Slide	Presentation Notes
1	Today, we will be discussing newborn resuscitation, which I believe is one of the most effective known medical interventions.
2	Discussion outline. This session will also include some hands-on practice with newborn resuscitation.
3	This pie chart shows the leading causes of child mortality under the age of five. What do you think is on this chart?
4	Here are the leading causes of under-five mortality.
5	Today, we will be focusing on neonatal causes of mortality, which is the leading cause of childhood mortality.
6	This pie chart is a little different – this pie chart shows the specific causes of neonatal mortality (or deaths in the first 28 days of life). What do you think these causes are?
7	Here the leading causes of newborn mortality, including perinatal asphyxia, which is our focus today.
8	Importance of newborn resuscitation
9	Which newborns require newborn resuscitation?
10	About 10% of newborns require some assistance to begin breathing at birth. Only about 1% need advanced resuscitation measures to survive. Using very simple steps (which are possible even in resource-limited settings) can address the needs of 99% of newborns. (Advanced resuscitation interventions, such as chest compressions, intubations, epinephrine, are usually not available or appropriate for resource-limited settings.)
11	Depending on the setting, a number of newborn resuscitation algorithms have been developed. These include newborn resuscitation program (NRP; used in the U.S.), Helping Babies Breathe (HBB; used in resource-limited settings), and MNCS (Maternal Newborn and Child Survival; developed at Massachusetts General Hospital for non-literate unskilled birth attendants in resource-limited settings).
12	Background on HBB. PLEASE NOTE: We will be teaching you an algorithm that is purposefully a simplified form of NRP that would still be useful in a resource-limited setting. We elected to do this simplified/modified form of NRP (rather than pure HBB) since you will be soon rotating in U.S. hospitals, and we want this introduction to be consistent with what you will see or use in these U.S. hospitals. HBB and NRP have many similarities, but HBB is structured a little differently than NRP, and we do not want to introduce a potentially confusing structure at this point in your training.
13	Depending on the setting (e.g., high-income country, low-income country, tertiary hospital, rural clinic, etc.), you can choose the most appropriate algorithm. However, in the vast majority of facilities in resource-limited settings, HBB is what you would like to be using. The rare exception would be perhaps a tertiary medical center in the capital city that has newborn ventilators.
14	Example of newborn resuscitation algorithm for MNCS program. (See Nelson BD, et al. Evaluation of a novel training package among frontline maternal, newborn, and child health workers in South Sudan. *International Journal of Gynecology and Obstetrics.* 2012 Nov;119(2):130-5.)

15	The first priority is to prepare prior to every delivery.
16	This slide provides an overview of the steps for newborn resuscitation.
17-18	This slide illustrates the standard steps for newborn resuscitation. We will take each step and discuss and demonstrate each one-by-one. Afterwards, we will split into small groups and let you practice some practice scenarios on some newborn resuscitation mannequins (NeoNatalie).
19-23	Step 1
24-25	After Step 1, you will want to assess the baby
26	Heart rate (HR) can be assessed by stethoscope or by feeling umbilical pulse.
27-28	Continue the assessment by assessing breathing and color. (With regard to color, in recent years, there has been some updates to NRP that suggest there is less urgency to address central cyanosis in the first minute of life.)
29-37	If needed, Step 2
38	Re-assess the baby
39-46	If needed, Step 3. PLEASE NOTE: This step demonstrates chest compressions, which we discussed is rarely used in resource-limited settings. Therefore, the instructor may wish to stop the demonstration at this point and have the students practice scenarios with Steps 1 and 2. However, if time and interest permits, the instructor could emphasize that chest compressions, etc., are rarely taught in these settings, but we are happy to show them to you today so in case you might see them domestically.
47	Reassess the baby
48	In a resource-rich setting, there are other interventions you could also consider.
49-52	Intubation (in resource-rich settings; included here in order to be comprehensive and in case there is student interest)
53	What if resuscitation isn't effective? When can you stop? You can stop after 20 minutes of EFFECTIVE resuscitation.
54-56	Summary of what we discussed today.
57	Now let's practice what we have discussed and demonstrated.