South African Initiative for Systematic Reviews on Health Policies and Systems (SAI)

Review priorities survey: Source document on literature search

June 2014

SOUTH AFRICAN MEDICAL RESEARCH COUNCIL

Health Systems Research Unit

Overview

This document serves as a resource for public health policy makers, practitioners and academics who are interested in the use of systematic reviews. It resulted from a survey conducted in July 2013 among said stakeholders from South Africa and other sub-Saharan countries. The survey was conducted to identify four review priorities to be conducted by the *South African Initiative for Systematic Reviews on Health Policies and Systems* (SAI) (http://www.mrc.ac.za/healthsystems/sai.htm). The SAI is a two year project (June 2013 - June 2015) funded by the *Alliance for Health Policy and Systems Research* (AHPSR: http://www.who.int/alliance-hpsr/en/), and is hosted by the Health Systems Research Unit and South African Cochrane Centre at the Medical Research Council of South Africa.

A total of 90 priority systematic review questions were received, and after excluding those not meeting the SAI's inclusion criteria, the remaining questions were categorised into themes. Following a literature search on reviews that have been conducted on those questions, the questions were reduced to 39 and the SAI's Steering Committee and Advisory Group selected from these the four topics on which systematic reviews will be conducted. The four topics are:

- Community-based distribution of non-communicable diseases' medicines in low-and middle income countries and "vulnerable" populations in high income countries.
- The effectiveness of routine health Information system strengthening interventions for the improvement of health systems performance in low - and middle - income countries.
- The impact of m-Health used for communication to improve maternal care at primary healthcare level in low - and middle - income countries.
- An update-review of *Lagarde & Palmer, 2009, The impact of contracting out on health outcomes and use of health services in low and middle-income countries.*

The results of the post survey literature search on existing systematic reviews are presented below. The reviews we found are organised into themes and topics. For each review we offer a citation, URL link and a published abstract.

Systematic reviews offer one important benefit over primary research, in that it synthesises the results of several primary studies. A useful resource in this regard is the PDQ website (http://www.pdq-evidence.org/) that provides quick access to the best evidence for informing decisions about health systems. This document includes reviews conducted by:

- Cochrane Collaboration (http://www.cochrane.org/);
- EPPI Centre (https://eppi.ioe.ac.uk/cms/);
- Campbell Collaboration (http://www.campbellcollaboration.org/); and
- Reviews not affiliated to reviewing institutions.

Where appropriate, project reports are also cited.

Dr. Karen Daniels
Principal Investigator, SAI and Steering Committee Chair

Contents

Theme 1: Quality improvement

Topic: Formative and summative quality improvement

- What impact has formative (e.g. audit, capacity building, HR planning, M&E, routine data) and summative (e.g. accreditation) quality improvement tools had on primary health care delivery (e.g. number of cases treated successfully, decreased waiting time), organisation (e.g. distribution of staff), productivity (e.g. reduction of sick leave) and management (e.g. managers ability to use information management systems) in LMICs?
- How have formative and summative quality improvement initiatives been received by providers, managers and policy makers in LMICs?
- How cost effective are formative and summative quality improvement tools in improving the delivery, organisation and management of primary health care in LMICs?

Literature

Review

Closing the quality gap: Revisiting the state of the science: Vol. 1: Bundled payment: Effects on health care spending and quality

Hussey et al., 2012

Evidence Reports/Technology Assessments, No. 208.1, Agency for Healthcare Research and Quality (US)

http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0049201/

Background

"Bundled payment" is a method in which payments to health care providers are related to the predetermined expected costs of a grouping, or "bundle," of related health care services. The intent of bundled payment systems is to decrease health care spending while improving or maintaining the quality of care.

Aim

To systematically review studies of the effects of bundled payment on health care spending and quality, and to examine key design and contextual features of bundled payment programs and their association with program effectiveness.

Data Synthesis

The included studies examined 20 different bundled payment interventions, 16 of which focused on single institutional providers. The introduction of bundled payment was associated with: (1) reductions in health care spending and utilization, and (2) inconsistent and generally small effects on quality measures. These findings were consistent across different bundled payment programs and settings, but the strength of the body of evidence was rated as low, due mainly to concerns about bias and residual confounding. Insufficient evidence was available to identify the influence of key design factors and most contextual factors on bundled payment effects.

Limitations

Most of the bundled payment interventions studied in reviewed articles (16/20) were limited to payments to single institutional providers (e.g., hospitals, skilled nursing facilities) and so have limited generalizability to newer programs including multiple provider types and/or multiple providers. Exclusion criteria and the search

strategy we used may have omitted some relevant studies from the results. The review is limited by the quality of the underlying studies. The interventions studied were often incompletely described in the reviewed articles.

Conclusions

There is weak but consistent evidence that bundled payment programs have been effective in cost containment without major effects on quality. Reductions in spending and utilization relative to usual payment were less than 10 percent in many cases. Bundled payment is a promising strategy for reducing health spending. However, effects may not be the same in future programs that differ from those included in this review.

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Review

Closing the quality gap: Revisiting the state of the science, Vol. 3: Quality improvement interventions to address health disparities

McPheeters et al., 2012

Evidence Reports/Technology Assessments, No. 208.3. Agency for Healthcare Research and Quality (US)

http://www.ncbi.nlm.nih.gov/books/NBK107315/

Aim

This review evaluates the effectiveness of quality improvement (QI) strategies in reducing disparities in health and health care.

Results

14 primary research studies met criteria for inclusion. All but one of the studies incorporated multiple components into their QI approach. Patient education was part of most interventions (12 of 14), although the specific approach differed substantially across the studies. Ten of the studies incorporated self-management; this would include, for example, teaching individuals with diabetes to check their blood sugar regularly. Most (8 of 14) included some sort of provider education, which may have focused on the clinical issue or on raising awareness about disparities affecting the target population.

Studies evaluated the effect of these strategies on disparities in the prevention or treatment of breast or colorectal cancer, cardiovascular disease, depression, or diabetes. Overall, QI interventions were not shown to reduce disparities. Most studies have focused on racial or ethnic disparities, with some targeted interventions demonstrating greater effect in racial minorities—specifically, supporting individuals in tracking their blood pressure at home to reduce blood pressure and collaborative care to improve depression care. In one study, the effect of a language-concordant breast cancer screening intervention was helpful in promoting mammography in Spanish-speaking women. For some depression care outcomes, the collaborative care model was more effective in less-educated individuals than in those with more education and in women than in men.

Conclusions

The literature on QI interventions generally and their ability to improve health and health care is large. Whether those interventions are effective at reducing disparities

remains unclear. This report should not be construed to assess the general effectiveness of QI in the health care setting; rather, QI has not been shown specifically to reduce known disparities in health care or health outcomes. In a few instances, some increased effect is seen in disadvantaged populations; these studies should be replicated and the interventions studied further as having potential to address disparities.

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Review

The use of three strategies to improve quality of care at a national level

So et al., 2012

Clinical Orthopaedics and Related Researches, 470(4):1006-16. doi: 10.1007/s11999-011-2083-8

http://www.ncbi.nlm.nih.gov/pubmed/21938535#

Background

Improving the quality of care is essential and a priority for patients, surgeons, and healthcare providers. Strategies to improve quality have been proposed at the national level either through accreditation standards or through national payment schemes; however, their effectiveness in improving quality is controversial.

Aim

The purpose of this review was to address three questions: (1) does pay-for-performance improve the quality of care; (2) do surgical safety checklists improve the quality of surgical care; and (3) do practice guidelines improve the quality of care? These three strategies were chosen because there has been some research assessing their effectiveness in improving quality, and implementation had been attempted on a large scale such as entire countries.

Results

Pay-for-performance improved the process and to a lesser extent the outcome of care. Surgical checklists reduced morbidity and mortality. Explicit practice guidelines influenced the process and to a lesser extent the outcome of care. Although not definitively showed, clinician involvement during development of intervention and outcomes, with explicit strategies for communication and implementation, appears to increase the likelihood of positive results.

Conclusions

Although the cost-effectiveness of these three strategies is unknown, quality of care could be enhanced by implementing pay-for-performance, surgical safety checklists, and explicit practice guidelines. However, this review identified that the effectiveness of these strategies is highly context-specific.

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Review

The use of data for process and quality improvement in long term care and home care: a systematic review of the literature

Sales et al., 2012

Journal of the American Medical Directors Association, 13(2):103-13. doi: 10.1016/j.jamda.2011.01.004. Epub 2011
http://www.ncbi.nlm.nih.gov/pubmed/21450243

Background
Standardized resident or client assessments, including the Resident Assessment Instrument (RAI), have been available in long term care and home care settings (continuing care sector) in many jurisdictions for a number of years. Although using these data can make quality improvement activities more efficient and less costly, there has not been a review of the literature reporting quality improvement interventions using standardized data.
Aim
To address 2 questions: (1) How have RAI and other standardized data been used in process or quality improvement activities in the continuing care sector? and (2) Has the use of RAI and similar data resulted in improvements to resident or other outcomes?
Results
Key word searches identified 713 articles, of which we excluded 639 on abstract review because they did not meet inclusion criteria. A further 50 articles were excluded on full-text review, leaving a total of 24 articles. Of the 24 studies, 10 used a defined process improvement model, 8 used a combination of interventions (multimodal), 5 implemented new guidelines or protocols, and 1 used an education intervention.
Conclusions
The most frequently cited issues contributing to unsuccessful quality improvement interventions were lack of staff, high staff turnover, and limited time available to train staff in ways that would improve client care. Innovative strategies and supporting research are required to determine how to intervene successfully to improve quality in these settings characterized by low staffing levels and predominantly nonprofessional staff. Research on how to effectively enable practitioners to use data to improve quality of care, and ultimately quality of life, needs to be a priority.

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Review
Measuring team factors thought to influence the success of quality improvement in primary care: a systematic review of instruments
Brennan et al., 2013
Implementation Science, 8:20; doi:10.1186/1748-5908-8-20
http://www.implementationscience.com/content/8/1/20

Background
Measuring team factors in evaluations of Continuous Quality Improvement (CQI) may provide important information for enhancing CQI processes and outcomes; however, the large number of potentially relevant factors and associated measurement instruments makes inclusion of such measures challenging. This

review aims to provide guidance on the selection of instruments for measuring team-level factors by systematically collating, categorizing, and reviewing quantitative self-report instruments.

Results

We identified 192 potentially relevant instruments, 170 of which were analyzed to develop the taxonomy. Eighty-one instruments measured constructs relevant to CQI teams in primary care, with content covering teamwork context (45 instruments measured enabling conditions or attitudes to teamwork), team process (57 instruments measured teamwork behaviors), and team outcomes (59 instruments measured perceptions of the team or its effectiveness). Forty instruments were included for full review, many with a strong theoretical basis. Evidence supporting measurement properties was limited.

Conclusions

Existing instruments cover many of the factors hypothesized to contribute to QI success. With further testing, use of these instruments measuring team factors in evaluations could aid our understanding of the influence of teamwork on CQI outcomes. Greater consistency in the factors measured and choice of measurement instruments is required to enable synthesis of findings for informing policy and practice.

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Review

Pay-for-performance in the United Kingdom: Impact of the quality and outcomes framework: A systematic review

Gillam et al., 2012

Ann Fam Med, 10:461-468. doi:10.1370/afm.1377

http://www.annfammed.org/content/10/5/461.full.pdf

Aim

Primary care practices in the United Kingdom have received substantial financial rewards for achieving standards set out in the Quality and Outcomes Framework since April 2004. This article reviews the growing evidence for the impact of the framework on the quality of primary medical care.

Results

Quality of care for incentivized conditions during the first year of the framework improved at a faster rate than the pre-intervention trend and subsequently returned to prior rates of improvement. There were modest cost-effective reductions in mortality and hospital admissions in some domains. Differences in performance narrowed in deprived areas compared with non-deprived areas. Achievement for conditions outside the framework was lower initially and has worsened in relative terms since inception. Some doctors reported improved data recording and teamwork, and nurses enhanced specialist skills. Both groups believed that the person-centeredness of consultations and continuity were negatively affected. Patients' satisfaction with continuity declined, with little change in other domains of patient experience.

Conclusions
Observed improvements in quality of care for chronic diseases in the framework were modest, and the impact on costs, professional behavior, and patient experience remains uncertain. Further research is needed into how to improve quality across different domains, while minimizing costs and any unintended adverse effects of payment for performance schemes. Health care organizations should remain cautious about the benefits of similar schemes

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Review
The impact of vouchers on the use and quality of health care in developing countries: A systematic review
Brody et al., 2013
Global Public Health: An International Journal for Research, Policy and Practice, Volume 8, Issue 4
http://www.tandfonline.com/doi/abs/10.1080/17441692.2012.759254

Background
One approach to delivering healthcare in developing countries is through voucher programmes, where vouchers are distributed to a targeted population for free or subsidised health care. Using inclusion/exclusion criteria, a search of databases, key journals and websites review was conducted in October 2010. A narrative synthesis approach was taken to summarise and analyse five outcome categories: targeting, utilisation, cost efficiency, quality and health outcomes. Sub-group and sensitivity analyses were also performed. A total of 24 studies evaluating 16 health voucher programmes were identified.
Results
The findings from 64 outcome variables indicates: modest evidence that vouchers effectively target specific populations; insufficient evidence to determine whether vouchers deliver healthcare efficiently; robust evidence that vouchers increase utilisation; modest evidence that vouchers improve quality; no evidence that vouchers have an impact on health outcomes; however, this last conclusion was found to be unstable in a sensitivity analysis.
Conclusions
The results in the areas of targeting, utilisation and quality indicate that vouchers have a positive effect on health service delivery. The subsequent link that they improve health was found to be unstable from the data analysed; another finding of a positive effect would result in robust evidence. Vouchers are still new and the number of published studies is limiting.

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Review
The impact of non-physician clinicians: do they improve the quality and cost-effectiveness of health care services?
Laurant et al., 2009
Med Care Res Rev, Dec;66(6 Suppl):36S-89S. doi: 10.1177/1077558709346277

http://www.ncbi.nlm.nih.gov/pubmed/19880672

Background
Health care is changing rapidly. Unacceptable variations in service access and quality of health care and pressures to contain costs have led to the redefinition of professional roles. The roles of non-physician clinicians (nurses, physician assistants, and pharmacists) have been extended to the medical domain. It is expected that such revision of roles will improve health care effectiveness and efficiency.
Conclusions
The evidence suggests that non-physician clinicians working as substitutes or supplements for physicians in defined areas of care can maintain and often improve the quality of care and outcomes for patients. The effect on health care costs is mixed, with savings dependent on the context of care and specific nature of role revision. The evidence base underpinning these conclusions is strongest for nurses with a marked paucity of research into pharmacists and physician assistants. More robust evaluative studies into role revision are needed, particularly with regard to economic impacts, before definitive conclusions can be drawn.

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Review
The impact of health information technology on the quality of medical and health care: a systematic review
Jamal et al., 2009
Health information management journal, Vol 38 No 3, ISSN 1833-3583 (Print) ISSN 1833-3575 (Online)
http://esvc000274.wic061u.server-web.com/members/journal/HIMJ_38_3_2009/Jamal_et_al_Impact_of_HI_technology.pdf

Aim
The aim of this study was to systematically review the published evidence of the impact of health information technology (HIT) or health information systems (HIS) on the quality of healthcare, focusing on clinicians' adherence to evidence-based guidelines and the corresponding impact this had on patient clinical outcomes.
Background
The review covered the use of health information technologies and systems in both medical care (i.e. clinical and surgical) and other areas such as allied health and preventive services. Studies were included in the review if they examined the impact of Electronic Health Record (EHR), Computerised Provider Order-Entry (CPOE), or Decision Support System (DS); and if the primary outcomes of the studies were focused on the level of compliance with evidence-based guidelines among clinicians. Measurements considered relevant to the review were either of changes in clinical processes resulting from a change of the providers' behaviour, or of specific patient outcomes that demonstrated the effectiveness of a particular treatment given by providers.

