INTERVENTIONS AND POLICIES TO REDUCE CHILD MORTALITY

Topic 2

Evidenced based interventions

- As seen in Topic 1 the causes of child mortality are complex and include underlying and structural causes as well as proximate causes. In Topic 2 we will consider interventions that have been shown to be effective in reducing child mortality.
- An intervention is a biological agent or action that can reduce child morbidity and mortality. *

*How many child deaths can we prevent this year? Lancet,2003.362(9377):p.65-71

- Interventions may aim to prevent or treat a specific cause of mortality (example- malaria prevention or treatment); or to improve health delivery (example – integrated management of childhood illness).
- Other interventions such as poverty alleviation and educational strategies are considered in the SDGs but will not be concentrated on here.

- When thinking about interventions, it is important that you are able to
  - search for relevant literature to provide evidence to support any planned intervention
  - Look at outcomes of studies that have considered interventions
  - Assess how good the evidence is and whether it is relevant to your situation.

Identifying Relevant Literature

- Use a database to identify evidence to show that an intervention is effective.
- Example: To find out evidenced based interventions for malaria in Tanzania using pubmed here
  - In the advanced search enter
    - Tanzania AND
    - Child Mortality AND
    - Malaria
- On the 9.3.16 there were 29 relevant studies

Resource 1:

- Please read 'The Partnership for Maternal, Newborn & Child Health. 2011. A Global Review of the Key Interventions Related to Reproductive, Maternal, Newborn and Child Health' . Available here

This shows a summary of interventions that can help reduce neonatal and childhood mortality. There are references to the papers which give evidence that the intervention works which you can also access. This is a great document to read, but the key interventions for child health are summarised on the next slide…..

Resource 1 continued: Essential interventions for child health from The Partnership for Maternal, Newborn & Child Health. 2011.

- *Promotion and support for exclusive breastfeeding for 6 months*
- *Promotion and support of continued breastfeeding (up to 2 years) and complementary feeding (starting at 2 months)*
- *Prevention and management of childhood malaria (insecticide treated bed nets and case management)*
- *Comprehensive care of children infected with or exposed to HIV*
- *Promote and provide routine immunization plus H.influenzae, meningococcal, pneumococcal, and rotavirus vaccines*
- *Vitamin A supplementation from 6 months of age in Vitamin A deficient populations*
- *Management of severe acute malnutrition*
- *Case management of childhood pneumonia*

Resource 2:

- Read the paper 'Integrated community case management of malaria and pneumonia increases prompt and appropriate treatment for pneumonia symptoms in children under five years in Eastern Uganda' which is available here

This paper looks at a health delivery intervention -extending the role of community workers to include treating pneumonia and malaria, and concludes: "Integrated community management of malaria and pneumonia increases prompt and appropriate treatment for pneumonia symptoms and improves treatment outcomes".

Resource 2 continued

This can be considered an example of Integrated Management of Childhood Illness (IMCI) (click on this WHO site for more information)

IMCI is an integrated approach to child health that focuses on the well-being of the whole child. IMCI aims to reduce death, illness and disability, and to promote improved growth and development among children under five years of age. IMCI includes both preventive and curative elements that are implemented by families and communities as well as by health facilities.

The strategy includes three main components:

Improving case management skills of health-care staff
Improving overall health systems
Improving family and community health practices.

Thinking about evidence and applying it locally – an example

- *You are working in a district hospital in your setting and would like to reduce neonatal mortality. You are keen to use Kangaroo Mother Care but are looking for evidence that this is safe, acceptable and effective and how early it can be used.*
- In the next slide there is a link to a relevant paper for you to read and some questions to help you think about the paper in more detail.

Resource 3:

- Please read the abstract for *Worku B, Kassie A. Kangaroo mother care: a randomized controlled trial on effectiveness of early kangaroo mother care for the low birthweight infants in Addis Ababa, Ethiopia.*

The abstract is available here and all the information you need is available in the abstract and in the notes provided below.

- This is a paper that looks at an intervention to reduce neonatal mortality – Early Kangaroo Mother Care and asks whether it is an effective intervention to improve the care of low birthweight (LBW) neonates in Ethiopia. It is a randomized control trial (RCT) with an intervention group and a control group.
- Some additional information is summarised below in case you have problems accessing the paper.

Resource 3: Additional Information

- All healthy singleton babies, over a period of 1 year, weighing less than 2000g were randomized using a pre-prepared list of random numbers to one of these options and then after stabilisation moved onto KMC:
  - Conventional method of care: routine care including an artificial warming system, oxygen therapy, breast, tube, cup, or mixed feeding.
  - Early KMC with continuous skin to skin contact between the mother and the baby starting during the first 24 h of life.
- Out of the 253 eligible babies 123 were included. 130 were excluded for one of following reasons: mothers were not available (transfer from another hospital or mother too ill), twins (5 sets); or congenital malformation (1)

Resource 3:

Use the following questions to help critically appraise the paper

- Did the trial address a clearly focused issue?
  Does it define:
  - The population studied
  - The intervention group
  - The control group
  - The outcomes considered

Resource 3 continued

- Were the patients randomly selected – what was the process for this?
- Were the groups similar at the beginning of the trial?
- Is there an explanation of what happened to all the patients considered for the trial?
- What are the results?
- Will the results help locally?

Resource 3: answers guide

1. Did the trial address a clearly focused issue? Does it define:
   - The population studied
     - All low birth babies admitted to the hospital over a period of one year
   - The intervention group
     - Early KMC starting within the first 24 hours
   - The control group
     - Standard care until stable and then KMC
   - The outcomes considered
     - The main outcome was to look at neonatal mortality. Mothers were also asked whether the method they had been assigned was acceptable. Additional information was collected on each individual baby. *Some of the information came from the hospital data. The reliability of this would depend on how accurate this data was.*
2. Were the patients randomly selected – what was the process for this?
   - Yes. Using a list of random numbers prepared in advance. The health professionals were aware which treatment babies had been assigned to

Resource 3: answers guide

- Were the groups similar at the beginning of the trial?
  - The demographics were similar however there is statistical difference in the mean birthweight and the mean gestational age with the KMC group being slightly larger and older. This difference is not explained in the discussion and could contribute to the lower mortality rate in the KMC group (though probably not fully explain it).

4. Is there an explanation of what happened to all the patients considered for the trial?
   - Yes – in the results and discussion section though specific numbers not given.
5. What are the results?
   - There is a statistically significant effect with a lower mortality rate and earlier discharge time for the KMC group. More than 95% of mothers reported they were happy to use early KMC.

Resource 3: answers guide

6. Will the results help locally?

- The results show that early KMC is safe for babies in the first 24 hours and in this study showed that the babies had a lower neonatal mortality rate. You will need to consider whether your population of babies and mothers and the levels of care you are able to give in your setting. Do you think the results are transferable

- The results demonstrate that early kangaroo mother care is acceptable for Ethiopian mothers. This acceptability would need to be considered within the your setting