Consortium, we report on:

- Demand.
- Outputs that are impacting on policy.
- Emphasis on high quality science
- Improving transparent decision making at global and national levels.
- Innovative, high level, bespoke capacity development.
- Advancing regional decision making within the context of the Consortium.
- Effective routine contracting, value for money assessments, and adjusting spend based on performance.

We welcome discussions with DFID as to whether they need further documentation of these approaches for learning purposes.

We would also welcome considering a dialogue about how we move forward long term.