Results
Of 23 studies included in the current review, 17 assessed the impact of HIT/HIS on health care practitioners' performance. A positive improvement, in relation to their compliance with evidence-based guidelines, was seen in 14 studies. Studies that included an assessment of patient outcomes, however, showed insufficient evidence of either clinically or statistically important improvements.
Conclusions
Although the number of studies reviewed was relatively small, the findings demonstrated consistency with similar previous reviews of this nature in that wide scale use of HIT has been shown to increase clinician's adherence to guidelines.

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Review
Health care interventions to improve the quality of diabetes care in African Americans
Ricci-Cabello et al., 2013
Diabetes care, Vol 36
http://care.diabetesjournals.org/content/36/3/760.full.pdf+html

Aim
The main goals of this systematic review were to identify and characterize health care–led interventions aimed at improving the quality of care in African Americans with diabetes.
Conclusions
This systematic review identified 31 health care–promoted interventions specifically aimed at improving the quality of diabetes care in African Americans, most of which targeted patients. The evidence gathered showed that interventions targeting African American diabetic patients, which mainly included culturally adapted DSM education, reduced the percentage of HbA1c by 0.8%. A lower level of evidence was observed in relation to interventions targeting the health care system and multiple-target interventions, although available evidence suggests that they can be effective and have the potential to improve diabetes care and health outcomes.

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Review
Role of quality improvement in prevention of inappropriate transfusions
Mohandas et al., 2011
Qual Manag Health Care, Oct-Dec; 20(4):298-310. doi: 10.1097/QMH.0b013e3182315d22
http://www.ncbi.nlm.nih.gov/pubmed/21971027

Aim
Many different methods are used to manage surgical bleeding and reduce transfusion. Techniques vary by institution, resulting in inconsistent outcomes. We reviewed the current literature on the quality and costs of transfusions, focusing on prevention and management of transfusions during surgery, and provide recommendations on future directions for quality improvement (QI).

Results
A variety of bleeding management (BM) techniques were identified, with multiple studies suggesting that algorithms combining pre-, peri-, and postoperative interventions have the greatest potential to minimize transfusions. Most studies assessing the economic impact of BM interventions excluded resources beyond blood acquisition cost and longer-term complications, which may underestimate transfusion costs and bias estimates of the cost-effectiveness of interventions. Despite consensus on avoiding inappropriate transfusions, little agreement exists on optimal use of interventions.
Conclusions
Multifaceted algorithms show promising results. Future QI should focus on reducing practice variation via evidence-based guidelines for effective use of BM interventions.

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Review
Organizational change to transfer knowledge and improve quality and outcomes of care for patients with severe mental illness: a systematic overview of reviews
Franx et al., 2008
Can J Psychiatry, May;53(5):294-305
http://www.ncbi.nlm.nih.gov/pubmed/18551850

Aim
To provide a comprehensive overview of the research on organizational changes aimed at improving health care for patients with severe mental illness and to learn lessons for mental health practice from the results.
Results
A total of 21 reviews were included. Among these, 17 had reasonably good methodological quality. Almost all reviews included or intended to include randomized controlled trials (RCTs), 6 reviews did not identify studies that met eligibility criteria. Multidisciplinary teams and integrated care models had been reviewed most frequently (a total of 15 reviews). In most studies, these types of changes showed better outcomes in terms of symptom severity, functioning, employment, and housing, compared with conventional services. Different results were found on cost savings. Other types of organizational changes, such as changing professional roles or introducing quality management or knowledge management, were much less frequently reviewed. Very few reviews looked at effects of organizational changes on professional performance.
Conclusions
There is a fairly large body of evidence of the positive impact of multidisciplinary teams and integrated care changes on symptom severity, functioning, employment, and housing of people with severe mental illness, compared with conventional services. Other strategies, such as changes in professional roles, quality or knowledge management, have either not been the subject of systematic reviews or have not been evaluated in RCTs. There is still a lack of insight in the so-called black box of change processes and the impact of change on professional performance.

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Review

An assessment of cost, quality and outcomes for five HIV prevention youth peer education programs in Zambia

Burke et al., 2011

Health Educ. Res, doi: 10.1093/her/cyr103

http://her.oxfordjournals.org/content/early/2011/11/01/her.cyr103.full.pdf+html

Background

Youth peer education (YPE) programs are a popular strategy for HIV prevention in sub-Saharan Africa. However, research on the effectiveness of YPE programs is scarce and the wide variation in programs makes it difficult to generalize research findings.

Aim

Measuring quality and comparing program effectiveness require the use of standardized instruments. In this study, we used standardized evidenced-based instruments to compare program inputs, quality, outputs and outcomes for five YPE programs in Zambia.

Results and Conclusions

The study revealed wide variation in the cost, quality and outcomes of YPE programs. Higher quality programs were associated with greater exposure and more referrals of youth to the clinics. However, one of the two highest quality programs achieved twice as many exposure and referral outcomes at about half the cost per peer educator of the more expensive program. Results indicate that the standardized instruments used in this study are useful for assessing and comparing program attributes among diverse YPE programs.

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Review

The creating incentives and continuity leading to efficiency staffing model: A quality improvement initiative in hospital medicine

Chandra et al., 2012

Mayo Clin Proc. Apr 2012; 87(4): 364–371. doi: 10.1016/j.mayocp.2011.12.015PMCID: PMC3498415

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3498415/

Aim

The review aimed to determine the effect of a hospitalist-developed, continuity-centered hospitalist staffing model on patient outcomes and resource use.

Methods

The Creating Incentives and Continuity Leading to Efficiency (CICLE) staffing model was conceived by a group of hospitalists who sought to improve continuity of inpatient care. Using a retrospective, observational, pre-post study design, we compared patient-level data for all discharges from our hospitalist service from 6 months after implementation of the CICLE staffing model (September 1, 2009, through February 28, 2010; n=1585) with data from those same months in the prior

year (September 1, 2008, through February 28, 2009; n=1808). We used the number of unique hospitalists who documented an encounter during the admission as a measure of continuity of care. Length of stay and hospital charges per admission constituted the measures of resource use.

Results

The odds of having a single hospitalist for the entire hospitalization nearly doubled under the CICLE model (odds ratio, 1.87; 95% confidence interval, 1.60-2.2; P<.001). Mean length of stay decreased 7.5% (from 2.92 before to 2.70 days after initiation of the model; P<.001). Mean hospital charge per admission decreased 8.5% (from $7224.33 before to $6607.79 after initiation of the model; P<.001). Thirty-day readmission rates were not substantially affected by the CICLE model (15.0% before to 17.3% after initiation of the model; P=.08).

Conclusions

Improved continuity of care among hospitalists was associated with reductions in length of stay and lower health care costs. These benefits were realized without substantially affecting readmission rates. The staffing model can be achieved by reorganizing existing hospitalists and may not require the hiring of additional personnel. The CICLE staffing model is a viable option for hospitalist groups that are aiming to diminish resource use and improve quality of care.

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Review

Electronic health records in four community physician practices: Impact on quality and cost of care

Welch et al., 2007

J Am Med Inform Assoc, 14:320 –328. DOI 10.1197/jamia.M2125

http://jamia.bmj.com/content/14/3/320.full.pdf+html

Aim

To assess the impact of the electronic health record (EHR) on cost (i.e., payments to providers) and process measures of quality of care.

Results

The implementation of the EHR had a modest positive impact on the quality measure of guideline adherence for hypertension and hyperlipidemia, but no significant impact for diabetes and coronary artery disease. No measurable impact on the short-term cost per episode was found. Discussions with the study practices revealed that the timing and comprehensiveness of EHR implementation varied across practices, creating an intervention variable that was heterogeneous.

Conclusions

Guideline adherence increased across practices without EHRs and slightly faster in practices with EHRs. Measuring the impact of EHRs on cost per episode was challenging, because of the difficulty of completely capturing the long-term episodic costs of a chronic condition. Few practices associated with the study MCO had implemented EHRs in any form, much less utilizing standardized protocols.

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Review

Improving quality and efficiency of facility-based child health care through Integrated Management of Childhood Illness in Tanzania

Bryce et al., 2005

Health Policy Plan, Dec;20 Suppl 1:i69-i76

http://heapol.oxfordjournals.org/content/20/suppl_1/i69.full.pdf+html

Aim

To assess the effect of Integrated Management of Childhood Illness (IMCI) relative to routine care on the quality and efficiency of providing care for sick children in first-level health facilities in Tanzania, and to disseminate the results for use in health sector decision-making.

Results

IMCI training is associated with significantly better child health care in facilities at no additional cost to districts. The cost per child visit managed correctly was lower in IMCI than in routine care settings: $4.02 versus $25.70, respectively, in 1999 US dollars and after standardization for variations in population size.

Conclusions

IMCI improved the quality and efficiency of child health care relative to routine child health care in the study districts. Previous study results indicated that the introduction of IMCI in these Tanzanian districts was associated with mortality levels that were 13% lower than in comparison districts. We can therefore conclude that IMCI is also more cost-effective than routine care for improving child health outcomes. The dissemination strategy for these results led to adoption of IMCI for nationwide implementation within 12 months of study completion.

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Review

Effectiveness of structural quality in quality assurance - A review

Lungen et al., 2002

Fortbildung und Qualitatssicherung, 96(2):101-114

http://www.ncbi.nlm.nih.gov/pubmed/11921606 (The article is in German.)

Background

Minimum standards as a part of structural quality are often discussed for the sake of improving the quality of medical care. Before implementing obligatory standards, however, the effectiveness of the demands made should be evaluated.

Results

A minimum caseload, the use of guidelines and continuing medical education show positive effects on the outcome of care. The other items show mixed study results or are not measurable in a sense that would make their results of use for quality improvement. Without evidence of effectiveness, minimum standards should not be introduced. Despite the inhomogeneity of the methods used by the studies, minimum caseloads for some diagnoses, the use of guidelines and well-organised continuing medical education are to be recommended.

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Review
Cross sectoral quality assurance
Wörz et al., 2009
Health Policy Monitor, October
http://www.hpm.org/de/a14/3.pdf

Summary
German health care is known for its rather strict and historically evolved separation between the various sectors. A new cross sectoral quality assurance (QA) system aims to overcome this fragmentation. After a European wide tender, the Joint Federal Committee commissioned the AQUA-Institute with implementing a new QA system. From 2010, AQUA will also take over the task of external QA in the hospital sector, which so far was the responsibility of the Federal Office for Quality Assurance (BQS).

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Review
External quality assurance for hospitals
Hesse et al., 2004
Health Policy Monitor, 12
http://www.hpm.org/de/b4/1.pdf

Summary
In November 2004 the Federal Office for Quality Assurance (BQS) issued its Quality Report 2003, a report on external quality assurance that published full and specific outcome data for all German hospitals authorized to take part in public health care. This report, the first of its kind in any country, presents the assessment of 33 defined surgical and diagnostic measures against quality indicators for medical and nursing procedures.

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Review
Rapid assessment of Schistosoma mansoni: The validity, applicability and cost-effectiveness of the Lot Quality Assurance Sampling method in Uganda
Brooker et al., 2005
Tropical Medicine and International Health, 10(7):647-658
http://www.ncbi.nlm.nih.gov/pubmed/15960703

Background
Rapid and accurate identification of communities at highest risk of morbidity from schistosomiasis is key for sustainable control. Although school questionnaires can effectively and inexpensively identify communities with a high prevalence of Schistosoma haematobium, parasitological screening remains the preferred option for S. mansoni.

Aim

To help reduce screening costs, we investigated the validity of Lot Quality Assurance Sampling (LQAS) in classifying schools according to categories of S. mansoni prevalence in Uganda, and explored its applicability and cost-effectiveness.

Results

In identifying schools with prevalences > or =50%, computer simulations showed that LQAS had high levels of sensitivity and specificity (>90%) at sample sizes <20. The method also provides an ability to classify communities into three prevalence categories. Field testing showed that LQAS where 15 children were sampled had excellent diagnostic performance (sensitivity: 100%, specificity: 96.4%, positive predictive value: 85.7% and negative predictive value: 92.3%). Screening using LQAS was more cost-effective than mass treating all schools (US$218 vs. US$482/high prevalence school treated). Threshold analysis indicated that parasitological screening and mass treatment would become equivalent for settings where prevalence > or =50% in 75% of schools and for treatment costs of US$0.19 per schoolchild.

Conclusions

We conclude that, in Uganda, LQAS provides a rapid, valid and cost-effective method for guiding decision makers in allocating finite resources for the control of schistosomiasis.

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Review

Audit and feedback: Effects on professional practice and healthcare outcomes

Ivers et al., 2012

Cochrane Database of Systematic Reviews, (6):1-229

http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD000259.pub3/pdf

Background

Audit and feedback is widely used as a strategy to improve professional practice either on its own or as a component of multifaceted quality improvement interventions. This is based on the belief that healthcare professionals are prompted to modify their practice when given performance feedback showing that their clinical practice is inconsistent with a desirable target. Despite its prevalence as a quality improvement strategy, there remains uncertainty regarding both the effectiveness of audit and feedback in improving healthcare practice and the characteristics of audit and feedback that lead to greater impact.

Aim

To assess the effects of audit and feedback on the practice of healthcare professionals and patient outcomes and to examine factors that may explain variation in the effectiveness of audit and feedback.

Main results

We included and analysed 140 studies for this review. In the main analyses, a total of 108 comparisons from 70 studies compared any intervention in which audit and feedback was a core, essential component to usual care and evaluated effects on professional practice. After excluding studies at high risk of bias, there were 82

comparisons from 49 studies featuring dichotomous outcomes, and the weighted median adjusted RD was a 4.3% (interquartile range (IQR) 0.5% to 16%) absolute increase in healthcare professionals' compliance with desired practice. Across 26 comparisons from 21 studies with continuous outcomes, the weighted median adjusted percent change relative to control was 1.3% (IQR = 1.3% to 28.9%). For patient outcomes, the weighted median RD was -0.4% (IQR -1.3% to 1.6%) for 12 comparisons from six studies reporting dichotomous outcomes and the weighted median percentage change was 17% (IQR 1.5% to 17%) for eight comparisons from five studies reporting continuous outcomes. Multivariable meta-regression indicated that feedback may be more effective when baseline performance is low, the source is a supervisor or colleague, it is provided more than once, it is delivered in both verbal and written formats, and when it includes both explicit targets and an action plan. In addition, the effect size varied based on the clinical behaviour targeted by the intervention.

Conclusions

Audit and feedback generally leads to small but potentially important improvements in professional practice. The effectiveness of audit and feedback seems to depend on baseline performance and how the feedback is provided. Future studies of audit and feedback should directly compare different ways of providing feedback.

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Review

Critical incident audit and feedback to improve perinatal and maternal mortality and morbidity

Pattinson et al., 2005

Cochrane Database of Systematic Reviews, (4):1-15

http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD002961.pub2/pdf

Background

Audit and feedback of critical incidents is an established part of obstetric practice. However, the effect on perinatal and maternal mortality is unclear. The potential harmful effects and costs are unknown.

Aim

Is critical incident audit and feedback effective in reducing the perinatal mortality rate, the maternal mortality ratio, and severe neonatal and maternal morbidity?

Data collection and analysis

No suitable trials were found.

Conclusions

The necessity of recording the number and cause of deaths is not in question. Mortality rates are essential in identifying problems within the healthcare system. Maternal and perinatal death reviews should continue to be held, until further information is available. The evidence from serial data clearly suggests more benefit than harm. Feedback is essential in any audit system. The most effective mechanisms for this are unknown, but it must be directed at the relevant people.

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Review
The effect of audit and feedback on immunization delivery: A systematic review
Bordley et al., 2000
American Journal of Preventive Medicine, 18(4):343-50
http://ac.els-cdn.com/S0749379700001264/1-s2.0-S0749379700001264-main.pdf?_tid=0aec4838-bb0b-11e3-b975-00000aab0f02&acdnat=1396514365_d6ed6cf6bf07245dc58f55c2131ddb1b

Aim
To assess the effective of audit and feedback (A&F) on immunization delivery by health care professionals.
Results
The search process resulted in 60 citations; 44 were fully reviewed and 15 met eligibility criteria. Five were randomized trials. Twelve of the fifteen studies found that A&F, alone or in combination with other interventions, were associated with improvements in immunization rates. The magnitude of the effect varied from −17% to +49% change. Study design heterogeneity precluded statistical pooling of study results.
Conclusions
The evidence available from published studies suggests that A&F alone may be an effective strategy for improving immunization rates. The number of well-conducted studies is small, and the effect is variable. Additional well-designed studies are needed to identify the independent effects of A&F, optimal format and frequency of A&F, and to examine its long-term effect on provider immunization practices and costs.

