Effective interventions for RMNCH: what works?

Zulfiqar A. Bhutta

Women & Child Health, Aga Khan University & Global Child Health, Sick Kids, University of Toronto

Outline

- Child mortality: interventions that address major causes of mortality
- What works and can be packaged together?
- How can we scale up and implement?

Muslim majority countries



40% of the global burden of stillbirths 40% of the global burden of under 5 deaths

Global causes of child death for 2010



Source: Liu et al. 2012. Global, regional and national causes of child mortality in 2000-2010: an updated systematic analysis. The Lancet. DOI:10.1016/SO140-60560-1.

The Challenge of Diarrhea & Pneumonia



Reduction In Global U5MR By Disease, 2000 to 2010



What can be done?

The Lancet & MNCH Interventions



36 key interventions can make a huge difference if delivered in primary care settings

Consensus on essential RMNCH interventions



- First ever multi-stakeholder consensus on what works for RMNCH
- Led by WHO, Aga Khan University and PMNCH with 40+ friends...
- Based on 3 year review over 50 000 scientific papers
- Packages of care across the continuum of care
- Supports policy making and resource allocation at global and national level



Integrated maternal, newborn and child health packages of care

Clinical	-Screening and management of chronic diseases especially diabetes -Genetic counselling	-Post-abortion care - STI case management	CHILDBIRTH CARE - Emergency obstetric care - Skilled obstetric care and immediate newborn care (hygiene, warmth, breastfeeding) and resuscitation - PMTCT	EMERGENCY NEWBORN AND CHILD CARE - Hospital care of newborn and childhood illness including HIV care - Extra care of preterm babies including kangaroo mother care - Emergency care of sick newborns
Outreach/outpatient	 Multivitamin and folic acid supplementation Family planning Youth development programs Prevention of obesity 	ANTENATAL CARE - 4-visit focused ANC package - IPTp and bednets for malaria - PMTCT	- Pron - Early	NATAL CARE notion of healthy behaviors y detection of and referral for illness a care of LBW babies CT
amily/community	FAMILY AND COMMU -Optimising Adolescent and pre- pregnancy nutrition - Health education and counseling on risk factors prevention	• Counselling and preparation for newborn care, breastfeeding, birth and emergency preparedness	d care is not - New sider clean - Nutr appro including - Seek including - Dang reastfeeding - Whe	hy home care including: born care (hygiene, warmth) rition including exclusive breastfeeding and priate complementary feeding king appropriate preventive care ger sign recognition and cares eeking for illness rehydration salts for prevention of diarrhoea ere referral is not available, consider case gement for pneumonia, malaria, neonatal sepsis
Pre		roved living and working conditions – l cation and female empowerment Pregnancy	Housing, water and sanitation, and Birth	Inutrition



BEFORE & BETWEEN PREGNANCIES



Prevention and treatment strategies for pneumonia and diarrhoea



"The road to inaction is paved with research reports"

Median national coverage of interventions in Muslim Countdown countries based on the most recent measurement since 2006 (%).





Reaching the unreached through community outreach programs

Community based Newborn Care

- Released in 2009
- Focused on home visits for mothers and newborns in the first week of life
 - Early breastfeeding
 - Birth registration
 - Cord and skin care
 - Care of low birth weight infants
 - Birth spacing and maternal counseling
 - Recognition of danger signs & referral
- Few countries have as yet implemented this strategy at scale with data on post-natal visits



Home visits for the newborn child: a strategy to improve survival

unicef 🕲



Optimal management of diarrhea

- Approved in 2003
- Recommend for all cases of acute diarrhea
 - 1. Low osmolarity ORS
 - 2. Oral zinc sulfate 20 mg daily for 14 days
 - 3. Antibiotics in dysentery
- No country has as yet implemented this strategy at scale



CLINICAL MANAGEMENT OF ACUTE DIARRHOEA

Community management of Pneumonia

"CHWs can be trained to assess sick children for signs of pneumonia; select appropriate treatments; administer the proper doses of antibiotics; counsel parents on how to follow the recommended treatment regimen; follow-up sick children; and refer them to a health facility in case of complications.

There is strong scientific and program evidence to support the effectiveness of this approach."



