

Research Priorities for Integrated Community Case Management: *CHNRI exercise by CCM Task Force*

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Evidence Review Symposium**
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Background

- The CCM “Operational Research Group (CCM.ORG) has been in place since 2008 as part of the global CCM Task Force – Karolinska, BU, WHO/TDR, SCF, JHSPH, MC, PSI, BMGF, UNICEF, USAID, MCHIP... (recently chaired by David Marsh)
- Research priorities for iCCM were identified previously by CCM.ORG, but:
 - Involvement in identifying research priorities was limited
 - Research priorities were not systematically evaluated
- Therefore, given current context of program scale-up, during 2013 it was decided to employ the CHNRI methodology to systematically and transparently set research priorities for iCCM, globally

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Our exercise

- Brought on board the Centre for Global Child Health (PGPR) at the University of Toronto to support process
- Aimed to set research priorities for iCCM over the next 10 years
- First time CHNRI method has been used for a delivery method, rather than a condition
- Participants included
 - In-country and regional iCCM experts
 - Bilateral agencies
 - NGOs
 - Academia
- 61 research questions were scored

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CHNRI Methodology

- The CHNRI method is comprised of four stages:
 - i. Context of the problem and evaluation criteria are defined
 - ii. Technical experts generate and rank research questions against proposed criteria
 - iii. Weighting of evaluation criteria is decided through consultation with stakeholders
 - iv. Research priority scores (RPS) and average expert agreement (AEA) are calculated for each research priority

Context of the problem is defined

- We aimed to identify global research gaps and resource priorities for strengthening integrated community case management over the next 10 years

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Evaluation Criteria

- We chose the following four criteria:
 - Answerability
 - Research Feasibility
 - Deliverability
 - Importance/Potential Impact

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Criterion	Sub-questions
Answerability	<ol style="list-style-type: none"> 1. Would you say that the research question is well-framed? 2. Can a single study or a very small number of studies be designed to answer the research question? 3. Do you think that a study needed to answer the proposed research question would obtain ethical approval without major concerns?
Research Feasibility	<ol style="list-style-type: none"> 1. Is it likely that, in the context of interest, there will be sufficient capacity to carry out this research? 2. Is it feasible to provide the training required for staff to carry out the research in the context of interest? 3. Is the cost and time required for this research reasonable within the context of interest?
Deliverability	<ol style="list-style-type: none"> 1. Taking into account the level of difficulty with the delivery of the potential intervention or delivery strategy, would you say that this intervention or delivery strategy will be deliverable within the context of interest? 2. Taking into account the resources available to implement the intervention, would you say that the intervention or delivery strategy would be affordable within the context of interest? 3. Would government capacity and partnership be essential to ensure the intervention or delivery strategy would be sustainable?
Importance/ Potential Impact	<ol style="list-style-type: none"> 1. Will the results of this research fill an important knowledge gap? 2. Are the results from this research likely to shape future planning and implementation? 3. Will the results from this research be relevant to most countries in the context of interest?

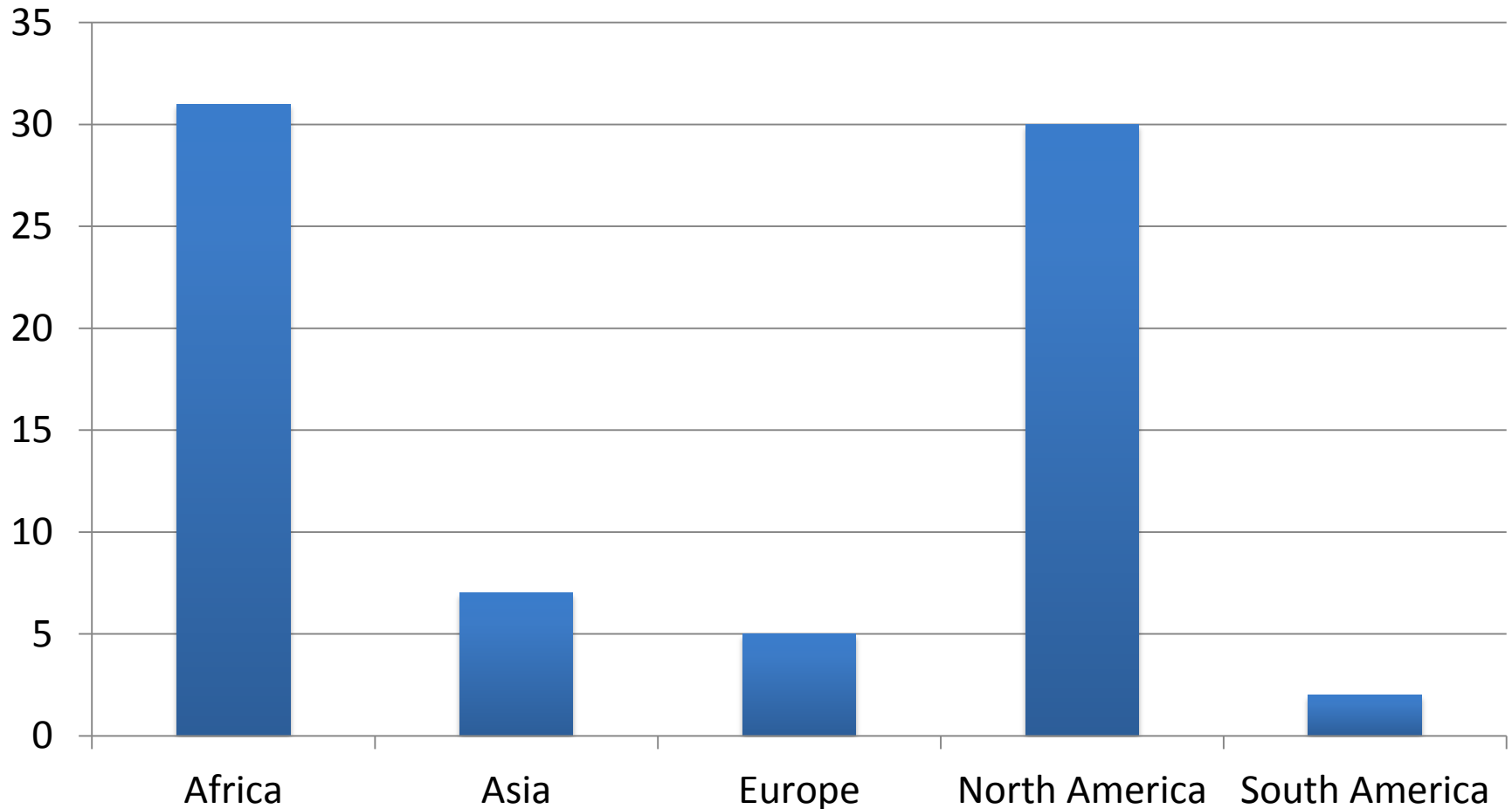
Technical experts generate and score research questions

