

Impact of Health Systems Strengthening on Health

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Motivations

- ▶▶ To End Preventable Child and Maternal Deaths, create an AIDS-Free Generation, and Protect Communities against Infectious Diseases, countries need effective health systems that can deliver essential health services to those in need
- ▶▶ Leaders need a sound basis for investing scarce funds in health systems strengthening (HSS) in an environment of competing investment options
- ▶▶ Evidence on HSS impact has been scattered and not widely disseminated

Punchline: HSS interventions produce substantial positive impact on health status and health system outcomes



Objectives

Through a review of published systematic reviews of the literature, identify documented effects of HSS interventions in LMICs on:

▶▶ **Health status**

▶▶ **Health system outcome measures**

- ❖ Service utilization
- ❖ Quality service provision
- ❖ Uptake of healthy behaviors
- ❖ Financial protection



Methods

- ▶▶ Inclusive definition of “health systems strengthening” (WHO, USAID)
 - ❖ No globally recognized list of HSS interventions

- ▶▶ Literature search of published systematic reviews
 - ❖ Primary source of review articles: McMaster University Health Systems Evidence (HSE) online database (www.healthsystemsevidence.org).
 - ❖ Supplemented with targeted searches in PubMed
 - ❖ Review conducted over a 3-month period

- ▶▶ Team of expert reviewers and writers

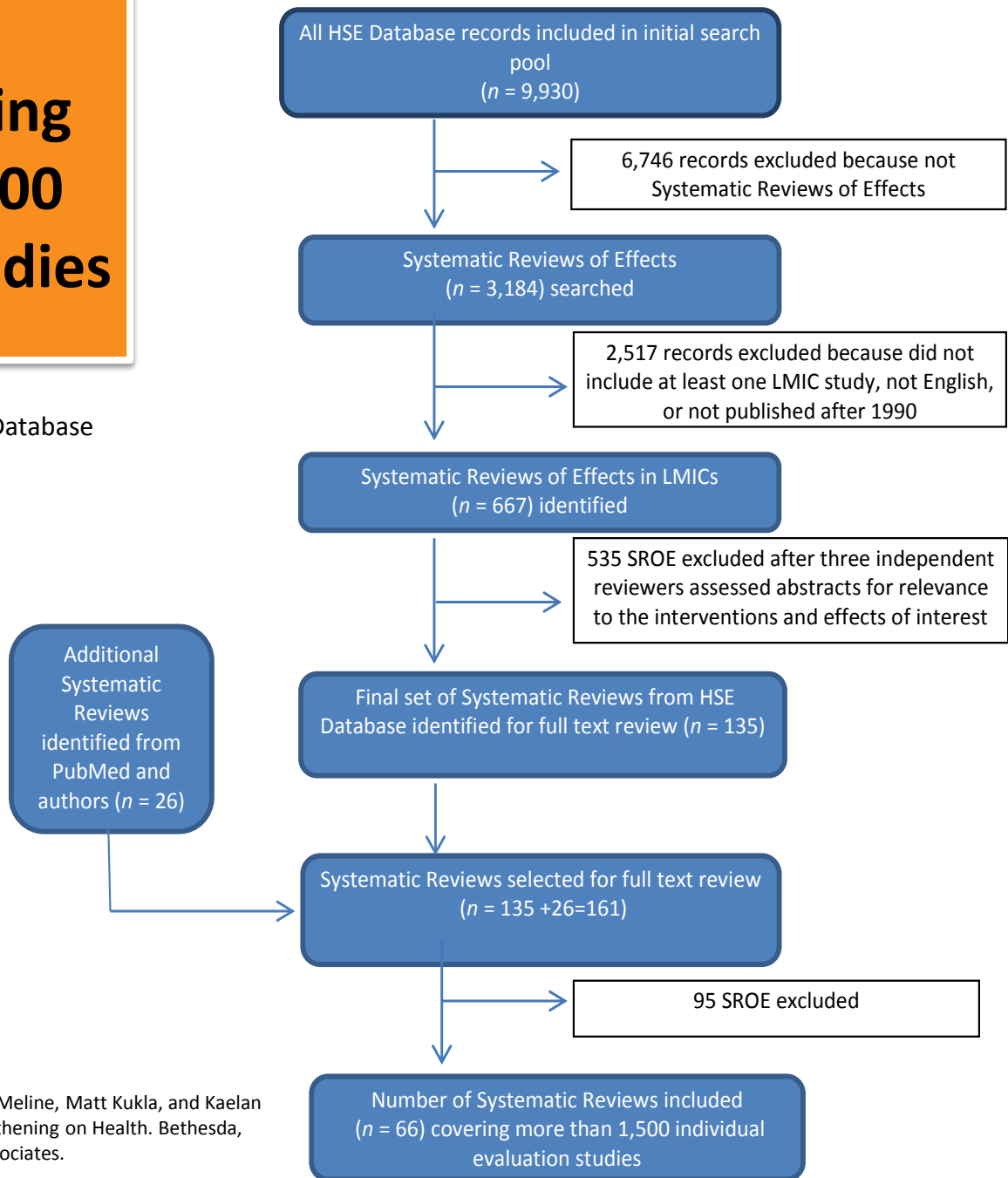


Inclusion criteria

- ▶▶ Systematic reviews only
- ▶▶ Must report effects on one of the health system outcomes previously listed
- ▶▶ Must include data from at least one LMIC
- ▶▶ In English
- ▶▶ Studies conducted since 1990
- ▶▶ Exclude studies focused primarily on medical or pharmacological interventions

66 systematic reviews covering more than 1,500 evaluation studies

*HSE = Health Systems Evidence Database (McMaster University)




Review process: Selected Limitations

- ▶▶ Review included **only** systematic reviews:
 - ❖ Some promising individual studies may not have been included yet in a systematic review
 - ❖ 'Newer' or little-studied interventions may not be included
 - ❖ Absence of a given HSS intervention only reflects an absence of published *systematic reviews* on said intervention
- ▶▶ Did not include 'gray' literature reviews
- ▶▶ Evidence from high-income countries might be relevant
- ▶▶ We cannot conclude anything about "best buys" in HSS as the reviews were not comparative evaluations




KEY FINDINGS:

Documented effects of 13 types of HSS interventions



Summary results: 13 HSS interventions with documented positive effects

- ▶▶ Accountability and engagement interventions
- ▶▶ Conditional cash transfers
- ▶▶ Contracting out service provision
- ▶▶ Health insurance
- ▶▶ Health worker training to improve service delivery
- ▶▶ Information technology supports (m-health/e-health)
- ▶▶ Pharmaceutical systems strengthening initiatives
- ▶▶ Voucher programs
- ▶▶ Service integration
- ▶▶ Strengthening health services at the community level
