

## University of Dundee

### Asking different questions

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1 Unacceptably high rates of adverse outcomes persist for childbearing women and infants,  
2 including maternal and newborn mortality, stillbirth, and short- and long-term morbidity.<sup>1</sup> In  
3 light of the challenges to achieve the UN Sustainable Development Goals, it is timely to re-  
4 consider priorities for research in maternal and newborn health. Are we asking the right  
5 questions?<sup>2</sup> Recent evidence indicates the importance of seeking knowledge beyond the  
6 treatment of complications, to inform better ways of providing sustainable, high quality care,  
7 including preventing problems before they occur.<sup>3</sup>

8 The 2014 publication of the Lancet Series on Midwifery presented a unique  
9 opportunity to generate future areas of inquiry by drawing on the most extensive  
10 examination to date of evidence on the care that all women and newborn infants need  
11 across the continuum from pre-pregnancy, birth, postpartum, and the early weeks of life.<sup>4-6</sup>  
12 The series summarized the evidence base for quality maternal and newborn care ([QMNC](#)) in  
13 a new framework that focuses on the needs of women, infants and families and  
14 differentiates between what care is provided, how it is provided and by whom.<sup>4</sup> These are  
15 concepts that are often confused or ignored in existing studies. Midwifery was identified as a  
16 cost-effective and fundamentally important element of quality care, with the potential to  
17 improve over 50 different maternal and newborn outcomes including mortality and morbidity.  
18 However, there are substantive barriers to proper implementation and integration of  
19 midwifery into health systems.<sup>1</sup>

20 We adapted the Child Health and Nutrition Research Initiative (CHNRI) methodology  
21 to score competing future research topics on quality maternal and newborn care and the  
22 contribution of midwifery to that care.<sup>7</sup> This method has been used to set health research  
23 priorities for infant and childhood conditions,<sup>8-9</sup> reduction of maternal and perinatal  
24 mortality,<sup>2</sup> and preterm birth and stillbirths.<sup>10</sup>

25 A team representing expertise in maternal and newborn health research, including  
26 authors from the Lancet Series on Midwifery, contributors from WHO, UNFPA, the  
27 International Confederation of Midwives, and a representative of/advocate for service users  
28 conducted the work. The team identified 30 research topics based on an analysis of gaps in  
29 the evidence presented in the 2014 Lancet Series on Midwifery. Stakeholders were asked to  
30 consider the potential research topics in terms of their relevance, significance, and potential  
31 future implementation based on five criteria: answerability, community involvement,  
32 sustainability, equity, and maximal impact.<sup>7</sup> The 30 research topics and scoring criteria were  
33 distributed in English/French/Spanish online surveys to 1191 stakeholders, including  
34 constituents of the global Partnership for Maternal, Newborn, and Child Health (PMNCH)  
35 and representatives from all WHO regions. Stakeholders were asked to score each of the 30  
36 research topics as 1.0 (Yes), 0.5 (Informed but undecided answer), or 0 (No) on whether it

37 met each of the five criteria. It was possible to omit a score if a respondent did not feel  
38 confident to decide on a criterion and were considered missing data and not part of the  
39 denominator. Summary scores for each criterion and an overall score were then computed  
40 as the sum of the scores divided by the number of actual scorers.

41 Responses were received from all WHO regions with a total response rate of 23%  
42 (n=271). Most (83%) responses were submitted in English, 13% in French, and 4% in  
43 Spanish. The highest proportion (24%) of those who provided demographic information  
44 came from the Western Pacific Region and the lowest (2.6%) from Southeast Asia. Over a  
45 quarter (26%) came from the academic/research/training institution sector of the PMNCH  
46 constituents. Of the 199 respondents who identified themselves as health professionals, 168  
47 (84%) were in roles associated with maternal and child health.

48 Our goal was to identify the top 10 priorities; however, two scored equally, and so the  
49 top 11 are presented in the Table. The stakeholders prioritized research that would increase  
50 knowledge about ways to prevent complications and reduce unnecessary interventions,  
51 strengthen women's own capabilities, and optimize biological, social, and cultural processes.  
52 They also identified the importance of examining the role of midwifery in providing quality  
53 care for all women and infants. Stakeholders also identified research to improve skilled,  
54 knowledgeable, and compassionate care provided by an appropriate workforce that ensures  
55 timely referral when complications arise. The top two priorities indicate the fundamental  
56 importance of effective family planning services and of quality care to reduce rates of  
57 preterm birth, low birth weight, stillbirth, and perinatal mortality. Evidence indicates that  
58 midwifery care can be a key intervention to improve these outcomes, but more research is  
59 urgently needed to determine clinically and cost-effective models of care in diverse settings,  
60 especially in low resource areas.<sup>11</sup> A focus on new measures and indicators of care  
61 components that have not traditionally been well-examined will enable new benchmarks to  
62 be set for developing systems of care that meet the needs of all women and newborns.

63 The priorities identified reveal broad knowledge domains rather than individual  
64 research questions. Research funding in the past has often targeted management of critical  
65 situations that contribute to high mortality, such as hemorrhage, hypertensive disorders,  
66 obstructed labor, preterm birth, and sepsis.<sup>12</sup> The priorities identified in this study do not  
67 eschew the importance of complication management, but potentially restore balance by  
68 moving toward a focus on prevention. Studying ways of providing such care has the  
69 potential to improve the provision of quality care for all, enhance women's and infants' own  
70 capabilities, and maximize the health promotion potential of midwives. The Global Strategy  
71 for Women's, Children's and Adolescents' Health 2016-2030 is designed to help women,  
72 children, and adolescents survive, thrive, and transform.<sup>13</sup> The concepts of thriving and

73 transforming particularly resonate with the research priorities identified in this exercise.  
74 Importantly, this new knowledge could contribute to achieving Sustainable Development  
75 Goal 3, for healthy lives and well-being for all people. Investment in these innovative  
76 priorities has the potential to enable the rights of women and children to life and to health,  
77 and help women, infants and families to survive and thrive. It would be transformative for  
78 families, communities, and science.

79

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