- 127 experts, nominated by members of the CCM.ORG, were invited to participate – particular effort to solicit participation from country-based participants
- A total of 366 research questions generated
- CHNRI Advisory Group met and removed duplicates, collated and prioritized 366 questions; 61 questions were ultimately sent to experts for scoring
- Out of 127 experts invited, 75 completed the scoring

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Locations of Participants



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RPS and AEA are calculated

- The Research Priority Score (RPS) is the mean score given, across criteria and scorers, for a particular research question
- Average Expert Agreement (AEA) is the proportion of scorers who chose the mode (most common score) for each research question

Top 10 Research Priorities

Rank	Research Question
1	Assess perceptions of beneficiaries and levels of community satisfaction in CHWs capacity to diagnose and treat sick children (with malaria, pneumonia, diarrhoea and severe malnutrition) at the community level.
2	Identify and evaluate strategies for retention and motivation of CHWs.
3	Identify and evaluate strategies for improving referral between communities and health facilities, including referral compliance.
4	Identify determinants of non-use of iCCM services by caretakers and develop strategies to increase the uptake of iCCM.
5	Identify and evaluate new diagnostic tools for improved classification of pneumonia (i.e. different ARI timers, respiratory counting beads, etc.) at the community level that are most appropriate for various cadres.
6	Evaluate the effectiveness of 3-day vs. 5-day oral amoxicillin treatment in Africa.
7	Identify and evaluate innovative strategies to improve community engagement and mobilization for CCM.
8	Evaluate the feasibility, effectiveness and impact of adding community-based infant and young child feeding (ciYCF) counseling skills to the CHW workload.
9	Identify the primary barriers to CHW supervision and develop and evaluate strategies to motivate CHW supervisors to provide continuous support to CHWs.
10	What is the impact of pre-referral antibiotics on treatment outcomes of possible serious bacterial infections?

Results

- Strategies to improve motivation, retention, training and supervision ranked highly
- Strategies to increase uptake of iCCM (through community motivation and satisfaction, identification of determinants of non-use, motivating factors for care seeking behaviour and improving compliance) also ranked highly

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Results

- *“Identifying and evaluating feasible and effective strategies for maintaining CHWs’ quality of case management”* ranked highest in **importance/potential impact criterion**
- *“Identifying new diagnostics for different CHW cadres”* ranked second in the importance/potential impact criterion

Additional analyses

- We separated responses from participants working in organizational HQs or HICs and those working in-country or regionally
- We compared responses using a Spearman's Rho correlation and found a mild to moderate, though statistically significant, positive correlation ($r = 0.35045$, $p < 0.01$)
- **Experts working in LMICs** prioritized research questions that were **mainly operational or delivery-based**, including strengthening CHW supervision, increasing uptake of iCCM services by caretakers and improving community engagement and mobilization
- **Experts from HQs/HICs** prioritized **more technical questions** including evaluating diagnostic tools for different cadres of CHWs and evaluation 3-day vs. 5-day oral amoxicillin treatment in Africa.

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Conclusions

- The results of this exercise should assist funders, researchers, policy-makers and program managers in providing focus for country-based research activities on iCCM that would best inform program scale-up and impact U5MR reduction through the MDGs and beyond

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