- ▶▶ Supply-side performance-based financing programs
- ▶▶ Task-sharing/task-shifting
- ▶▶ User fee exemptions



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Accountability and engagement interventions among communities & providers

- ▶▶ In Uganda, a rural community monitoring initiative led to 33% reduction in under-five mortality
- ▶▶ In Nepal, a community-based, participatory health program led to 30% lower neonatal mortality and 80% lower maternal mortality in intervention versus control sites (cluster-randomized evaluation)



Health insurance

- ▶▶ Women enrolled in Ghana's National Health Insurance Scheme were 8 to 11 percentage points less likely to experience infant death
- ▶▶ Four systematic reviews of over 100 studies consistently document positive associations between health insurance coverage, increased utilization of health services, and improved financial protection



Strengthening health services at community level

- ▶▶ Five systematic reviews of programs providing community-based MNH care found these programs resulted in 16% to 38% lower perinatal and neonatal mortality rates
- ▶▶ Ethiopia study found that community worker-based management of malaria in a rural setting reduced all-cause mortality by over 40%



Service integration

- ▶▶ Reviews found that integrating HIV/AIDS services with MNCH and nutrition increased HIV testing and enrollment in HIV services
- ▶▶ Integrating HIV testing and FP services increased contraceptive uptake and condom use, resulted in fewer pregnancies, and increased the percentage of clients tested



Task-sharing / task-shifting

- ▶▶ Three systematic reviews assessing nurse-led provision of ART for HIV found that nurse-led routine HIV/AIDS care is comparable to physician-led care, as measured by patient mortality rates



Supply-side performance-based financing (PBF) programs

- ▶▶ In a Philippines study, PBF was found to reduce wasting rates and improve parent-reported health status among children under-five discharged after diarrhea or pneumonia treatment
- ▶▶ Randomized controlled trials of PBF in Rwanda found a 23% increase in institutional deliveries and significant increases in child preventive care visits



Summary results: Documented effects of 13 HSS interventions

Types of interventions	Health Impacts and Health System Outcome Measures				
	Improved service provision/ quality	Increased financial protection	Increased service utilization	Uptake of healthy behaviors	Reduced morbidity, mortality
Accountability and engagement interventions	x		x	x	x
Conditional cash transfers			x	x	x
Contracting out service provision		x	x		x
Health insurance		x	x		x
Health worker training to improve service delivery	x			x	x
Information technology supports (m-health/ e-health)			x	x	
Pharmaceutical systems strengthening initiatives	x				
Service integration			x	x	x
Strengthening health services at the community level			x	x	x
Supply-side performance-based financing programs			x		x
Task-sharing/task-shifting			x		x
User fee exemptions			x		
Voucher programs		x	x	x	x

