



Meetings on Postpartum Hemorrhage

“Postpartum hemorrhage: New science and outstanding questions”

&

“Optimizing available technologies for management of PPH at all levels of the health system”

March 17-20, 2014
New York, NY, USA

Gynuity Health Projects, in collaboration with The Bill & Melinda Gates Foundation and USAID, held two meetings on postpartum hemorrhage (PPH) from March 17-20, 2014 in New York City. These meetings convened over 60 researchers, health professionals, and policymakers from 20 different countries to discuss the science and strategies for effective management of PPH.

The first meeting, “**Postpartum hemorrhage: New science and outstanding questions,**” took place from March 17-18 and focused on new or emerging areas of scientific inquiry related to the etiology and management of PPH. The engagement of professionals from diverse backgrounds provided a unique opportunity for consideration of new perspectives on outstanding questions, existing paradigms and the hierarchy of PPH interventions.

MEETING HIGHLIGHTS

Etiology of PPH

- PPH continues to be a leading cause of maternal morbidity and mortality, highlighting the need for new science on etiology
- Uterine atony is widely acknowledged as the main cause of PPH, though little is known about coagulopathy that leads to death
- There appear to be populations with increased bleeding: high altitude, anemia, obesity, genetic factors, coagulation defects
- Different underlying factors associated with increased bleeding may impact efficacy of PPH management strategies

Rethinking PPH and when to act

- There is questionable clinical value in the universal definition of PPH as equal to 500mL blood loss postpartum – this number may not be what helps identify women most in need of intervention
- In settings where access to PPH services is poor, early intervention might be more prudent despite potentially “over-treating” some women
- New approaches for identifying women needing treatment for PPH (i.e., obstetric shock index, time to placental delivery, other clinical signs and symptoms) may enhance timeliness of care and lead to improved triage of the most severe cases

New science on uterotonic management of PPH

- Too much of a good thing: repetitive use of oxytocin during labor may lead to desensitization of oxytocin receptors and can decrease effectiveness of uterotonics when women most need them
- There is a potential role for customized uterotonic care to maximize efficacy: dose alteration may be needed for some women (consider obesity, pre-delivery exposure to oxytocics, etc.)

Adding tools to the arsenal

- New, simple technologies such as tranexamic acid and the bilateral uterine clamp may expand PPH treatment options in a broad range of settings for women who fail to respond to uterotonics
- Reexamination of the contribution of uterine massage and uterine compression for PPH management could also expand options, especially in settings with scarce resources

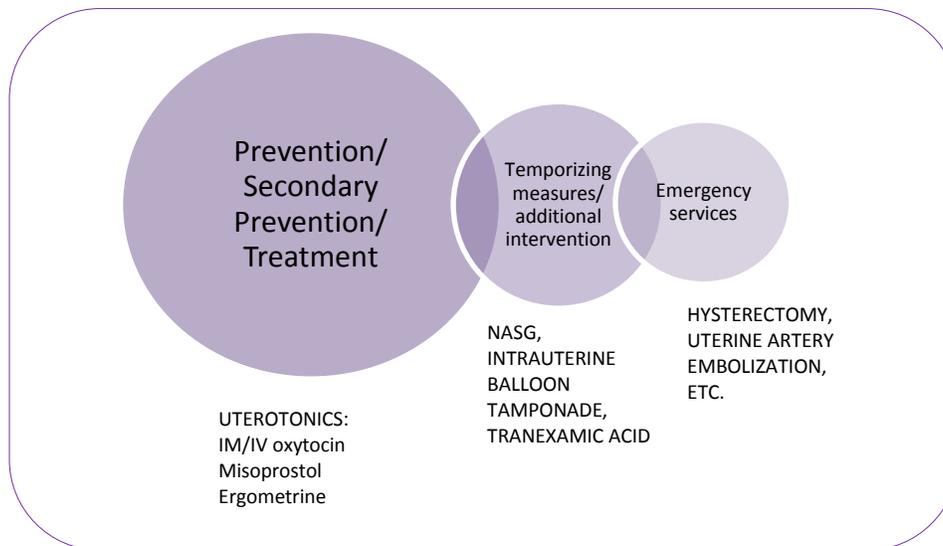
The meeting attendees concluded that there is a need to pay attention to individual variation and to maximize the potential of tools we have at all levels of care. In settings with scarce resources, over-treatment may be preferred to under-treatment. Further, despite much excitement over the potential of new tools and innovative approaches to PPH management, there is a recognized need for clear evidence on the efficacy and safety of these new technologies. Ultimately, a new consensus emerged regarding the importance of integrating the diverse set of tools into a continuum of PPH care in order to move beyond the false dichotomy of prevention vs. treatment approaches in the management of PPH.