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Review
Audit and feedback as a clinical practice guideline implementation strategy: A model for acute care nurse practitioners
Dulko et al., 2007
Worldviews on Evidence Based Nursing, 4(4):200-209
http://onlinelibrary.wiley.com/doi/10.1111/j.1741-6787.2007.00098.x/abstract

Background
The transfer of research evidence into practice and changing provider behavior is challenging, even when the advantages are strong. Despite the availability of supportive care clinical practice guidelines (CPG), consistent integration of these principles into practice has not been achieved. The failure of dissemination strategies has been identified as a key barrier to successful implementation. A potentially effective approach to facilitating the transfer of research evidence into practice is audit and feedback. Audit and feedback is a summary of provider performance over a specified period of time, with or without recommendations to improve practice.

Rationale
Cancer pain is an optimal symptom to examine when studying the effect of an audit and feedback intervention. It is a common condition with important consequences, established CPG are available, measurable outcomes are defined, and there is potential for improvement in current practice. Acute care nurse practitioners (NPs) are often responsible for overseeing and directly managing symptoms such as pain and are well positioned to implement CPG and study the effects of adherence to guidelines on patients' pain outcomes.
Conclusions
Recognized in medicine as a valuable intervention to improve healthcare quality, audit and feedback is a strategy that has not been widely studied in nursing. Although cancer pain cannot always be entirely eliminated, appropriate use of available therapies can effectively relieve pain in a majority of patients. This article is a review of the literature on audit and feedback as a professional practice change strategy and indicates a model for operationalizing the intervention.

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Review
Audit filters for improving processes of care and clinical outcomes in trauma systems
Evans et al., 2009
Cochrane Database of Systematic Reviews, Issue 4. Art. No.: CD007590. DOI: 10.1002/14651858.CD007590.pub2
http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007590.pub2/pdf

Background
Traumatic injuries represent a considerable public health burden with significant personal and societal costs. The care of the severely injured patient in a trauma system progresses along a continuum that includes numerous interventions being provided by a multidisciplinary group of healthcare personnel. Despite the recent emphasis on quality of care in medicine, there has been little research to direct trauma clinicians and administrators on how optimally to monitor and improve upon the quality of care delivered within a trauma system. Audit filters are one mechanism for improving quality of care and are defined as specific clinical processes or outcomes of care that, when they occur, represent unfavorable deviations from an established norm and which prompt review and feedback. Although audit filters are widely utilized for performance improvement in trauma systems they have not been subjected to systematic review of their effectiveness.
Aim
To determine the effectiveness of using audit filters for improving processes of care and clinical outcomes in trauma systems.
Results
There were no studies identified that met the inclusion criteria for this review.
Conclusions
We were unable to identify any studies of sufficient methodological quality to draw conclusions regarding the effectiveness of audit filters as a performance improvement intervention in trauma systems. Future research using rigorous study

designs should focus on the relative effectiveness of audit filters in comparison to alternative quality improvement strategies at improving processes of care, functional outcomes, and mortality for injured patients.

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Topic: Community level approaches to maintain accountability

- What impact has community level approaches to maintaining health systems accountability (e.g. local health committees, community health advisory structures) had on improving health services quality?

Literature

Review

A systematic review of the literature for evidence on health facility committees in low- and middle-income countries

McCoy et al., 2011

Health Policy Plan, doi: 10.1093/heapol/czr077

http://heapol.oxfordjournals.org/content/early/2011/12/08/heapol.czr077.full.pdf+html

Background and Aim

Community participation in health (CPH) has been advocated as a health-improving strategy for many decades. CPH comes in many different forms, one of which is the use of health facility committees (HFCs) on which there is community representation. This paper presents the findings of a systematic literature review of: (a) the evidence of HFCs' effectiveness, and (b) the factors that influence the performance and effectiveness of HFCs.

Results

The review found some evidence that HFCs can be effective in terms of improving the quality and coverage of health care, as well as impacting on health outcomes. There are plenty of experiences and lessons in the literature which decision makers and managers can use to optimize HFCs.

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Review

Community accountability at peripheral health facilities: a review of the empirical literature and development of a conceptual framework

Molyneux et al., 2012

Health Policy Plan, doi: 10.1093/heapol/czr083

http://heapol.oxfordjournals.org/content/early/2012/01/24/heapol.czr083.full.pdf+html

Background and Aim

Public accountability has re-emerged as a top priority for health systems all over the world, and particularly in developing countries where governments have often failed to provide adequate public sector services for their citizens. One approach to strengthening public accountability is through direct involvement of clients, users or the general public in health delivery, here termed 'community

accountability'. The potential benefits of community accountability, both as an end in itself and as a means of improving health services, have led to significant resources being invested by governments and non-governmental organizations. Data are now needed on the implementation and impact of these initiatives on the ground.

Results

Mechanisms covered included committees and groups (n¼19), public report cards (n¼1) and patients' rights charters (n¼1). In this paper we summarize the data presented in these papers, including impact, and factors influencing impact, and conclude by commenting on the methods used, and the issues they raise.

Conclusions

We highlight that the international interest in community accountability mechanisms linked to peripheral facilities has not been matched by empirical data, and present a conceptual framework and a set of ideas that might contribute to future studies.

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Review

Managerial supervision to improve primary health care in low- and middle-income countries
Bosch-Capblanch et al, 2011
Cochrane Database of Systematic Reviews, Issue 9. Art. No.: CD006413. DOI: 10.1002/14651858.CD006413.pub2
http://apps.who.int/rhl/reviews/CD006413.pdf

Background and Aim

To review the effects of managerial supervision of health workers to improve the quality of PHC (such as adherence to guidance or coverage of services) in low- and middle-income countries. Supervision includes site visits from a central level of the health system, plus at least one supervisory activity. Nine studies met the inclusion criteria.

Results

Nine studies met the inclusion criteria: three compared supervision with no supervision, five compared enhanced supervision with routine supervision, and one study compared less intensive supervision with routine supervision. Most outcomes were scores relating to providers' practice, knowledge and provider or user satisfaction. The majority of the outcomes were measured within nine months after the interventions were introduced. In two studies comparing supervision with no supervision, small benefits on provider practice and knowledge were found. For methods of enhancing supervision, we identified five studies, and two studies of frequent supportive supervision demonstrated small benefits on workers performance. The one study examining the impact of less intensive supervision found no evidence that reducing the frequency of visits had any effect on the utilisation of services. The GRADE evidence quality for all comparisons and outcomes was "low" or "very low".

Conclusions
It is uncertain whether supervision has a substantive, positive effect on the quality of primary health care in low- and middle-income countries. The long term effectiveness of supervision is unknown.

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Review
Measuring organizational and individual factors thought to influence the success of quality improvement in primary care: A systematic review of instruments
Brennan et al., 2012
Implementation Science, 7:121 doi:10.1186/1748-5908-7-121
http://www.implementationscience.com/content/pdf/1748-5908-7-121.pdf

Background and Aim
Continuous quality improvement (CQI) methods are widely used in healthcare; however, the effectiveness of the methods is variable, and evidence about the extent to which contextual and other factors modify effects is limited. We aimed to provide guidance to support the selection of measurement instruments by systematically collating, categorising, and reviewing quantitative self-report instruments.
Results and Conclusions
We identified 186 potentially relevant instruments, 152 of which were analysed to develop the taxonomy. Eighty-four instruments measured constructs relevant to primary care, with content measuring CQI implementation and use (19 instruments), organizational context (51 instruments), and individual factors (21 instruments). Forty-one instruments were included for full review. Many instruments are available for evaluating CQI, but most require further use and testing to establish their measurement properties.

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Review
A systematic review of the impact of routine collection of patient reported outcome measures on patients, providers and health organisations in an oncologic setting
Chen et al., 2013
BMC Health Services Research, 13:211 doi:10.1186/1472-6963-13-211
http://www.biomedcentral.com/content/pdf/1472-6963-13-211.pdf

Background
Despite growing interest and urges by leading experts for the routine collection of patient reported outcome (PRO) measures in all general care patients, and in particular cancer patients, there has not been an updated comprehensive review of the evidence regarding the impact of adopting such a strategy on patients, service providers and organisations in an oncologic setting.
Results
The 27 identified studies showed strong evidence that the well-implemented PROs improved patient-provider communication and patient satisfaction. There was also

growing evidence that it improved the monitoring of treatment response and the detection of unrecognised problems. However, there was a weak or non-existent evidence-base regarding the impact on changes to patient management and improved health outcomes, changes to patient health behaviour, the effectiveness of quality improvement of organisations, and on transparency, accountability, public reporting activities, and performance of the health care system.

Conclusions

Despite the existence of significant gaps in the evidence-base, there is growing evidence in support of routine PRO collection in enabling better and patient-centred care in cancer settings.

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Review

Nurses' accountability for stroke quality of care: part one: Review of the literature on nursing-sensitive patient outcomes

Green et al., 2011

Can J Neurosci Nurs, 33(3):13-23

http://www.ncbi.nlm.nih.gov/pubmed/22338209

Background

Over the past decade, an exciting area of research has emerged that demonstrates strong links between specific nursing care activities and patient outcomes. This body of research has resulted in the identification of a set of "nursing-sensitive outcomes" (NSOs). These NSOs may be interpreted with more meaning when they are linked to evidence-based best practice guidelines, which provide a structured means of ensuring care is consistent among all health care team members, across geographic locations, and across care settings. Uptake of evidence-based best practices at the point of care has been shown to have a measurable positive impact on processes of care and patient outcomes.

Aim

The purpose of this paper is to present a systematic, narrative review of the literature regarding the clinical effectiveness of nursing management strategies on stroke patient outcomes sensitive to nursing interventions. Subsequent investigation will explore current applications of nursing-sensitive outcomes to patients with stroke, and identify and validate measurable NSOs within stroke care delivery.

Conclusions

Ongoing measurement and monitoring is key to sustaining and improving best practice initiatives within the clinical setting. All inter-professional stroke team members contribute to the quality of care delivered to stroke patients. Within the context of stroke care delivery, a collaborative inter-professional team approach is strongly emphasized as the model of care. Within the team, it is important and reasonable to tease out those measures that are most impacted by one discipline more than others. This expands the current research beyond the impact of nursing care. Although articles and grey literature pertaining to outcomes attributable to other health care professions were excluded from this report, we conducted a separate literature review for all other disciplines. While the results of the search

were abundant for physician sensitive measures, there was a paucity of findings for physical therapy, occupational therapy, speech language pathologists, social workers, dietitians and pharmacists. Identification of discipline-sensitive structure, process and outcome measures using standardized measurement definitions will enhance continuity of care and increase patient safety, as well as increase the opportunity to meet patient and family care needs across all settings.

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Review
Health sector accreditation research: a systematic review
Greenfield et al., 2008
International Journal for Quality in Health Care, Volume 20, Number 3: pp. 172–183
http://intqhc.oxfordjournals.org/content/20/3/172.full.pdf

Aim
The purpose of this study was to identify and analyze research into accreditation and accreditation processes.
Results
The results, examining the impact or effectiveness of accreditation, were classified into 10 categories: professions' attitudes to accreditation, promote change, organizational impact, financial impact, quality measures, program assessment, consumer views or patient satisfaction, public disclosure, professional development and surveyor issues. The analysis reveals a complex picture. In two categories consistent findings were recorded: promote change and professional development. Inconsistent findings were identified in five categories: professions' attitudes to accreditation, organizational impact, financial impact, quality measures and program assessment. The remaining three categories—consumer views or patient satisfaction, public disclosure and surveyor issues—did not have sufficient studies to draw any conclusion. The search identified a number of national health care accreditation organizations engaged in research activities.
Conclusions
The health care accreditation industry appears to be purposefully moving towards constructing the evidence to ground our understanding of accreditation.

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Review
Use of criterion-based clinical audit to improve the quality of obstetric care: A systematic review
Kongnyuy et al., 2009
Acta Obstet Gynecol Scand, 88(8):873-81. doi: 10.1080/00016340903093542
http://www.ncbi.nlm.nih.gov/pubmed/19557553

Background and Aim
Although there is evidence that audit and feedback can improve health outcomes, little is known about the effect of audit on the quality of care from client's perspective. The aim of the current review was to explore the use of criterion-based

audit to improve quality of obstetric care from both the midwives/doctors' and women/mothers' perspectives.

Results

Nineteen studies (one RCT and 18 before-and-after studies) involving 32,972 participants met our inclusion criteria. None of these studies assessed the effect of audit on quality from the women/mothers' perspective and none of the studies compared the effectiveness of different types of feedback. Ninety-five percentage (18/19) of studies showed significant improvement in at least one standard measured. Criterion-based audit has been used in obstetrics to improve quality from one dimension, namely the midwives/doctors' perspective. Midwives/doctors should consider the use of audit to improve quality of care from the mothers' view.

Conclusions

There is need for well-designed RCTs to assess the effectiveness of different types of feedback in criterion-based audit.

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Review

Methods of consumer involvement in developing healthcare policy and research, clinical practice guidelines and patient information material

Nilsen et al., 2006

Cochrane Database of Systematic Reviews, Issue 3. Art. No.: CD004563. DOI: 10.1002/14651858.CD004563.pub2

http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004563.pub2/abstract

Background

The importance of consumer involvement in health care is widely recognised. Consumers can be involved in developing healthcare policy and research, clinical practice guidelines and patient information material, through consultations to elicit their views or through collaborative processes. Consultations can be single events, or repeated events, large or small scale. They can involve individuals or groups of consumers to allow debate; the groups may be convened especially for the consultation or be established consumer organisations. They can be organised in different forums and through different media.

Aim

To assess the effects of consumer involvement and compare different methods of involvement in developing healthcare policy and research, clinical practice guidelines, and patient information material.

Results

We included six randomised controlled trials with moderate or high risk of bias, involving 2123 participants. There is moderate quality evidence that involving consumers in the development of patient information material results in material that is more relevant, readable and understandable to patients, without affecting their anxiety. This 'consumer-informed' material can also improve patients' knowledge. There is low quality evidence that using consumer interviewers instead of staff interviewers in satisfaction surveys can have a small influence on the survey results. There is low quality evidence that an informed consent document developed

with consumer input (potential trial participants) may have little if any impact on understanding compared to a consent document developed by trial investigators only. There is very low quality evidence that telephone discussions and face-to-face group meetings engage consumers better than mailed surveys in order to set priorities for community health goals. They also result in different priorities being set for these goals.

Conclusions

There is little evidence from randomised controlled trials of the effects of consumer involvement in healthcare decisions at the population level. The trials included in this review demonstrate that randomised controlled trials are feasible for providing evidence about the effects of involving consumers in these decisions.

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Review

Educational outreach visits: effects on professional practice and health care outcomes

O'Brien et al., 2007

Cochrane Database of Systematic Reviews, Issue 4. Art. No.: CD000409. DOI: 10.1002/14651858.CD000409.pub2

http://apps.who.int/rhl/reviews/CD000409sp.pdf

Background

Educational outreach visits (EOVs) have been identified as an intervention that may improve the practice of healthcare professionals. This type of face-to-face visit has been referred to as university-based educational detailing, academic detailing, and educational visiting.

Aim

The review aimed to assess the effects of EOVs on health professional practice or patient outcomes.

Results

We included 69 studies involving more than 15,000 health professionals. Twenty-eight studies (34 comparisons) contributed to the calculation of the median and interquartile range for the main comparison. The median adjusted risk difference (RD) in compliance with desired practice was 5.6% (interquartile range 3.0% to 9.0%). The adjusted RDs were highly consistent for prescribing (median 4.8%, interquartile range 3.0% to 6.5% for 17 comparisons), but varied for other types of professional performance (median 6.0%, interquartile range 3.6% to 16.0% for 17 comparisons). Meta-regression was limited by the large number of potential explanatory factors (eight) with only 31 comparisons, and did not provide any compelling explanations for the observed variation in adjusted RDs. There were 18 comparisons with continuous outcomes, with a median adjusted relative improvement of 21% (interquartile range 11% to 41%). There were eight trials (12 comparisons) in which the intervention included an EOV and was compared to another type of intervention, usually audit and feedback. Interventions that included EOVs appeared to be slightly superior to audit and feedback. Only six studies evaluated different types of visits in head-to-head comparisons. When individual visits were compared to group visits (three trials), the results were mixed. EOVs

alone or when combined with other interventions have effects on prescribing that are relatively consistent and small, but potentially important. Their effects on other types of professional performance vary from small to modest improvements, and it is not possible from this review to explain that variation.