THOUGHTS ON MEASURING THE IMPACT OF HEALTH SYSTEMS STRENGTHENING



Distal Causal Relationships, Long Time Horizons

- ▶▶ This type of review may over-emphasize interventions that are more proximal to health outcomes
- ▶▶ Examples of interventions that are “distal” and not highlighted in this review include:
 - ❖ Efforts to strengthen health information and surveillance systems
 - ❖ Improving health workforce training institutions
 - ❖ Enhancing management and leadership capacity of senior officials responsible for health system stewardship
 - ❖ Generating health expenditure data through National Health Accounts



Complexity and Scale

- ▶▶ Many HSS interventions are actually a combination of distinct activities, such as a policy change, capacity building, and a change in how or how many resources are allocated
- ▶▶ Multiple related tasks happening simultaneously make it difficult to isolate the individual factors that influence a health status change
 - ❖ Activities interact / multiple interventions occurring
 - ❖ Multiple avenues for an intervention to work
- ▶▶ “Universality” of systems-level interventions may make it impossible to identify a plausible control group



Compelling Conclusions, Need for More Research

- ▶▶ We should not conclude that “missing” interventions do not produce positive effects, if there is a current lack of evidence
- ▶▶ There is a great need for more/better HSS research and measurement methods
- ▶▶ This review demonstrates that there is **substantial, currently available quantitative evidence linking HSS interventions with health impacts and health system outcomes**
- ▶▶ Innovations and reforms in how and where health services are delivered, how they are organized and financed, and who delivers them can improve the health of populations in LMICs

Thank you

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Conditional cash transfers (CCTs)

- ▶▶ Mexico's *Oportunidades* led to 11% reduction in maternal mortality from 1995 to 2002
- ▶▶ Other evidence from Latin America and Malawi shows CCTs were positively associated with mother-reported health outcomes for children and reduced child malnutrition



Contracting out service provision

- ▶▶ Review of 13 studies found that contracting out nutritional services in Senegal and Madagascar was associated with gains in nutritional outcomes after 17 months
- ▶▶ Severe malnutrition disappeared among children aged 6–11 months, going from 6% to 0%, and moderate malnutrition declined among those aged 6–35 months from 28% to 24%



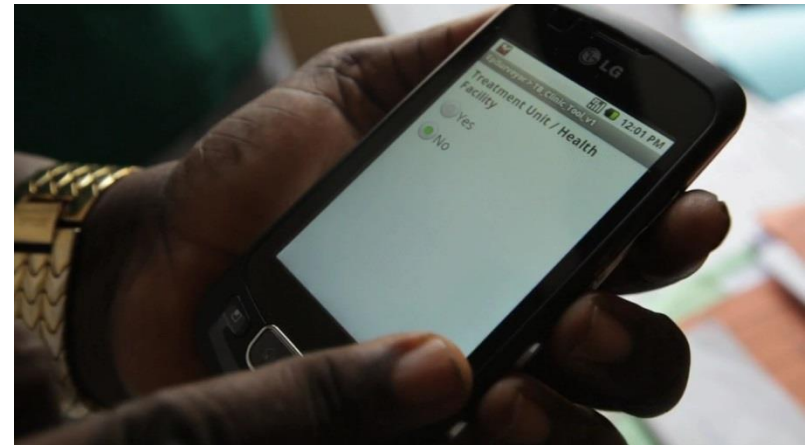
Improving Service Quality through Health Worker Training

- ▶▶ Meta-analysis of randomized controlled trials estimated that training traditional birth attendants, in both developing and developed countries, led to 24% reduction in perinatal deaths 21% reduction in neonatal deaths



Information technology to improve service provision, patient behaviors

- ▶▶ Reviews found evidence that mobile phone reminders, including text messages, increased TB and HIV patients' clinic attendance, TB treatment completion, and HIV treatment adherence



Pharmaceutical Systems Strengthening Initiatives

- ▶▶ Randomized multi-center trial conducted in Cameroon, Nigeria, and Uganda on “community-directed interventions” resulted in significantly increased coverage of vitamin A, anti-parasite drugs, and appropriate malaria treatment



User Fees, User Fee Exemptions

- ▶▶ Systematic reviews found that lowering or removing user fees is associated with increased service utilization, including facility-based deliveries



Voucher programs

- ▶▶ A review of reproductive health voucher programs found two rigorous studies in Uganda and Nicaragua in which such programs reduced the prevalence of sexually transmitted infections
- ▶▶ Reviews have linked voucher programs with increases in facility-based delivery and bed net use during pregnancy

