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[Overview of Reviews]

Delivery arrangements for health systems in low-income countries: an overview of systematic reviews

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ABSTRACT

Background

Delivery arrangements include changes in who receives care and when, who provides care, the working conditions of those who provide care, coordination of care amongst different providers, where care is provided, the use of information and communication technology to deliver care, and quality and safety systems. How services are delivered can have impacts on the effectiveness, efficiency and equity of health systems. This broad overview of the findings of systematic reviews can help policymakers and other stakeholders identify strategies for addressing problems and improve the delivery of services.

Objectives

To provide an overview of the available evidence from up-to-date systematic reviews about the effects of delivery arrangements for health systems in low-income countries. Secondary objectives include identifying needs and priorities for future evaluations and systematic reviews on delivery arrangements and informing refinements of the framework for delivery arrangements outlined in the review.

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Methods

We searched Health Systems Evidence in November 2010 and PDQ-Evidence up to 17 December 2016 for systematic reviews. We did not apply any date, language or publication status limitations in the searches. We included well-conducted systematic reviews of studies that assessed the effects of delivery arrangements on patient outcomes (health and health behaviours), the quality or utilisation of healthcare services, resource use, healthcare provider outcomes (such as sick leave), or social outcomes (such as poverty or employment) and that were published after April 2005. We excluded reviews with limitations important enough to compromise the reliability of the findings. Two overview authors independently screened reviews, extracted data, and assessed the certainty of evidence using GRADE. We prepared SUPPORT Summaries for eligible reviews, including key messages, 'Summary of findings' tables (using GRADE to assess the certainty of the evidence), and assessments of the relevance of findings to low-income countries.

Main results

We identified 7272 systematic reviews and included 51 of them in this overview. We judged 6 of the 51 reviews to have important methodological limitations and the other 45 to have only minor limitations. We grouped delivery arrangements into eight categories. Some reviews provided more than one comparison and were in more than one category. Across these categories, the following intervention were effective; that is, they have desirable effects on at least one outcome with moderate- or high-certainty evidence and no moderate- or high-certainty evidence of undesirable effects.

Who receives care and when: queuing strategies and antenatal care to groups of mothers.

Who provides care: lay health workers for caring for people with hypertension, lay health workers to deliver care for mothers and children or infectious diseases, lay health workers to deliver community-based neonatal care packages, midlevel health professionals for abortion care, social support to pregnant women at risk, midwife-led care for childbearing women, non-specialist providers in mental health and neurology, and physician-nurse substitution.

Coordination of care: hospital clinical pathways, case management for people living with HIV and AIDS, interactive communication between primary care doctors and specialists, hospital discharge planning, adding a service to an existing service and integrating delivery models, referral from primary to secondary care, physician-led versus nurse-led triage in emergency departments, and team midwifery.

Where care is provided: high-volume institutions, home-based care (with or without multidisciplinary team) for people living with HIV and AIDS, home-based management of malaria, home care for children with acute physical conditions, community-based interventions for childhood diarrhoea and pneumonia, out-of-facility HIV and reproductive health services for youth, and decentralised HIV care.

Information and communication technology: mobile phone messaging for patients with long-term illnesses, mobile phone messaging reminders for attendance at healthcare appointments, mobile phone messaging to promote adherence to antiretroviral therapy, women carrying their own case notes in pregnancy, interventions to improve childhood vaccination.

Quality and safety systems: decision support with clinical information systems for people living with HIV/AIDS.

Complex interventions (cutting across delivery categories and other health system arrangements): emergency obstetric referral interventions.

Authors' conclusions

A wide range of strategies have been evaluated for improving delivery arrangements in low-income countries, using sound systematic review methods in both Cochrane and non-Cochrane reviews. These reviews have assessed a range of outcomes. Most of the available evidence focuses on who provides care, where care is provided and coordination of care. For all the main categories of delivery arrangements, we identified gaps in primary research related to uncertainty about the applicability of the evidence to low-income countries, low- or very low-certainty evidence or a lack of studies.

PLAIN LANGUAGE SUMMARY

Effects of delivery arrangements for health systems in low-income countries

What is the aim of this overview?

The aim of this Cochrane Overview is to provide a broad summary of what is known about the effects of delivery arrangements for health systems in low-income countries.

This overview is based on 51 systematic reviews. These systematic reviews searched for studies that evaluated different types of delivery arrangements. The reviews included a total of 850 studies.

This overview is one of a series of four Cochrane Overviews that evaluate health system arrangements.

What was studied in the overview?

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Delivery arrangements include changes in who receives care and when, who provides care, the working conditions of those who provide care, coordination of care amongst different health care providers, where care is provided, the use of information and communication technology to deliver care, and quality and safety systems. How services are delivered can have impacts on the effectiveness, efficiency and equity of health systems. This overview can help policymakers and other stakeholders to identify evidence-informed strategies to improve the delivery of services.

What are the main results of the overview?

When focusing only on evidence assessed as high to moderate certainty, the overview points to a number of delivery arrangements that had at least one desirable outcome and no evidence of any undesirable outcomes. These include the following:

Who receives care and when

- Queuing strategies
- Group antenatal care

Who provides care - role expansion or task shifting

- Lay or community health workers supporting the care of people with hypertension
- Community-based neonatal packages that include additional training of outreach workers
- Lay health workers to deliver care for mothers and children or for infectious diseases
- Mid-level, non-physician providers for abortion care
- Health workers providing social support during at-risk pregnancies
- Midwife-led care for childbearing women and their infants

- Non-specialist health workers or other professionals with health roles to help people with mental, neurological and substance-abuse disorders

- Nurses substituting for physicians in providing care

Coordination of care

- Structured multidisciplinary care plans (care pathways) used by health care providers in hospitals to detail essential steps in the care of people with a specific clinical problem

- Interactive communication between collaborating primary care physicians and specialist physicians in outpatient care
- Planning to facilitate patients' discharge from hospital to home
- Adding a new health service to an existing service and integrating services in health care delivery
- Integrating vaccination with other healthcare services
- Using physicians rather than nurses to lead triage in emergency departments
- Groups or teams of midwives providing care for a group of women during pregnancy and childbirth and after childbirth

Where care is provided - site of service delivery

- Clinics or hospitals that manage a high volume of people living with HIV and AIDS rather than smaller volumes
- Intensive home-based care for people living with HIV and AIDS
- Home-based management of malaria in children
- Providing care closer to home for children with long-term health conditions
- Community-based interventions using lay health workers for childhood diarrhoea and pneumonia
- Youth HIV and reproductive health services provided outside of health facilities



- Decentralising care for initiation and maintenance of HIV and AIDS medicine treatment to peripheral health centres or lower levels of healthcare

Information and communication technology

- Mobile phone messaging for people with long-term illnesses
- Mobile phone messaging reminders for attendance at healthcare appointments
- Mobile phone messaging to promote adherence to antiretroviral therapy
- Women carrying their own case notes in pregnancy

- Information and communication interventions to improve childhood vaccination coverage

Quality and safety systems

- Establishing clinical information systems to organize patient data for people living with HIV and AIDS

Packages that include multiple interventions

- Interventions to improve referral for emergency care during pregnancy and childbirth

How up to date is this overview?

The overview authors searched for systematic reviews that had been published up to 17 December 2016.