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Review
Systematic review of interventions to improve prescribing
Ostini et al., 2009
Ann Pharmacother, Mar;43(3):502-13. doi: 10.1345/aph.1L488. Epub 2009 Mar 3
http://www.ncbi.nlm.nih.gov/pubmed/19261953

Aim
To update 2 comprehensive reviews of systematic reviews on prescribing interventions and identify the latest evidence about the effectiveness of the interventions.
Conclusions
Educational outreach as well as audit and feedback continue to dominate research into prescribing interventions. These 2 prescribing interventions also most consistently show positive results. Much less research is conducted into other types of interventions and there is still very little effort to systematically test why interventions do or do not work.

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Review
Doctor performance assessment in daily practise: does it help doctors or not? A systematic review
Overeem et al., 2007
Med Educ, Nov; 41(11):1039-49
http://www.ncbi.nlm.nih.gov/pubmed/17973764

Background and Aim
Continuous assessment of individual performance of doctors is crucial for life-long learning and quality of care. Policy-makers and health educators should have good insights into the strengths and weaknesses of the methods available. The aim of this study was to systematically evaluate the feasibility of methods, the psychometric properties of instruments that are especially important for summative assessments, and the effectiveness of methods serving formative assessments used in routine practise to assess the performance of individual doctors.
Results
A total of 64 articles met our inclusion criteria. We observed 6 different methods of evaluating performance: simulated patients; video observation; direct observation; peer assessment; audit of medical records, and portfolio or appraisal. Peer assessment is the most feasible method in terms of costs and time. Little psychometric assessment of the instruments has been undertaken so far.

Effectiveness of formative assessments is poorly studied. All systems but 2 rely on a single method to assess performance.

Conclusions

There is substantial potential to assess performance of doctors in routine practise. The long-term impact and effectiveness of formative performance assessments on education and quality of care remains hardly known. Future research designs need to pay special attention to unmasking effectiveness in terms of performance improvement.

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Review

Can clinical governance deliver quality improvement in Australian general practice and primary care? A systematic review of the evidence

Phillips et al., 2010

Med J Aust, Nov 15; 193(10):602-7

https://www.mja.com.au/journal/2010/193/10/can-clinical-governance-deliver-quality-improvement-australian-general-practice

Aim

The review aimed to assess the literature on different models of clinical governance and to explore their relevance to Australian primary health care, and their potential contributions on quality and safety.

Data synthesis

Most evidence supports governance models which use targeted, peer-led feedback on the clinician's own practice. Strategies most used in clinical governance models were audit, performance against indicators, and peer-led reflection on evidence or performance.

Conclusions

The evidence base for clinical governance is fragmented, and focuses mainly on process rather than outcomes. Few publications address models that enhance safety, efficiency, sustainability and the economics of primary health care. Locally relevant clinical indicators, the use of computerised medical record systems, regional primary health care organisations that have the capacity to support the uptake of clinical governance at the practice level, and learning from the Aboriginal community-controlled sector will help integrate clinical governance into primary care.

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Review

Interventions for hiring, retaining and training district health systems managers in low- and middle-income countries

Rockers et al., 2013

Cochrane Database Syst Rev, Apr 30; 4:CD009035. doi: 10.1002/14651858.CD009035.pub2

http://www.ncbi.nlm.nih.gov/pubmed/23633365

Background
District managers are playing an increasingly important role in determining the performance of health systems in low- and middle-income countries as a result of decentralization.
Aim
To assess the effectiveness of interventions to hire, retain and train district health systems managers in low- and middle-income countries.
Results
Two studies met our inclusion criteria. The findings of one study conducted in Cambodia provide low quality evidence that private contracts with international nongovernmental organizations (NGOs) for district health systems management ('contracting-in') may improve health care access and utilization. Contracting-in increased use of antenatal care by 28% and use of public facilities by 14%. However, contracting-in was not found to have an effect on population health outcomes. The findings of the other study provide low quality evidence that intermittent training courses over 18 months may improve district health system managers' performance. In three countries in Latin America, managers who did not receive the intermittent training courses had between 2.4 and 8.3 times more management deficiencies than managers who received the training courses. No studies that aimed to investigate interventions for retaining district health systems managers met our study selection criteria for inclusion in this review.
Conclusions
There is low quality evidence that contracting-in may improve health care accessibility and utilization and that intermittent training courses may improve district health systems managers' performance. More evidence is required before firm conclusions can be drawn regarding the effectiveness of these interventions in diverse settings. Other interventions that might be promising candidates for hiring and retaining (e.g., government regulations, professional support programs) as well as training district health systems managers (e.g., in-service workshops with on-site support) have not been adequately investigated.

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Review
Specialty board certification and clinical outcomes: the missing link
Sharp et al., 2002
Acad Med, Jun; 77(6):534-42
http://www.ncbi.nlm.nih.gov/pubmed/12063199

Aim
Specialty board certification status is often used as a standard of excellence, but no systematic review has examined the link between certification and clinical outcomes. The authors evaluated published studies tracking clinical outcomes and certification status.
Results
Of the 33 findings, 16 demonstrated a significant positive association between certification status and positive clinical outcomes, three revealed worse outcomes

for certified physicians, and 14 showed no association. Three negative findings and one finding of no association were identified in two papers with insufficient case-mix adjustments in the analyses. Meta-analytic statistics were not feasible due to variability in outcome measures across studies.

Conclusions

Few published studies (5%) used research methods appropriate for the research question, and among the screened studies more than half support an association between board certification status and positive clinical outcomes.

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Review

Systematic review of the literature on assessment, feedback and physicians' clinical performance: BEME Guide No. 7

Veloski et al., 2006

Med Teach, 28(2):117-28

http://www.ncbi.nlm.nih.gov/pubmed/16707292

Background

There is a basis for the assumption that feedback can be used to enhance physicians' performance. Nevertheless, the findings of empirical studies of the impact of feedback on clinical performance have been equivocal.

Aim

To summarize evidence related to the impact of assessment and feedback on physicians' clinical performance.

Data synthesis

A group of 220 studies involving primary data collection was identified. However, only 41 met all selection criteria and evaluated the independent effect of feedback on physician performance. Of these, 32 (74%) demonstrated a positive impact. Feedback was more likely to be effective when provided by an authoritative source over an extended period of time. Another subset of 132 studies examined the effect of feedback combined with other interventions such as educational programmes, practice guidelines and reminders. Of these, 106 studies (77%) demonstrated a positive impact. Two additional subsets of 29 feedback studies involving resident physicians in training and 18 studies examining proxy measures of physician performance across clinical sites or groups of patients were reviewed. The majority of these two subsets also reported that feedback had positive effects on performance.

Results and Conclusions

Feedback can change physicians' clinical performance when provided systematically over multiple years by an authoritative, credible source. The effects of formal assessment and feedback on physician performance are influenced by the source and duration of feedback. Other factors, such as physicians' active involvement in the process, the amount of information reported, the timing and amount of feedback, and other concurrent interventions, such as education, guidelines, reminder systems and incentives, also appear to be important. However, the independent contributions of these interventions have not been well documented in

controlled studies. It is recommended that the designers of future theoretical as well as practical studies of feedback separate the effects of feedback from other concurrent interventions.

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Topic: Mechanisms to improve professionals' quality of care

- What is the most effective way to improve the capability of health care workers to execute their functions optimally?

Literature

Review

Getting evidence into practice: what works in developing countries?

Siddiqi et al., 2005

Int J Qual Health Care, 17 (5): 447-454. doi: 10.1093/intqhc/mzi051

http://intqhc.oxfordjournals.org/content/17/5/447.full.pdf+html

Aim

We summarize and comment on the available literature on the effectiveness of interventions designed to change professional behaviour in order to bring evidence into practice in developing countries.

Results

Data were synthesized and categorized according to different types of intervention. Audit and feedback was found to be effective, at least in the short term, when combined with other approaches. Similarly, educational interventions were more effective when designed to address local educational needs and organizational barriers. We found insufficient evidence to assess the effectiveness of educational outreach, local opinion leaders, use of mass media, and reminders. Educational materials alone are unlikely to influence change. However, the majority of studies had weak designs and failed to exclude possible biases.

Conclusions

Current evidence for the effectiveness of interventions to change health professionals' behaviour in developing countries is either scanty or flawed due to poorly designed research. Given the recent drive to improve quality of care, this should be a priority area for researchers and international agencies supporting health systems development in developing countries. This review provides an insight into some of the methodological issues that interested researchers may face.

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Review

The effectiveness of strategies to change organisational culture to improve healthcare performance: a systematic review

Parmelli et al., 2011

Implement Sci, 6: 33

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3080823/pdf/1748-5908-6-33.pdf

Background and Aim
Organisational culture is an anthropological metaphor used to inform research and consultancy and to explain organisational environments. In recent years, increasing emphasis has been placed on the need to change organisational culture in order to improve healthcare performance. However, the precise function of organisational culture in healthcare policy often remains underspecified and the desirability and feasibility of strategies to be adopted have been called into question. The objective of this review was to determine the effectiveness of strategies to change organisational culture in order to improve healthcare performance.
Results
The search strategy yielded 4,239 records. After the full text assessment, two CBA studies were included in the review. They both assessed the impact of interventions aimed at changing organisational culture, but one evaluated the impact on work-related and personal outcomes while the other measured clinical outcomes. Both were at high risk of bias. Both reported positive results.
Conclusions
Current available evidence does not identify any effective, generalisable strategies to change organisational culture. Healthcare organisations considering implementing interventions aimed at changing culture should seriously consider conducting an evaluation (using a robust design, *e.g.*, ITS) to strengthen the evidence about this topic.

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Effects of evidence-based clinical practice guidelines on quality of care: a systematic review
Lugtenberg et al., 2009
Qual Saf Health Care, 18:385-392 doi:10.1136/qshc.2008.028043
http://qualitysafety.bmj.com/content/18/5/385

Background and Aim
Evidence-based clinical guidelines aim to improve the quality of care. In The Netherlands, considerable time and effort have been invested in the development and implementation of evidence-based guidelines since the 1990s. Thus far, no reviews are available on their effectiveness. The primary aim of this article was to assess the evidence for the effectiveness of Dutch evidence-based clinical guidelines in improving the quality of care.
Results
A total of 20 studies were included. In 17 of 19 studies that measured the effects on the process or structure of care, significant improvements were reported. Thirteen of these studies reported improvement with respect to some of the recommendations studied. In addition, the size of the observed effects varied largely across the recommendations within guidelines. Six of nine studies that measured patient health outcomes showed significant but small improvements as a result of the use of clinical guidelines.
Conclusions
This review demonstrates that Dutch evidence-based clinical guidelines can be effective in improving the process and structure of care. The effects of guidelines on

patient health outcomes were studied far less and data are less convincing. The high level of variation in effects across recommendations suggests that implementation strategies tailored to individual recommendations within the guideline are needed to establish relevant improvements in healthcare. Moreover, the results highlight the need for well-designed studies focusing on the level of the recommendations to determine which factors influence guideline utilisation and improved patient outcomes.

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Review

The use of data for process and quality improvement in long term care and home care: A systematic review of the literature

Sales et al., 2012

Journal of the American Medical Directors Association, 13(2):103-113

http://www.experts.umich.edu/pubDetail.asp?t=pm&id=84856115457&

Background

Standardized resident or client assessments, including the Resident Assessment Instrument (RAI), have been available in long term care and home care settings (continuing care sector) in many jurisdictions for a number of years. Although using these data can make quality improvement activities more efficient and less costly, there has not been a review of the literature reporting quality improvement interventions using standardized data.

Aim

To address 2 questions: (1) How have RAI and other standardized data been used in process or quality improvement activities in the continuing care sector? and (2) Has the use of RAI and similar data resulted in improvements to resident or other outcomes?

Results

Key word searches identified 713 articles, of which we excluded 639 on abstract review because they did not meet inclusion criteria. A further 50 articles were excluded on full-text review, leaving a total of 24 articles. Of the 24 studies, 10 used a defined process improvement model, 8 used a combination of interventions (multimodal), 5 implemented new guidelines or protocols, and 1 used an education intervention.

Conclusions

The most frequently cited issues contributing to unsuccessful quality improvement interventions were lack of staff, high staff turnover, and limited time available to train staff in ways that would improve client care. Innovative strategies and supporting research are required to determine how to intervene successfully to improve quality in these settings characterized by low staffing levels and predominantly nonprofessional staff. Research on how to effectively enable practitioners to use data to improve quality of care, and ultimately quality of life, needs to be a priority.

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Theme 2: Technologies/mHealth

Topic: User experience and Effectiveness studies

- What has been the experience of patients, caregivers and health care providers in engaging with mHealth technologies in LMICs?

Literature

Review

Interventions for promoting information and communication technologies adoption in healthcare professionals

Gagnon et al., 2009

Cochrane Database of Systematic Reviews, Issue 1. Art. No.: CD006093. DOI: 10.1002/14651858.CD006093.pub2

http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006093.pub2/abstract

Background

Information and communication technologies (ICT) are defined as digital and analogue technologies that facilitate the capturing, processing, storage and exchange of information via electronic communication. ICTs have the potential to improve information management, access to health services, quality of care, continuity of services, and cost containment. Knowledge is lacking on conditions for successful ICT integration into practice.

Aim

This review aimed to carry out a systematic review of the effectiveness of interventions to promote the adoption of ICT by healthcare professionals.

Results

Ten studies met the inclusion criteria. Nine of them were RCTs. All studies involved physicians as participants (including postgraduate trainees), and one study also included other participants. Only two studies measured patient outcomes. Searching skills and/or frequency of use of electronic databases, mainly MEDLINE, were targeted in eight studies. Use of Internet for audit and feedback, and email for provider-patient communication, were targeted in two studies. Four studies showed small to moderate positive effects of the intervention on ICT adoption. Four studies were unable to demonstrate significant positive effects, and the two others showed mixed effects. No studies looked at the long-term effect or sustainability of the intervention.

Conclusions

There is very limited evidence on effective interventions promoting the adoption of ICTs by healthcare professionals. Small effects have been reported for interventions targeting the use of electronic databases and digital libraries. The effectiveness of interventions to promote ICT adoption in healthcare settings remains uncertain, and more well designed trials are needed.

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Review

A new dimension of health care: Systematic review of the uses, benefits, and limitations of social media for health communication

Moorhead et al., 2013
Journal of Medical Internet Research, 15(4):e85
http://www.jmir.org/2013/4/e85/

Background

There is currently a lack of information about the uses, benefits, and limitations of social media for health communication among the general public, patients, and health professionals from primary research.

Aim

To review the current published literature to identify the uses, benefits, and limitations of social media for health communication among the general public, patients, and health professionals, and identify current gaps in the literature to provide recommendations for future health communication research.

Results

The search identified 98 original research studies that included the uses, benefits, and/or limitations of social media for health communication among the general public, patients, and health professionals. The methodological quality of the studies assessed using the Downs and Black instrument was low; this was mainly due to the fact that the vast majority of the studies in this review included limited methodologies and was mainly exploratory and descriptive in nature. Seven main uses of social media for health communication were identified, including focusing on increasing interactions with others, and facilitating, sharing, and obtaining health messages. The six key overarching benefits were identified as (1) increased interactions with others, (2) more available, shared, and tailored information, (3) increased accessibility and widening access to health information, (4) peer/social/emotional support, (5) public health surveillance, and (6) potential to influence health policy. Twelve limitations were identified, primarily consisting of quality concerns and lack of reliability, confidentiality, and privacy.