MANAGEMENT OF PNEUMONIA IN COMMUNITY SETTINGS



WHO/UNICEF Joint Statement, "Management of Pneumonia in Community Settings," May 2004

What works in community settings?



Community-Based Intervention Packages for Preventing Maternal Morbidity and Mortality and Improving Neonatal Outcomes

Zohra S Lassi, Batool A Haider, and Zulfiqar A Bhutta March 2010



Impact of Community-based Intervention Packages on Neonatal Mortality

			Intervention Package	Standard Care		Risk Ratio	Risk Ratio
Study or Subgroup	log[Risk Ratio]	SE	Total	Total	Weight	IV, Random, 95% CI	IV, Random, 95% Cl
Azad 2010	-0.105	0.107	15153	14736	5.7%	0.90 [0.73, 1.11]	+
Bang 1999	-0.844	0.238	979	1108	2.9%	0.43 [0.27, 0.69]	
Baqui -home care (a) 2008	-0.415	0.173	2812	1436	4.1%	0.66 [0.47, 0.93]	
Baqui-CARE INDIA 2008	0.0099	0.076	7812	6014	6.5%	1.01 [0.87, 1.17]	+
Baqui-com care (a) 2008	-0.051	0.16	3009	1436	4.4%	0.95 [0.69, 1.30]	+
Bhutta 2008	-0.371	0.116	2932	2610	5.5%	0.69 [0.55, 0.87]	-
Bhutta 2011	-0.163	0.057	12028	11005	7.0%	0.85 [0.76, 0.95]	+
Darmstadt 2010	-0.139	0.118	1322	1231	5.4%	0.87 [0.69, 1.10]	-
Gill 2011	-0.598	0.261	1889	1446	2.5%	0.55 [0.33, 0.92]	
Gloyd 2001	0.1655	0.345	1652	1352	1.7%	1.18 [0.60, 2.32]	
Greenwood 1990	-0.371	0.116	2932	2610	5.5%	0.69 [0.55, 0.87]	-
Jokhio 2005	-0.128	0.061	10093	9432	6.9%	0.88 [0.78, 0.99]	
Kafatos 1991 Kumar 2011 Kumar ENC 2008	20% r	od	uction ir	noon	ata	Imorta	
Kumar ENC 2008	27/01	CU		ITICOL	ala	i moi ta	incy:
Manandhar 2004							
Midhet C-IECC 2011	-0.446	0.077	622	447	6.5%	0.64 [0.55, 0.74]	+
Midhet W-IECC 2011	-0.386		740	448	6.6%	0.68 [0.59, 0.78]	
Tripathy 2010	-0.342		10093		6.5%	0.71 [0.61, 0.83]	
Total (95% CI)			82388	70356	100.0%	0.71 [0.65, 0.79]	•
Heterogeneity: Tau ² = 0.03; Chi ² = 1	77.68 df = 19.0P	·< ۸ ۸۸					
Test for overall effect: Z = 6.66 (P < 0.00001)							<u>0.01 0.1 i 10</u>
	0.00001/					ŀ	Favours experimental Favours contr

Impact of Community-based Intervention Packages on Maternal Morbidity



25% reduction in Maternal Morbidity!

Source: Lassi ZS, Haider BA, Bhutta ZA. Community-based intervention packages for reducing maternal and neonatal morbidity and mortality and improving neonatal. Cochrane Database of Systematic Reviews 2010



Impact of scaling up community based service delivery for diarrhea & pneumonia in Pakistan



What will it take to implement

- **Country ownership** & Political will
- A clear focus on **equity** as a goal
- Evidence based policy making and scaling up interventions in neglected areas such as
 - The first 1000 + days to address early risks through preconception care, IUGR reduction and early nutrition
 - Target **newborn survival** as a priority
 - Linkage with the post-neonatal and young infant care agenda (a clear focus on reducing Diarrhea & Pneumonia deaths)
 - Health systems functionality and **Quality of Care**
- Innovations to accelerate implementation and community demand creation
- Monitoring and **Accountability**
- Changing mindsets

"My greatest challenge has been to change the mindset of people. Mindsets play strange tricks on us. We see things the way our minds have instructed our eyes to see"



Mohammad Yunus (Nobel Laureate 2006)