The second meeting, “**Optimizing available technologies for management of PPH at all levels of the health system,**” was held on March 19-20. This meeting built on the evidence presented at the science meeting and focused on identifying how scientific knowledge can be translated into comprehensive programs for PPH management. Policy makers and health professionals examined the role of different strategies and technologies in maximizing the availability and quality of simple low cost interventions, particularly at lower levels of care.

Framing the Discussion: Why do women die?

- Case studies of maternal deaths due to hemorrhage highlight systematic gaps in care and treatment
- Women encounter challenges in initiating transfer, delays in receiving higher level care, and poor quality of care at referral facilities
- Missed opportunities to manage PPH exist at many levels of care
 - Options for treating PPH should exist wherever women deliver
 - First-line treatments (i.e., uterotonics, uterine compression, fluids, etc) are often under-utilized at lower levels of care
- Management of PPH = prevention + treatment. There is need for PPH management across all levels of care to move beyond the false dichotomy of prevention and treatment

The discussion of case studies provided the opportunity to follow a woman with PPH through the health system, highlighting how effective programs must think beyond traditional prevention approaches and establish ways to facilitate quality treatment of PPH as quickly as possible as part of basic emergency obstetric care. Universal prophylaxis programs alone are insufficient, as 6-16% of women who receive prophylaxis may still go on to have PPH. The need for a broader focus on the continuum of care in a health system was emphasized, beginning with prevention and first-line treatment measures, advancing to temporizing measures and ending with emergency services. To this end, different program approaches to PPH management were presented, all with an eye towards task-sharing PPH management down to where women deliver.



Program approaches to task share PPH management

- Strategies utilizing uterotonics
 - Universal prophylaxis (misoprostol or IM oxytocin) followed by treatment with 800 mcg sublingual misoprostol if PPH occurs
 - Treatment approaches as “first aid” administered alongside referral
 - Hybrid models, including secondary prevention / early treatment at higher than average blood loss (i.e., around 350-500mls)
- Possibility of incorporating other technologies (still not well-tested in programs) to temporize or treat PPH
 - Uterine balloon tamponade
 - Non-pneumatic anti-shock garment
 - Tranexamic acid
- Precision when assessing blood loss (exact number of CCs) is not necessary
- Greatest benefit will be achieved when a wide range of technologies is integrated into a comprehensive health system

The deliberation of different PPH management strategies, including the advantages and disadvantages of each, underscored the complexity of moving from established science to the practicalities of programming. A one-size-fits-all approach for programs is not sufficient; rather, program strategies will differ by specific contexts. Breakout sessions provided the opportunity to examine different hypothetical settings closely and to discuss optimal technologies, strategies and health system components needed to provide comprehensive PPH care to women.

Consider the context

- Harsh realities pose challenges to establishment of comprehensive PPH management programs in settings with limited resources and infrastructure
- Program priorities and the utility of individual technologies will differ by context
- Creative and flexible thinking is needed when developing programs, guidelines, and training or other resources
- Clear and measurable indicators are essential for establishing benchmarks for treatment quality and evaluating provider practices

The meeting concluded with a look at the road ahead. Alternative models were presented, including the possibility of self-administration of misoprostol for secondary prevention/early treatment. Factors such as treatment delays, drug stock-outs, lack of accountability and other systems issues suggested the need for greater focus on logistics and quality of care related to PPH services. Overall, the meeting reflected the growing evidence and excitement around technologies and devices to manage PPH, but raised cautions regarding program implementation of these management options before a solid evidence base established. Strengthening programs by including multiple approaches, examining ways to improve quality of care in services, and optimizing the use of existing technologies would lead to a greater ability to address the problem of PPH. Ultimately, participants recognized that there is not one road ahead, but multiple pathways to ensuring more comprehensive services of high quality to reduce PPH-related mortality.