Conclusions

Social media brings a new dimension to health care as it offers a medium to be used by the public, patients, and health professionals to communicate about health issues with the possibility of potentially improving health outcomes. Social media is a powerful tool, which offers collaboration between users and is a social interaction mechanism for a range of individuals. Although there are several benefits to the use of social media for health communication, the information exchanged needs to be monitored for quality and reliability, and the users' confidentiality and privacy need to be maintained. Eight gaps in the literature and key recommendations for future health communication research were provided. Examples of these recommendations include the need to determine the relative effectiveness of different types of social media for health communication using randomized control trials and to explore potential mechanisms for monitoring and enhancing the quality and reliability of health communication using social media. Further robust and comprehensive evaluation and review, using a range of methodologies, are required to establish

whether social media improves health communication practice both in the short and long terms.

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Review

Community health workers and mobile technology: A systematic review of the literature
Braun et al., 2013
PLoS ONE, 8(6): e65772. doi:10.1371/journal.pone.0065772
http://www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0065772&representation=PDF

Background
In low-resource settings, community health workers are frontline providers who shoulder the health service delivery burden. Increasingly, mobile technologies are developed, tested, and deployed with community health workers to facilitate tasks and improve outcomes. We reviewed the evidence for the use of mobile technology by community health workers to identify opportunities and challenges for strengthening health systems in resource-constrained settings.
Results
Community health workers have used mobile tools to advance a broad range of health aims throughout the globe, particularly maternal and child health, HIV/AIDS, and sexual and reproductive health. Most commonly, community health workers use mobile technology to collect field-based health data, receive alerts and reminders, facilitate health education sessions, and conduct person-to-person communication. Programmatic efforts to strengthen health service delivery focus on improving adherence to standards and guidelines, community education and training, and programmatic leadership and management practices. Those studies that evaluated program outcomes provided some evidence that mobile tools help community health workers to improve the quality of care provided, efficiency of services, and capacity for program monitoring.
Conclusions
Evidence suggests mobile technology presents promising opportunities to improve the range and quality of services provided by community health workers. Small-scale efforts, pilot projects, and preliminary descriptive studies are increasing, and there is a trend toward using feasible and acceptable interventions that lead to positive program outcomes through operational improvements and rigorous study designs. Programmatic and scientific gaps will need to be addressed by global leaders as they advance the use and assessment of mobile technology tools for community health workers.

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Review

Mobile health (mHealth) approaches and lessons for increased performance and retention of community health workers in low- and middle-income countries: a review
Källander et al., 2013

J Med Internet Res, Jan 25;15(1):e17. doi: 10.2196/jmir.2130
http://www.jmir.org/2013/1/e17/

Background
Mobile health (mHealth) describes the use of portable electronic devices with software applications to provide health services and manage patient information. With approximately 5 billion mobile phone users globally, opportunities for mobile technologies to play a formal role in health services, particularly in low- and middle-income countries, are increasingly being recognized. mHealth can also support the performance of health care workers by the dissemination of clinical updates, learning materials, and reminders, particularly in underserved rural locations in low- and middle-income countries where community health workers deliver integrated community case management to children sick with diarrhea, pneumonia, and malaria.

Aim
Our aim was to conduct a thematic review of how mHealth projects have approached the intersection of cellular technology and public health in low- and middle-income countries and identify the promising practices and experiences learned, as well as novel and innovative approaches of how mHealth can support community health workers.

Results
The review revealed that there are very few formal outcome evaluations of mHealth in low-income countries. Although there is vast documentation of project process evaluations, there are few studies demonstrating an impact on clinical outcomes. There is also a lack of mHealth applications and services operating at scale in low- and middle-income countries. The most commonly documented use of mHealth was 1-way text-message and phone reminders to encourage follow-up appointments, healthy behaviors, and data gathering. Innovative mHealth applications for community health workers include the use of mobile phones as job aides, clinical decision support tools, and for data submission and instant feedback on performance.

Conclusions
With partnerships forming between governments, technologists, non-governmental organizations, academia, and industry, there is great potential to improve health services delivery by using mHealth in low- and middle-income countries. As with many other health improvement projects, a key challenge is moving mHealth approaches from pilot projects to national scalable programs while properly engaging health workers and communities in the process. By harnessing the increasing presence of mobile phones among diverse populations, there is promising evidence to suggest that mHealth can be used to deliver increased and enhanced health care services to individuals and communities, while helping to strengthen health systems.

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Review

Health care consumers' experiences of information communication technology : a summary of literature

Åkesson et al., 2007

International Journal of Medical Informatics, Vol 76, Issue: 9, pp. 633-645

http://www.diva-portal.org/smash/get/diva2:1239/FULLTEXT01.pdf

Background

There is an increasing interest in reaching consumers directly through the Internet and different telecommunication systems. The most important contacts in health care will always be the face-to-face meetings, but the tools of health informatics can be seen as a means to an end, which is to provide the best possible health care. A variety of applications have been described in different references. To our knowledge there has been no review of a research-based state of the art in the field of consumers' experiences in using different applications in health informatics. According to the benefits in using information communication technology (ICT) as being cost-effective and timesaving it is of great importance to focus on and examine consumers' experiences. It is important that it is user friendly and regarded as valuable and useful.

Aim

The aim of this study was to describe consumers' subjective experiences of using electronic resources with reference to health and illness.

Results

In spite of this broad search few references were found. Twelve references remained and three themes were identified: support and help, education and information, and telecommunication instead of on-site visiting. Consumers felt more confident and empowered, their knowledge increased and their health status improved due to the ICT resources. Lack of face-to-face meetings or privacy did not appear to be a problem.

Conclusions

ICT can improve the nurse-patient relationship and augment well-being for consumers. More research is needed to measure consumers' experiences and factors that influence it.

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Review

Telemedicine versus face to face patient care: effects on professional practice and health care outcomes

Currell et al., 2002

Cochrane Database Syst Rev, (2):CD002098

http://www.thecochranelibrary.com/userfiles/ccoch/file/Telemedicine/CD002098.pdf

Background

Telemedicine is the use of telecommunications technology for medical diagnosis and patient care. From its beginnings telemedicine has been used in a variety of health

care fields, although widespread interest among healthcare providers has only now become apparent with the development of more sophisticated technology.

Aim

The review assessed the effects of telemedicine as an alternative to face-to-face patient care.

Results

Seven trials involving more than 800 people were included. One trial was concerned with telemedicine in the emergency department, one with video-consultations between primary health care and the hospital outpatients department, and the remainder were concerned with the provision of home care or patient self-monitoring of chronic disease. The studies appeared to be well conducted, although patient numbers were small in all but one. Although none of the studies showed any detrimental effects from the interventions, neither did they show unequivocal benefits and the findings did not constitute evidence of the safety of telemedicine. None of the studies included formal economic analysis. All the technological aspects of the interventions appear to have been reliable, and to have been well accepted by patients.

Conclusions

Establishing systems for patient care using telecommunications technologies is feasible, but there is little evidence of clinical benefits. The studies provided variable and inconclusive results for other outcomes such as psychological measures, and no analysable data about the cost effectiveness of telemedicine systems. The review demonstrates the need for further research and the fact that it is feasible to carry out randomised trials of telemedicine applications. Policy makers should be cautious about recommending increased use and investment in unevaluated technologies.

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Review

Mobile phone messaging reminders for attendance at healthcare appointments

Car et al., 2012

Cochrane Database Syst Rev, Jul 11;7:CD007458. doi: 10.1002/14651858.CD007458.pub2

http://www.ncbi.nlm.nih.gov/pubmed/22786507

Background

Missed appointments are a major cause of inefficiency in healthcare delivery, with substantial monetary costs for the health system, leading to delays in diagnosis and appropriate treatment. Patients' forgetfulness is one of the main reasons for missed appointments, and reminders may help alleviate this problem. Modes of communicating reminders for appointments to patients include face-to-face communication, postal messages, calls to landlines or mobile phones, and mobile phone messaging. Mobile phone messaging applications such as Short Message Service (SMS) and Multimedia Message Service (MMS) could provide an important, inexpensive delivery medium for reminders for healthcare appointments.

Aim

The primary objective is to assess the effects of mobile phone messaging reminders for attendance at healthcare appointments. Secondary objectives include

assessment of patients' and healthcare providers' evaluation of the intervention; costs; and possible risks and harms associated with the intervention.

Results

We included four randomised controlled trials involving 3547 participants. Three studies with moderate quality evidence showed that mobile text message reminders improved the rate of attendance at healthcare appointments compared to no reminders (risk ratio (RR) 1.10 (95% confidence interval (CI) 1.03 to 1.17)). One low quality study reported that mobile text message reminders with postal reminders, compared to postal reminders, improved rate of attendance at healthcare appointments (RR 1.10 (95% CI 1.02 to 1.19)). However, two studies with moderate quality of evidence showed that mobile phone text message reminders and phone call reminders had a similar impact on healthcare attendance (RR 0.99 (95% CI 0.95 to 1.03). The costs per attendance of mobile phone text message reminders were shown to be lower compared to phone call reminders. None of the included studies reported outcomes related to harms or adverse effects of the intervention, nor health outcomes or user perception of safety related to the intervention.

Conclusions

There is moderate quality evidence that mobile phone text message reminders are more effective than no reminders, and low quality evidence that text message reminders with postal reminders are more effective than postal reminders alone. Further, according to the moderate quality evidence we found, mobile phone text message reminders are as effective as phone call reminders. Overall, there is limited evidence on the effects of mobile phone text message reminders for appointment attendance, and further high-quality research is required to draw more robust conclusions.

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Review

New technologies for chronic disease management and control: a systematic review

García-Lizana et al., 2007

J Telemed Telecare, 13(2):62-8

https://www.ncbi.nlm.nih.gov/m/pubmed/17359568/?i=6&from=/21041173/related

Aim

We conducted a systematic review of the clinical effectiveness of interventions using information and communication technologies (ICTs) for managing and controlling chronic diseases.

Results

Of the 950 clinical trials identified, 56 studies were identified for potential inclusion. Of those, 24 were finally included: 5 studies in asthma, 3 in hypertension, 1 in home telecare, 7 in diabetes, 6 in heart failure and 2 in prevention heart disease.

Conclusions

Overall, ICT applications did not show an improvement in clinical outcomes, although no adverse effects were identified. However, ICTs used in the detection and follow up of cardiovascular diseases provided better clinical outcomes, mortality reduction and lower health services utilization. Systems used for improving education and

social support were also shown to be effective. At present the evidence about the clinical benefits of ICTs for managing chronic disease is limited.

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Review
Systematic review: impact of health information technology on quality, efficiency, and costs of medical care
Chaudhry et al., 2006
Ann Intern Med, 16; 144(10):742-52
http://stage.wapatientsafety.org/downloads/article-4.pdf

Background
Experts consider health information technology key to improving efficiency and quality of health care.
Aim
To systematically review evidence on the effect of health information technology on quality, efficiency, and costs of health care.
Data synthesis
257 studies met the inclusion criteria. Most studies addressed decision support systems or electronic health records. Approximately 25% of the studies were from 4 academic institutions that implemented internally developed systems; only 9 studies evaluated multifunctional, commercially developed systems. Three major benefits on quality were demonstrated: increased adherence to guideline-based care, enhanced surveillance and monitoring, and decreased medication errors. The primary domain of improvement was preventive health. The major efficiency benefit shown was decreased utilization of care. Data on another efficiency measure, time utilization, were mixed. Empirical cost data were limited.
Limitations
Available quantitative research was limited and was done by a small number of institutions. Systems were heterogeneous and sometimes incompletely described. Available financial and contextual data were limited.
Conclusions
Four benchmark institutions have demonstrated the efficacy of health information technologies in improving quality and efficiency. Whether and how other institutions can achieve similar benefits, and at what costs, are unclear.

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Theme 3: Staff motivation

Topic: Incentives and motivation

- Which incentives have been most effective in improving health worker attitudes and motivation in LMICs?

Literature

Review

Community health worker incentives and disincentives: How they Affect motivation, retention, and sustainability

Bhattacharyya et al, 2011

Published by the Basic Support for Institutionalizing Child Survival Project (BASICS II) for the United States Agency for International Development, Arlington, Virginia

http://pdf.usaid.gov/pdf_docs/PNACQ722.pdf

Summary

There is no tidy package of three incentives that will ensure motivated CHWs.

A complex set of factors affects CHW motivation and attrition, and how these factors play out varies considerably from place to place. The motivation and retention of CHWs is influenced by who they are in the community context. The specific tasks and duties of CHWs affect their motivation and retention. When given too many tasks, CHWs feel overwhelmed with information or may spend so much time in training that they rarely practice what they have learned. Often the catchment areas they cover are too large with too many households, making it difficult for a CHW to spend the time or find the transportation to go to all the households. Monetary incentives can increase retention. Monetary incentives often bring a host of problems because the money may not be enough, may not be paid regularly, or may stop altogether.

Non-monetary incentives are critical: CHWs need to feel that they are a part of the health system through supportive supervision and appropriate training.

Small things, such as an identification badge, can provide a sense of pride in their work and increased status in their communities. Appropriate job aides such as counseling cards and regular replenishment of supplies can help ensure that CHWs feel competent to do their jobs. Peer support can come in many forms, such as working regularly with one or two other CHWs, frequent refresher training, or even CHW associations. Different communities will need different types of incentives, depending on the other job opportunities available, prior experience with CHWs, the economic situation of the community, and other factors.

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Review

Current evidence on evidence-based practice training in allied health: a systematic review of the literature

Dizon et al., 2012

International Journal of Evidence-based Healthcare, Volume 10, Number 4, 1, pp. 347-360(14)

http://www.ingentaconnect.com/content/bsc/jbr/2012/00000010/00000004/art00005

Background

It is essential that allied health practice decisions are underpinned by the best available evidence. Therefore, effective training needs to be provided for allied health professionals to do this. However, little is known about how evidence-based practice training programs for allied health professionals are delivered, the elements contained within them, how learning outcomes are measured or the effectiveness of

training components in improving learning outcomes.

Results

Six relevant studies (four randomised controlled trials and two before-and-after studies) reported on the effectiveness of evidence-based practice training programs for evidence-based practice for groups of health professionals. Specifically, only three of these studies (one randomised controlled trial and two before-and-after studies) reported on allied health professionals (physiotherapists, occupational therapists and social workers). Among these three studies on allied health, outcomes were variably measured, largely reporting on knowledge, skills, attitudes and/or behaviours. Significant changes in knowledge and skills were reported in all studies. Only the social work study, which reassessed outcomes after 3 months, reported significant changes in attitudes and behaviours. Training took from 3 hours to 2 days. While there was information on training program components, there was no evidence of effectiveness related to learning outcomes.

Conclusions

Overall, there is limited research regarding training of allied health professionals in evidence-based practice and learning outcomes. From the limited evidence base, there was consistent evidence that any training significantly influenced knowledge, skills and attitudes, irrespective of the allied health discipline. There was little information, however, regarding how to change or measure behaviours. This review cannot recommend components of training for allied health professionals in evidence-based practice, which significantly improve learning outcomes.

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Review

Effects of financial incentives on medical practice: results from a systematic review of the literature and methodological issues

Chaix-Couturier et al., 2000

Int J Qual Health Care, Apr, 12(2):133–142

http://intqhc.oxfordjournals.org/content/12/2/133.full.pdf

Aim

This review aimed to identify all financial incentives that had been proposed, described, or used regardless of their initial objective and, when possible, to assess the results of these incentives on costs, process or outcomes of care.

Results

Financial incentives concerned the modalities of physician payment and financing of the health care system. Confounding factors included: age of the doctor, training, speciality, place and type of medical practice, previous sanctions for over-prescribing, type and severity of disease, type of insurance. Risks of financial incentives were: limited access to certain types of care, lack of continuity of care, conflict of interests between the physician and the patient. Any form of fund-holding or capitation decreased the total volume of prescriptions by 0-24%, and hospital days by up to 80% compared with fee-for-service. Annual cap on doctors' incomes resulted in referrals to colleagues when target income is reached.

Conclusions

Financial incentives can be used to reduce the use of health care resources, improve compliance with practice guidelines or achieve a general health target. It may be effective to use incentives in combination depending on the target set for a given health care programme.

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Review

Policies and incentives for health worker retention in east and southern Africa: Learning from country research

Iipinge et al., 2009

EQUINET, ECSA-HC, *EQUINET Discussion Paper 78* EQUINET: Harare

http://www.equinetafrica.org/bibl/docs/Diss78synthesisHRH09.pdf

Summary

The studies sought to investigate the causes of migration of health professionals, the strategies used to retain health professionals, how they are being implemented, monitored and evaluated, as well as their impact, to make recommendations to enhance the monitoring, evaluation and management of non-financial incentives for health worker retention. They aimed to have some comparability in design to share learning. Incentives that address social needs were used in several countries,

All the countries studied were applying a mix of non-financial incentives according to their strategies and plans, although implementation was not always uniform at all levels or for all cadres, or reached all those cadres intended. For example, Tanzania offers a hardship allowance for remote areas and non-taxable allowances, such as car allowances and overtime pay. Kenya offers a hardship allowance paid to members of staff who are stationed in the designated hardship areas, paid at the rate of 30% of an officer's basic salary – however this did not make much difference if the salary was low already. Zimbabwe offers a rural allowance (10% of basic salary) for remote areas, while Swaziland does not offer such allowances for its health workers. As in the four countries, the background review found that incentives in many countries are focused on a few cadres of staff, such as doctors for rural facilities in Zambia, nurse tutors in Malawi, or nurses and doctors in Botswana.

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Review

An overview of reviews evaluating the effectiveness of financial incentives in changing healthcare professional behaviours and patient outcomes

Flodgren et al., 2011

Cochrane Database Syst Rev, Jul 6;(7):CD009255. doi: 10.1002/14651858.CD009255

http://www.nvag.nl/afbeeldingen/StukkenVereniging/Themamiddagen/Revue%20cohrane%20PBF.pdf

Background

There is considerable interest in the effectiveness of financial incentives in the delivery of health care. Incentives may be used in an attempt to increase the use of evidence-based treatments among healthcare professionals or to stimulate health

professionals to change their clinical behaviour with respect to preventive, diagnostic and treatment decisions, or both. Financial incentives are an extrinsic source of motivation and exist when an individual can expect a monetary transfer which is made conditional on acting in a particular way. Since there are numerous reviews performed within the healthcare area describing the effects of various types of financial incentives, it is important to summarise the effectiveness of these in an overview to discern which are most effective in changing health professionals' behaviour and patient outcomes.

Aim

To conduct an overview of systematic reviews that evaluates the impact of financial incentives on healthcare professional behaviour and patient outcomes.

Results

We identified four reviews reporting on 32 studies. Two reviews scored 7 on the AMSTAR criteria (moderate, score 5 to 7, quality) and two scored 9 (high, score 8 to 11, quality). The reported quality of the included studies was, by a variety of methods, low to moderate. Payment for working for a specified time period was generally ineffective, improving 3/11 outcomes from one study reported in one review. Payment for each service, episode or visit was generally effective, improving 7/10 outcomes from five studies reported in three reviews; payment for providing care for a patient or specific population was generally effective, improving 48/69 outcomes from 13 studies reported in two reviews; payment for providing a pre-specified level or providing a change in activity or quality of care was generally effective, improving 17/20 reported outcomes from 10 studies reported in two reviews; and mixed and other systems were of mixed effectiveness, improving 20/31 reported outcomes from seven studies reported in three reviews. When looking at the effect of financial incentives overall across categories of outcomes, they were of mixed effectiveness on consultation or visit rates (improving 10/17 outcomes from three studies in two reviews); generally effective in improving processes of care (improving 41/57 outcomes from 19 studies in three reviews); generally effective in improving referrals and admissions (improving 11/16 outcomes from 11 studies in four reviews); generally ineffective in improving compliance with guidelines outcomes (improving 5/17 outcomes from five studies in two reviews); and generally effective in improving prescribing costs outcomes (improving 28/34 outcomes from 10 studies in one review).

Conclusions

Financial incentives may be effective in changing healthcare professional practice. The evidence has serious methodological limitations and is also very limited in its completeness and generalisability. We found no evidence from reviews that examined the effect of financial incentives on patient outcomes.

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Review

The effects of group supervision of nurses: A systematic literature review

Francke et al., 2012

International Journal of nursing Studies, 49, 1165-1179

http://www.journalofnursingstudies.com/article/S0020-7489(11)00456-1/abstract

Aim
The review aimed to gain insight into the existing scientific evidence on the effects of group supervision for nurses.
Results
A total of 1087 potentially relevant references were found. After screening of the references, eight studies with a control group and nine with a pre-test post-test design were included. Most of the 17 studies included have serious methodological limitations, but four Swedish publications in the field of dementia care had high methodological quality and all point to positive effects on nurses' attitudes and skills and/or nurse–patient interactions. However, in interpreting these positive results, it must be taken into account that these four high-quality publications concern sub-studies of one 'sliced' research project using the same study sample. Moreover, these four publications combined a group supervision intervention with the introduction of individual care planning, which also hampers conclusions about the effectiveness of group supervision alone.
Conclusions
Although there are rather a lot of indications that group supervision of nurses is effective, evidence on the effects is still scarce. Further methodologically sound research is needed.

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Review
Target payments in primary care: effects on professional practice and health care outcomes.
Giuffrida et al., 2003
Cochrane Database Syst Rev, (3):CD000531
http://www.ncbi.nlm.nih.gov/pubmed/10908475

Background
The method by which physicians are paid may affect their professional practice. Although payment systems may be used to achieve policy objectives (e.g. improving quality of care, cost containment and recruitment to under-served areas), little is known about the effects of different payment systems in achieving these objectives. Target payments are a payment system which remunerates professionals only if they provide a minimum level of care.
Aim
To evaluate the impact of target payments on the professional practice of primary care physicians (PCPs) and health care outcomes.
Results
Two studies were included involving 149 practices. The use of target payments in the remuneration of PCPs was associated with improvements in immunisation rates, but the increase was statistically significant in only one of the two studies.
Conclusions
The evidence from the studies identified in this review is not of sufficient quality or power to obtain a clear answer to the question as to whether target payment remuneration provides a method of improving primary health care. Additional

efforts should be directed in evaluating changes in physicians' remuneration systems. Although it would not be difficult to design a randomised controlled trial to evaluate the impact of such payment systems, it would be difficult politically to conduct such trials.

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Review

In-service training for health professionals to improve care of the seriously ill newborn or child in low and middle-income countries

Opiyo et al., 2010

Cochrane Database Syst Rev. Apr 14, 2010; (4): CD007071.

doi: 10.1002/14651858.CD007071.pub2

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2868967/pdf/ukmss-30404.pdf

Background

A variety of emergency care training courses based on developed country models are being promoted as a strategy to improve the quality of care of the seriously ill newborn or child in developing countries. Clear evidence of their effectiveness is lacking.

Aim

The review investigated the effectiveness of in-service training of health professionals on their management and care of the seriously ill newborn or child in low and middle-income settings.

Results

Two studies of varied designs were included. In one RCT of moderate quality, Newborn Resuscitation Training (NRT) was associated with a significant improvement in performance of adequate initial resuscitation steps (risk ratio 2.45, 95% confidence interval (CI) 1.75 to 3.42, $P < 0.001$, adjusted for clustering) and a reduction in the frequency of inappropriate and potentially harmful practices (mean difference 0.40, 95% CI 0.13 to 0.66, $P = 0.004$). In the second RCT, available limited data suggested that there was improvement in assessment of breathing and newborn care practices in the delivery room following implementation of Essential Newborn Care (ENC) training.

Conclusions

There is limited evidence that in-service neonatal emergency care courses improve health-workers' practices when caring for a seriously ill newborn although there is some evidence of benefit. Rigorous trials evaluating the impact of refresher emergency care training on long-term professional practices are needed. To optimise appropriate policy decisions, studies should aim to collect data on resource use and costs of training implementation.

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Review

What is the empirical basis for paying for quality in health care?

Rosenthal et al., 2006

Med Care Res Rev, Apr;63(2):135-57

http://www.worldcat.org/title/what-is-the-empirical-basis-for-paying-for-quality-in-health-care/oclc/108965614&referer=brief_results

Summary
Despite more than a decade of bench-marking and public reporting of quality problems in the health care sector, changes in medical practice have been slow to materialize. To accelerate quality improvement, many private and public payers have begun to offer financial incentives to physicians and hospitals based on their performance on clinical and service quality measures. The authors review the empirical literature on paying for quality in health care and comparable interventions in other sectors. They find little evidence to support the effectiveness of paying for quality. The absence of findings for an effect may be attributable to the small size of the bonuses studied and the fact that payers often accounted for only a fraction of the targeted provider's panel. Even in non-health settings, however, where the institutional features are more favorable to a positive impact, the literature contains mixed results on the effectiveness of analogous pay-for-performance schemes.

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Review
The effect of financial incentives on the quality of health care provided by primary care physicians.
Scott et al., 2011
Cochrane Database Syst Rev, Sep 7;(9):CD008451. doi: 10.1002/14651858.CD008451.pub2
http://www.ncbi.nlm.nih.gov/pubmed/21901722

Background
The use of blended payment schemes in primary care, including the use of financial incentives to directly reward 'performance' and 'quality' is increasing in a number of countries. There are many examples in the US, and the Quality and Outcomes Framework (QoF) for general practitioners (GPs) in the UK is an example of a major system-wide reform. Despite the popularity of these schemes, there is currently little rigorous evidence of their success in improving the quality of primary health care, or of whether such an approach is cost-effective relative to other ways to improve the quality of care.
Aim
The aim of this review is to examine the effect of changes in the method and level of payment on the quality of care provided by primary care physicians (PCPs) and to identify: i) the different types of financial incentives that have improved quality; ii) the characteristics of patient populations for whom quality of care has been improved by financial incentives; and iii) the characteristics of PCPs who have responded to financial incentives.
Results
Seven studies were included in this review. Three of the studies evaluated single-threshold target payments, one examined a fixed fee per patient achieving a specified outcome, one study evaluated payments based on the relative ranking of

medical groups' performance (tournament-based pay), one study examined a mix of tournament-based pay and threshold payments, and one study evaluated changing from a blended payments scheme to salaried payment. Three cluster RCTs examined smoking cessation; one CBA examined patients' assessment of the quality of care; one CBA examined cervical screening, mammography screening, and HbA1c; one ITS focused on four outcomes in diabetes; and one controlled ITS (a difference-in-difference design) examined cervical screening, mammography screening, HbA1c, childhood immunisation, chlamydia screening, and appropriate asthma medication. Six of the seven studies showed positive but modest effects on quality of care for some primary outcome measures, but not all. One study found no effect on quality of care. Poor study design led to substantial risk of bias in most studies. In particular, none of the studies addressed issues of selection bias as a result of the ability of primary care physicians to select into or out of the incentive scheme or health plan.

Conclusions

The use of financial incentives to reward PCPs for improving the quality of primary healthcare services is growing. However, there is insufficient evidence to support or not support the use of financial incentives to improve the quality of primary health care. Implementation should proceed with caution and incentive schemes should be more carefully designed before implementation. In addition to basing incentive design more on theory, there is a large literature discussing experiences with these schemes that can be used to draw out a number of lessons that can be learned and that could be used to influence or modify the design of incentive schemes. More rigorous study designs need to be used to account for the selection of physicians into incentive schemes. The use of instrumental variable techniques should be considered to assist with the identification of treatment effects in the presence of selection bias and other sources of unobserved heterogeneity. In randomised trials, care must be taken in using the correct unit of analysis and more attention should be paid to blinding. Studies should also examine the potential unintended consequences of incentive schemes by having a stronger theoretical basis, including a broader range of outcomes, and conducting more extensive subgroup analysis. Studies should more consistently describe i) the type of payment scheme at baseline or in the control group, ii) how payments to medical groups were used and distributed within the groups, and iii) the size of the new payments as a percentage of total revenue. Further research comparing the relative costs and effects of financial incentives with other behaviour change interventions is also required.

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Review

Effectiveness of financial incentives in exchange for rural and underserviced area return-of-service commitments: systematic review of the literature

Sempowski, 2004

Can J Rural Med, Spring;9(2):82-8

http://www.cma.ca/multimedia/staticContent/HTML/N0/l2/cjrm/vol-9/issue-2/pdf/pg82.pdf

Aim
To evaluate the effectiveness of programs that provide financial incentives to physicians in exchange for a rural or underserviced area return-of-service (ROS) commitment.
Results
Outcome measures included initial recruitment of physicians, buyout rates and long-term retention. The majority of studies reported effective recruitment despite high buyout rates in some US-based programs. Increasing Canadian tuition and debt among medical students may make these programs attractive. The 1 prospective cohort study on retention showed that physicians who chose voluntarily to go to a rural area were far more likely to stay long term than those who located there as an ROS commitment. Multidimensional programs appeared to be more successful than those relying on financial incentives alone.
Conclusions
ROS programs to rural and underserviced areas have achieved their primary goal of short-term recruitment but have had less success with long-term retention. Additional research is needed to examine the cost effectiveness of existing ROS programs and the incorporation of other retention strategies, such as medical education initiatives, community and professional support, differential rural fees and alternate funding models

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Review
Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians
Gosden et al., 2000
Cochrane Database Syst Rev, (3):CD002215
http://www.ncbi.nlm.nih.gov/pubmed/10908531

Background
It is widely believed that the method of payment of physicians may affect their clinical behaviour. Although payment systems may be used to achieve policy objectives (e.g. cost containment or improved quality of care), little is known about the effects of different payment systems in achieving these objectives.
Aim
This review aims to evaluate the impact of different methods of payment (capitation, salary, fee for service and mixed systems of payment) on the clinical behaviour of primary care physicians (PCPs).
Results
Four studies were included involving 640 primary care physicians and more than 6400 patients. There was considerable variation in study setting and the range of outcomes measured. FFS resulted in more primary care visits/contacts, visits to specialists and diagnostic and curative services but fewer hospital referrals and repeat prescriptions compared with capitation. Compliance with a recommended number of visits was higher under FFS compared with capitation payment. FFS resulted in more patient visits, greater continuity of care, higher compliance with a

recommended number of visits, but patients were less satisfied with access to their physician compared with salaried payment.

Conclusions

It is noteworthy that so few studies met the inclusion criteria. There is some evidence to suggest that the method of payment of primary care physicians affects their behaviour, but the findings' generalisability is unknown. More evaluations of the effect of payment systems on PCP behaviour are needed, especially in terms of the relative impact of salary versus capitation payments.

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Review

Economic incentives and physicians' delivery of preventive care: a systematic review

Town et al., 2005

Am J Prev Med, Feb;28(2):234-40

http://download.journals.elsevierhealth.com/pdfs/journals/0749-3797/PIIS0749379704002934.pdf

Summary

A systematic review of the randomized trial literature examining the impact of financial incentives on provider preventive care delivery was conducted. English-language studies published between 1966 and 2002 that addressed primary or secondary preventive care or health promotion behaviors were included in the review. Six studies that met the inclusion criteria were identified, which generated eight different findings. The literature is sparse. Of the eight financial interventions reviewed, only one led to a significantly greater provision of preventive services. The lack of a significant relationship does not necessarily imply that financial incentives cannot motivate physicians to provide more preventive care. The rewards offered in these studies tend to be small. Therefore, the results suggest that small rewards will not motivate doctors to change their preventive care routines.

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Review

Motivation and retention of health workers in developing countries: a systematic review

Willis-Shattuck et al., 2008

BMC Health Serv Res, 8: 247

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2612662/pdf/1472-6963-8-247.pdf

Background and Aim

A key constraint to achieving the MDGs is the absence of a properly trained and motivated workforce. Loss of clinical staff from low and middle-income countries is crippling already fragile health care systems. Health worker retention is critical for health system performance and a key problem is how best to motivate and retain health workers. The authors undertook a systematic review to consolidate existing evidence on the impact of financial and non-financial incentives on motivation and retention.

Results
Twenty articles met the inclusion criteria. They consisted of a mixture of qualitative and quantitative studies. Seven major motivational themes were identified: financial rewards, career development, continuing education, hospital infrastructure, resource availability, hospital management and recognition/appreciation. There was some evidence to suggest that the use of initiatives to improve motivation had been effective in helping retention. There is less clear evidence on the differential response of different cadres.
Conclusions
While motivational factors are undoubtedly country specific, financial incentives, career development and management issues are core factors. Nevertheless, financial incentives alone are not enough to motivate health workers. It is clear that recognition is highly influential in health worker motivation and that adequate resources and appropriate infrastructure can improve morale significantly.

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Review
Financial incentives for return of service in underserved areas: a systematic review
Bärnighausen et al., 2009
BMC Health Services Research, 9:86
http://www.biomedcentral.com/content/pdf/1472-6963-9-86.pdf

Background
In many geographic regions, both in developing and in developed countries, the number of health workers is insufficient to achieve population health goals. Financial incentives for return of service are intended to alleviate health worker shortages: A (future) health worker enters into a contract to work for a number of years in an underserved area in exchange for a financial pay-off.
Results
Of the 43 reviewed studies 34 investigated financial-incentive programs in the US. The remaining studies evaluated programs in Japan (five studies), Canada (two), New Zealand (one) and South Africa (one). The programs started between 1930 and 1998. We identified five different types of programs (service-requiring scholarships, educational loans with service requirements, service-option educational loans, loan repayment programs, and direct financial incentives). Financial incentives to serve for one year in an underserved area ranged from year-2000 United States dollars 1,358 to 28,470. All reviewed studies were observational. The random-effects estimate of the pooled proportion of all eligible program participants who had either fulfilled their obligation or were fulfilling it at the time of the study was 71% (95% confidence interval 60–80%). Seven studies compared retention in the same (underserved) area between program participants and non-participants. Six studies found that participants were less likely than non-participants to remain in the same area (five studies reported the difference to be statistically significant, while one study did not report a significance level); one study did not find a significant difference in retention in the same area. Thirteen studies compared provision of care or retention in any underserved area between participants and non-participants.

Eleven studies found that participants were more likely to (continue to) practice in any underserved area (nine studies reported the difference to be statistically significant, while two studies did not provide the results of a significance test); two studies found that program participants were significantly less likely than non-participants to remain in any underserved area. Seven studies investigated the satisfaction of participants with their work and personal lives in underserved areas.

Conclusions

Financial-incentive programs for return of service are one of the few health policy interventions intended to improve the distribution of human resources for health on which substantial evidence exists. However, the majority of studies are from the US, and only one study reports findings from a developing country, limiting generalizability. The existing studies show that financial-incentive programs have placed substantial numbers of health workers in underserved areas and that program participants are more likely than non-participants to work in underserved areas in the long run, even though they are less likely to remain at the site of original placement. As none of the existing studies can fully rule out that the observed differences between participants and non-participants are due to selection effects, the evidence to date does not allow the inference that the programs have caused increases in the supply of health workers to underserved areas.

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Review

Primary health care supervision in developing countries

Bosch-Capblanch et al., 2008

Tropical Medicine & International Health, Vol 13, 3, pages 369–383, March

http://onlinelibrary.wiley.com/doi/10.1111/j.1365-3156.2008.02012.x/pdf

Aim

To (a) summarise opinion about what supervision of primary health care is by those advocating it; (b) compare these features with reports describing supervision in practice; and (c) to appraise the evidence of the effects of sector performance.

Results

74 reports were included. In eight policy and opinion papers, supervision was conceptualised as the link between the district and the peripheral health staff; it is important in performance and staff motivation; it often includes problem solving, reviewing records, and observing clinical practice; and is usually undertaken by visiting the supervisees place of work. In 54 descriptive studies, the setting was the primary health care (PHC) or specific services and programmes. Supervisor-supervisee dyads were generally district personnel supervising health facilities or lay health workers. Supervision mostly meant visiting supervisees, but also included meetings in the centre; it appeared to focus on administration and checking, sometimes with checklists. Problem solving, feedback and clinical supervision, training and consultation with the community were less commonly described in the descriptive studies. Supervision appears expensive from studies that have reported costs. In 12 quasi-experimental trials, supervision interventions generally showed

small positive effects in some of the outcomes assessed. However, trial quality was mixed, and outcomes varied greatly between studies.

Conclusions

Supervision is widely recommended, but is a complex intervention and implemented in different ways. There is some evidence of benefit on health care performance, but the studies are generally limited in the rigor and follow up is limited. Further research delineating what supervision consists of and evaluating it in the context of unbiased comparisons would guide the implementation of effective supervision as part of the management of PHC.

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Review

Effects of policy options for human resources for health: an analysis of systematic reviews

Chopra et al., 2008

Lancet, 371: 668–74

http://www.who.int/alliance-hpsr/researchsynthesis/AllianceHPSR_EffectsOfPolicyOptionsHumanResources_SystematicReviews.pdf

Background and Aim

Policy makers face challenges to ensure an appropriate supply and distribution of trained health workers and to manage their performance in delivery of services, especially in countries with low and middle incomes. We aimed to identify all available policy options to address human resources for health in such countries, and to assess the effectiveness of these policy options.

Results

28 of the 759 systematic reviews of effects that we identified were eligible according to our criteria. Of these, only a few included studies from countries with low and middle incomes, and some reviews were of low quality. Most evidence focused on organisational mechanisms for human resources, such as substitution or shifting tasks between different types of health workers, or extension of their roles; performance-enhancing strategies such as quality improvement or continuing education strategies; promotion of teamwork; and changes to workflow. Of all policy options, the use of lay health workers had the greatest proportion of reviews in countries with a range of incomes, from high to low.

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Review

Improving health worker performance: in search of promising practices

Dieleman et al., 2006

WHO Report

http://www.who.int/hrh/resources/improving_hw_performance.pdf

Summary

In this report, performance is considered to be a combination of staff being available (retained and present) and staff being competent, productive and responsive.

Described experiences and provide lessons learnt with respect to interventions to retain staff and improve their productivity, competence and responsiveness. It is primarily written for health policymakers, planners and managers in resource-poor settings. Poor performance is a result of health staff not being sufficient in numbers, or not providing care according to standards, and not being responsive to the needs of the community and patients. Various factors influencing staff retention and mobility can be distinguished: personal and lifestyle-related factors, including living circumstances; work-related factors, related to preparation for work during pre-service education; health-system related factors, such as human resources policy and planning; job satisfaction, influenced by health facility factors, such as financial considerations, working conditions, management capacity and styles, professional advancement and safety at work. At macro or health-system level, certain strategies within health sector reforms can be successful, such as changes in payment systems, decentralization, community participation and accountability mechanisms.
At micro or facility level, tested strategies include quality assurance and performance-improvement interventions and activities in human resources management, such as performance-based incentives, supportive supervision, training and improving leadership and management.

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Review
Effectiveness of continuing medical education
Marinopoulos et al., 2007
Evid Rep Technol Assess (Full Rep); (149):1-69.
http://archive.ahrq.gov/downloads/pub/evidence/pdf/cme/cme.pdf

Background and Aim
Despite the broad range of continuing medical education (CME) offerings aimed at educating practicing physicians through the provision of up-to-date clinical information, physicians commonly overuse, under-use, and misuse therapeutic and diagnostic interventions. It has been suggested that the ineffective nature of CME either accounts for the discrepancy between evidence and practice or at a minimum contributes to this gap. Understanding what CME tools and techniques are most effective in disseminating and retaining medical knowledge is critical to improving CME and thus diminishing the gap between evidence and practice. The purpose of this review was to comprehensively and systematically synthesize evidence regarding the effectiveness of CME and differing instructional designs in terms of knowledge, attitudes, skills, practice behavior, and clinical practice outcomes.
Results
Of the 68,000 citations identified by literature searching, 136 articles and 9 systematic reviews ultimately met our eligibility criteria. The overall quality of the literature was low and consequently firm conclusions were not possible. Despite this, the literature overall supported the concept that CME was effective, at least to some degree, in achieving and maintaining the objectives studied, including knowledge (22 of 28 studies), attitudes (22 of 26), skills (12 of 15), practice behavior (61 of 105), and clinical practice outcomes (14 of 33). Common themes included that live media was

more effective than print, multimedia was more effective than single media interventions, and multiple exposures were more effective than a single exposure. The number of articles that addressed internal and/or external characteristics of CME activities was too small and the studies too heterogeneous to determine if any of these are crucial for CME success. Evidence was limited on the reliability and validity of the tools that have been used to assess CME effectiveness. Based on previous reviews, the evidence indicates that simulation methods in medical education are effective in the dissemination of psychomotor and procedural skills.

Conclusions

Despite the low quality of the evidence, CME appears to be effective at the acquisition and retention of knowledge, attitudes, skills, behaviors and clinical outcomes. More research is needed to determine with any degree of certainty which types of media, techniques, and exposure volumes as well as what internal and external audience characteristics are associated with improvements in outcomes.

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Review

Preventive staff-support interventions for health workers

van Wyk et al., 2010

Cochrane Database of Systematic Reviews, Issue 3. Art. No.: CD003541. DOI: 10.1002/14651858.CD003541.pub2

http://www.udea.edu.co/portal/page/portal/bibliotecaSedesDependencias/unidadesAcademicas/FacultadNacionalSaludPublica/Diseno/archivos/General/Preventive%20staff-support%20interventions%20for%20health%20workers.pdf

Background

Healthcare workers need to be supported to maintain sufficient levels of motivation and productivity, and to prevent the debilitating effects of stress on mental and physical well-being.

Aim

The review aims to assess the effects of preventive staff-support interventions to healthcare workers.

Results

Ten studies involving 716 participants met the criteria for inclusion. None assessed the effects of support groups for health workers. Eight studies assessed the effects of training interventions in various stress management techniques on measures of stress and/or job satisfaction, and two studies assessed the effects of management interventions on stress, job satisfaction and absenteeism. Three studies demonstrated a beneficial effect of stress management training intervention on job stress. Only one of these showed that this effect is sustainable over the medium-term. One study demonstrated the beneficial effect of a high intensity, stress management training intervention on burnout. Low and moderate intensity stress management training interventions failed to demonstrate benefit on burnout or staff satisfaction. Management interventions demonstrated increases in job satisfaction, but failed to show effect on absenteeism. Most studies had several methodological shortcomings leaving them vulnerable to potential biases.

Conclusions

There is insufficient evidence for the effectiveness of stress management training interventions to reduce job stress and prevent burnout among healthcare workers beyond the intervention period. Low quality evidence suggests that longer-term interventions with refresher or booster sessions may have more sustained positive effect, but this needs to be rigorously evaluated in further trials. Low quality evidence exists to show that management interventions may improve some measures of job satisfaction. However, further trials are needed to assess whether this finding is replicable in other settings. There was insufficient evidence of the benefit of management interventions on staff absenteeism. Rigorous trials are needed to assess the effects of longer-term stress management training and management interventions in primary care and developing country settings.

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Review

Paying for performance to improve the delivery of health interventions in low- and middle-income countries

Witter et al., 2012

Cochrane Database of Systematic Reviews, Issue 2. Art. No.: CD007899. DOI: 10.1002/14651858.CD007899.pub2

http://www.tractionproject.org/sites/default/files/Cochrane%20Review%20PBF-%20Witter%202012.pdf

Background

There is a growing interest in paying for performance as a means to align the incentives of health workers and health providers with public health goals. However, there is currently a lack of rigorous evidence on the effectiveness of these strategies in improving health care and health, particularly in low- and middle-income countries. Moreover, paying for performance is a complex intervention with uncertain benefits and potential harms. A review of evidence on effectiveness is therefore timely, especially as this is an area of growing interest for funders and governments.

Aim

The aim is to assess the current evidence for the effects of paying for performance on the provision of health care and health outcomes in low and middle-income countries.

Results

Nine studies were included in the review: one randomised trial, six controlled before-after studies and two interrupted time series studies (or studies which could be re-analysed as such). The interventions were varied: one used target payments linked to quality of care (in the Philippines). Two used target payments linked to coverage indicators (in Tanzania and Zambia). Three used conditional cash transfers, modified by quality measurements (in Rwanda, Burundi and the Democratic Republic of Congo). Two used conditional cash transfers without qualitymeasures (in Rwanda and Vietnam).One used amix of conditional cash transfers and target payments (China). Targeted services also varied. Most of the interventions used a wide range

of targets covering inpatient, outpatient and preventive care, including a strong emphasis on services for women and children. However, one focused specifically on tuberculosis (the main outcome measure was cases detected); one on hospital revenues; and one on improved treatment of common illnesses in under-sixes. Participants were in most cases in a mix of public and faith-based facilities (dispensaries, health posts, health centres and hospitals), though districts were also involved and in one case payments were made direct to individual private practitioners. One study was considered to have low risk of bias and one a moderate risk of bias. The other seven studies had a high risk of bias. Only one study included any patient health indicators. Of the four outcome measures, two showed significant improvement for the intervention group (wasting and self-reported health by parents of the under-fives), while two showed no significant difference (being C-reactive protein (CRP)-negative and not anaemic). The two more robust studies both found mixed results - gains for some indicators but no improvement for others. Almost all dimensions of potential impact remain under-studied, including intended and unintended impact on health outcomes, equity, organisational change, user payments and satisfaction, resource use and staff satisfaction.

Conclusions

The current evidence base is too weak to draw general conclusions; more robust and also comprehensive studies are needed. Performance based funding is not a uniform intervention, but rather a range of approaches. Its effects depend on the interaction of several variables, including the design of the intervention (e.g. who receives payments, the magnitude of the incentives, the targets and how they are measured), the amount of additional funding, other ancillary components such as technical support, and contextual factors, including the organisational context in which it is implemented.

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Theme 4: Governance

Topic: Implementation of recent HIV testing strategies

- What are the barriers and facilitating factors to implementation of recent HIV testing strategies (self and home testing) in low - and middle - income countries?

Literature

Review

Home-based HIV voluntary counselling and testing (VCT) for improving uptake of HIV testing
Bateganya et al., 2010
Cochrane Database Syst Rev, Jul 7;(7):CD006493. doi: 10.1002/14651858.CD006493.pub4
http://www.ncbi.nlm.nih.gov/pubmed/20614446

Background

The low uptake of HIV voluntary counselling and testing (VCT) has hindered global attempts to prevent new HIV infections and has limited scale-up of HIV care and

treatment. Globally, only 10% of HIV-infected individuals are aware of their HIV status. One approach to increase uptake is home-based HIV VCT, which may be effective in increasing the number of patients on treatment and preventing new infections.

Aim

To establish the effect of home-based HIV VCT on uptake of HIV testing

Results

Only one study from developing countries met the inclusion criteria and was included in the review. The study, a cluster randomised trial (10 clusters, n=849) compared VCT uptake between an optional location (including home-based) and a local clinic location in a population-based HIV survey. The study showed a higher uptake of VCT among participants in the optional-location group. Uptake was significantly greater in the optional-location group in those who were pre-test counselled only (RR=4.6; 95% CI 3.58 to 5.91); pretest counselled and tested (RR=4.6; 95% CI 3.51 to 5.92); and post-test counselled and received the test result (RR=4.8; 95% CI 3.62 to 6.21). This study, however, had significant methodological problems limiting further analysis and interpretation.

Conclusions

Although home-based HIV VCT has the potential to enhance VCT uptake in developing countries, insufficient data exist to recommend large-scale implementation of home-based HIV testing. Further studies are needed to determine if home-based VCT is better than facility-based VCT in improving VCT uptake.

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Review

Effectiveness of external inspection of compliance with standards in improving healthcare organisation behaviour, healthcare professional behaviour or patient outcomes

Flodgren et al., 2011

Cochrane Database of Systematic Reviews, Issue 11. Art. No.: CD008992. DOI: 10.1002/14651858.CD008992.pub2

http://www.ncbi.nlm.nih.gov/pubmed/22071861

Background

Inspection systems are used in health care to promote quality improvements, i.e. to achieve changes in organisational structures or processes, healthcare provider behaviour and patient outcomes. These systems are based on the assumption that externally promoted adherence to evidence-based standards (through inspection/assessment) will result in higher quality of health care. However, the benefits of external inspection in terms of organisational, provider and patient level outcomes are not clear.

Aim

The aim is to evaluate the effectiveness of external inspection of compliance with standards in improving healthcare organisation behaviour, healthcare professional behaviour and patient outcomes.

Results

We identified one cluster-RCT involving 20 South African public hospitals (Salmon 2003) and one ITS involving all acute trusts in England (OPM 2009) for inclusion in this review. Salmon and colleagues (Salmon 2003) showed mixed effects of a hospital accreditation system on the compliance with COHSASA (the Council for Health Services Accreditation for South Africa) accreditation standards and eight indicators of hospital quality. Significantly improved total mean compliance score with COHSASA accreditation standards was found for 21/28 service elements: mean intervention effect (95% confidence interval (CI)) was 30% (23% to 57%) (P < 0.001). The score increased from 48% to 78% in intervention hospitals, while remaining the same in control hospitals (43%). A sub-analysis of 424 a priori identified critical criteria (19 service elements) showed significantly improved compliance with the critical standards (P < 0.001). The score increased from 41% (21% to 46%) to 75% (55% to 96%) in intervention hospitals, but was unchanged in control hospitals (37%). Only one of the nine intervention hospitals gained full accreditation status at the end of the study period, with two others reached pre-accreditation status. The median intervention effect (range) for the indicators of hospital quality of care was 2.4 (-1.9 to +11.8) and only one of the eight indicators: 'nurses perception of clinical quality, participation and teamwork' was significantly improved (mean intervention effect 5.7, P = 0.03).Re-analysis of the MRSA (methicillin-resistant Staphylococcus aureus) data showed statistically non-significant effects of the Healthcare Commissions Infection Inspection programme.

Conclusions

We only identified two studies for inclusion in this review, which highlights the paucity of high-quality controlled evaluations of the effectiveness of external inspection systems. No firm conclusions could therefore be drawn about the effectiveness of external inspection on compliance with standards.

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Review

Integration of HIV/AIDS services with maternal, neonatal and child health, nutrition, and family planning services

Lindegren et al., 2012

Cochrane Database of Systematic Reviews, Issue 9. Art. No.: CD010119. DOI: 10.1002/14651858.CD010119

http://www.ncbi.nlm.nih.gov/pubmed/22972150

Background

The integration of HIV/AIDS and maternal, neonatal, child health and nutrition services (MNCHN), including family planning (FP) is recognized as a key strategy to reduce maternal and child mortality and control the HIV/AIDS epidemic. However, limited evidence exists on the effectiveness of service integration.

Aim

To evaluate the impact of integrating MNCHN-FP and HIV/AIDS services on health, behavioral, and economic outcomes and to identify research gaps.

Results
Twenty peer-reviewed articles representing 19 interventions met inclusion criteria. There were no randomized controlled trials. One study utilized a stepped wedge design, while the rest were non-randomized trials, cohort studies, time series studies, cross-sectional studies, serial cross-sectional studies, and before-after studies. It was not possible to perform meta-analysis. Risk of bias was generally high. We found high between-study heterogeneity in terms of intervention types, study objectives, settings and designs, and reported outcomes. Most studies integrated FP with HIV testing (n=7) or HIV care and treatment (n=4). Overall, HIV and MNCHN-FP service integration was found to be feasible across a variety of integration models, settings and target populations. Nearly all studies reported positive post-integration effects on key outcomes including contraceptive use, antiretroviral therapy initiation in pregnancy, HIV testing, and quality of services.
Conclusions
This systematic review's findings show that integrated HIV/AIDS and MNCHN-FP services are feasible to implement and show promise towards improving a variety of health and behavioral outcomes. However, significant evidence gaps remain. Rigorous research comparing outcomes of integrated with non-integrated services, including cost, cost-effectiveness, and health outcomes such as HIV and STI incidence, morbidity and mortality are greatly needed to inform programs and policy.

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Review
Strategies for integrating primary health services in low- and middle-income countries at the point of delivery
Dudley et al., 2011
Cochrane Database of Systematic Reviews, Issue 7. Art. No.: CD003318. DOI: 10.1002/14651858.CD003318.pub3
http://www.ncbi.nlm.nih.gov/pubmed/21735392

Background
In some low- and middle-income countries, separate vertical programmes deliver specific life-saving interventions but can fragment services. Strategies to integrate services aim to bring together inputs, organisation, and delivery of particular functions to increase efficiency and people's access. We examined the evidence on the effectiveness of integration strategies at the point of delivery (sometimes termed 'linkages'), including integrated delivery of tuberculosis (TB), HIV/AIDS and reproductive health programmes.
Aim
To assess the effects of strategies to integrate primary health care services on healthcare delivery and health status in low- and middle-income countries.
Results
Five randomised trials and four controlled before and after studies were included. The interventions were complex. Five studies added an additional component, or linked a new component, to an existing service, for example, adding family planning

or HIV counselling and testing to routine services. The evidence from these studies indicated that adding on services probably increases service utilisation but probably does not improve health status outcomes, such as incident pregnancies. Four studies compared integrated services to single, special services. Based on the included studies, fully integrating sexually transmitted infection (STI) and family planning, and maternal and child health services into routine care as opposed to delivering them as special 'vertical' services may decrease utilisation, client knowledge of and satisfaction with the services and may not result in any difference in health outcomes, such as child survival. Integrating HIV prevention and control at facility and community level improved the effectiveness of certain services (STI treatment in males) but resulted in no difference in health seeking behaviour, STI incidence, or HIV incidence in the population.

Conclusions

There is some evidence that 'adding on' services (or linkages) may improve the utilisation and outputs of healthcare delivery. However, there is no evidence to date that a fuller form of integration improves healthcare delivery or health status. Available evidence suggests that full integration probably decreases the knowledge and utilisation of specific services and may not result in any improvements in health status. More rigorous studies of different strategies to promote integration over a wider range of services and settings are needed. These studies should include economic evaluation and the views of clients as clients' views will influence the uptake of integration strategies at the point of delivery and the effectiveness on community health of these strategies.

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Review

Integrating prevention of mother-to-child HIV transmission (PMTCT) programmes with other health services for preventing HIV infection and improving HIV outcomes in developing countries

Tudor Car et al., 2011

Cochrane Database of Systematic Reviews, Issue 6. Art. No.: CD008741. DOI: 10.1002/14651858.CD008741.pub2

http://www.ncbi.nlm.nih.gov/pubmed/21678382

Background

Every year nearly 400,000 children are infected with HIV through mother-to-child transmission (MTCT), which is responsible for more than 90% of HIV infections in children. In high-income countries, the MTCT rate is less than 1% through perinatal prevention of mother-to-child HIV transmission (PMTCT) interventions. In low- and middle-income countries, PMTCT programme coverage remains low and consequently transmission rate high. The World Health Organisation recommends integration of PMTCT programmes with other healthcare services to increase access and improve uptake of these interventions.

Aim

To assess the effect of integration of perinatal PMTCT measures with other health care services on coverage and service uptake compared to stand-alone PMTCT programmes and healthcare services or partially integrated PMTCT interventions.

Results

Only one study met the inclusion criteria. A cluster-randomised trial (12 clusters, n=7664), compared mother-infant nevirapine coverage at labour ward between intervention clinics implementing rapid HIV testing with structured nevirapine assessment and control clinics implementing informal assessment of nevirapine adherence. The authors measured nevirapine coverage in all clinics at baseline and after the implementation of the intervention. An increase of 10% (range of difference in coverage from -10% to +33%) was observed in the intervention sites compared to 10% decline in mother-infant coverage in the control sites (range of difference in coverage from -13% to 0%). The study showed that the probability of nevirapine coverage of mothers and their infants in the intervention arm compared to control arm increased from 0.89 at baseline to 1.22 during the intervention period, representing a multiplicative effect of 1.37 upon the ratio of relative risks at baseline (RR 1.37, bootstrapped 95% CI, 1.041.77). The study had a low risk of bias. No studies were found that evaluated the effectiveness of integrating other perinatal PMTCT interventions with healthcare services.

Conclusions

We found only one study suggesting that integrating perinatal PMTCT interventions with other healthcare services in low- and middle-income countries increases the proportion of pregnant women, mothers and infants receiving PMTCT intervention. The weak evidence base does not enable making any inferences for other countries or contexts. The study that met the inclusion criteria assessed only the impact of integrating PMTCT intervention in labour ward on the proportion of mothers and their infants receiving nevirapine. The study showed significant improvement in intervention coverage but it only addressed the labour ward aspect of PMTCT programme. We did not find sufficient evidence to make definitive conclusions about the effectiveness of integration of these interventions with other health services rather than providing them as stand-alone services. Further research is urgently needed to assess the effect of integrating perinatal prevention of mother-to-child HIV transmission interventions with other health services on intervention coverage, service uptake, quality of care and health outcomes and the optimal integration modality.

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Topic: Impact of decentralisation administrative functions

- What impact has decentralisation of administrative functions (e.g. finances, HR, procurement) had on the delivery, efficiency and experience (of patients, caregivers, providers, managers, policy makers) of health services in LMICs?

Literature

Review
Decentralising HIV treatment in lower- and middle-income countries
Kredo et al., 2013
Cochrane Database of Systematic Reviews, Issue 6. Art. No.: CD009987. DOI: 10.1002/14651858.CD009987.pub2
http://www.ncbi.nlm.nih.gov/pubmed/23807693

Background
Policy makers, health staff and communities recognise that health services in lower- and middle-income countries need to improve people's access to HIV treatment and retention to treatment programmes. One strategy is to move antiretroviral delivery from hospitals to more peripheral health facilities or even beyond health facilities. This could increase the number of people with access to care, improve health outcomes, and enhance retention in treatment programmes. On the other hand, providing care at less sophisticated levels in the health service or at community-level may decrease quality of care and result in worse health outcomes. To address these uncertainties, we summarised the research studies examining the risks and benefits of decentralising antiretroviral therapy service delivery.
Aim
To assess the effects of various models that decentralised HIV treatment and care to more basic levels in the health system for initiating and maintaining antiretroviral therapy.
Results
Sixteen studies met the inclusion criteria, all but one were from Africa, comprising two cluster randomised trials and 14 cohort studies. Antiretroviral therapy started at a hospital and maintained at a health centre (partial decentralisation) probably reduces attrition (RR 0.46, 95% CI 0.29 to 0.71, 4 studies, 39 090 patients, moderate quality evidence). There may be fewer patients lost to care with this model (RR 0.55, 95% CI 0.45 to 0.69, low quality evidence).We are uncertain whether there is a difference in attrition for antiretroviral therapy started and maintained at a health centre (full decentralisation) compared to a hospital at 12 months (RR 0.70, 95% CI 0.47 to 1.02; four studies, 56 360 patients, very low quality evidence), but there are probably fewer patients lost to care with this model (RR 0.3, 95% CI 0.17 to 0.54, moderate quality evidence).When antiretroviral maintenance therapy is delivered at home by trained volunteers, there is probably no difference in attrition at 12 months (RR 0.95, 95% CI 0.62 to 1.46, two trials, 1453 patients, moderate quality evidence).
Conclusions
Decentralisation of HIV care aims to improve patient access and retention in care. Most data were from good quality cohort studies but confounding between site of treatment and outcomes cannot be excluded. Nevertheless, this review found that attrition appears to be lower in partial decentralisation models of treatment, where antiretrovirals were started at hospital and continued in the health centre; with antiretroviral drugs started and continued at health centres, no difference in attrition was detected, but there were fewer patients lost to care. For antiretroviral

therapy provided at home by trained volunteers, no difference in outcomes was detected when compared to facility-based care.

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Theme 5: Financing

Topic: Frivolous use of services

- Is there evidence of unnecessary or 'frivolous' use of health services care when people do not have to pay out-of-pocket for health care?

Literature

Review

The impact of user fees on health service utilization in low- and middle-income countries: how strong is the evidence?
Lagarde et al., 2008
Bulletin of the World Health Organization, 86:839–848
http://www.who.int/bulletin/volumes/86/11/07-049197.pdf

Aim

To assess the effects of user charges on the uptake of health services in low- and middle-income countries.

Results

Sixteen studies were included: five CBA, two C-RCT and nine ITS. Only studies reporting effects on health service utilization, sometimes across socioeconomic groups, were identified. Removing or reducing user fees was found to increase the utilization of curative services and perhaps preventive services as well, but may have negatively impacted service quality. Introducing or increasing fees reduced the utilization of some curative services, although quality improvements may have helped maintain utilization in some cases. When fees were either introduced or removed, the impact was immediate and abrupt. Studies did not adequately show whether such an increase or reduction in utilization was sustained over the longer term. In addition, most of the studies were given low-quality ratings based on criteria adapted from those of the Cochrane Collaboration's Effective Practice and Organisation of Care group.

Conclusion

There is a need for more high-quality research examining the effects of changes in user fees for health services in low- and middle-income countries.

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Topic: National Health Insurance

- What is the evidence regarding the outcomes of national health insurance?

Literature

Review
Impact of national health insurance for the poor and the informal sector in low and middle-income countries: a systematic review
Acharya et al., 2012
EPPI-Centre, Social Science Research Unit, Institute of Education, University of London
http://r4d.dfid.gov.uk/PDF/Outputs/SystematicReviews/Health-insurance-2012Acharya-report.pdf

Background
Moving away from out-of-pocket (OOP) payments for healthcare at the time of use to prepayment through health insurance (HI) is an important step towards averting financial hardships associated with paying for health services. Social health insurance (SHI) is mandated for those employed in many developed countries where employment and wage rates are high; this service is extended to those unemployed through subsidy. In low- and middle-income countries (LMICs) some version of SHI has been offered to those in the informal labour sector, who may well comprise the majority of the workforce. We carried out a systematic review of studies reporting on the impact of health insurance schemes that are intended to benefit the poor, mostly employed in the informal sector, in LMICs at a national level, or have the potential to be scaled up to be delivered to a large population.
Conclusions
Our systematic review showed inconclusive evidence. Low enrolment is commonly observed in many of the insurance schemes we examined. Many health system factors may play a role in explaining low enrolment; studies did not explore supply factors. We do not observe a pattern regarding enrolment and outcome: for example, high enrolment is not correlated with better outcomes. There is some evidence that health insurance may prevent high levels of expenditure. From those studies reporting on whether or not the impact on the subgroup of insured that were poorer was more noticeable, we find that the impact was smaller for the poorer population. That is, the insured poor may be undertaking higher OOP expenditure than those who are not insured.

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Review
Community-based health insurance in developing countries: a study of its contribution to the performance of health financing systems
Guy et al., 2005
Tropical Medicine and International Health, Vol 10 no 8 pp 799–811
http://onlinelibrary.wiley.com/doi/10.1111/j.1365-3156.2005.01455.x/pdf

Summary
We studied the potential of community-based health insurance (CHI) to contribute to the performance of health financing systems. The international empirical evidence is analysed on the basis of the three health financing subfunctions as outlined in the

World Health Report 2000: revenue collection, pooling of resources and purchasing of services. The evidence indicates that achievements of CHI in each of these subfunctions so far have been modest, although many CHI schemes still are relatively young and would need more time to develop. We present an overview of the main factors influencing the performance of CHI on these financing subfunctions and discuss a set of proposals to increase CHI performance. The proposals pertain to the demand for and the supply of health care in the community; to the technical, managerial and institutional set-up of CHI; and to the rational use of subsidies.

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Review

Pharmaceutical policies: effects of cap and co-payment on rational drug use

Austvoll-Dahlgren et al., 2008

Cochrane Database Syst Rev, 23(1):CD007017. doi: 10.1002/14651858.CD007017

http://www.ncbi.nlm.nih.gov/pubmed/18254125

Background

Growing expenditures on prescription drugs represent a major challenge to many health systems. Cap and co-payment (direct cost-share) policies are intended as an incentive to deter unnecessary or marginal utilisation, and to reduce third-party payer expenditures by shifting parts of the financial burden from the insurer to patients, thus increasing their financial responsibility for prescription drugs. Direct patient drug payment policies include caps (maximum number of prescriptions or drugs that are reimbursed), fixed co-payments (patients pay a fixed amount per prescription or drug), coinsurance (patients pay a percent of the price), ceilings (patients pay the full price or part of the cost up to a ceiling, after which drugs are free or available at reduced cost), and tier co-payments (differential co-payments usually assigned to generic and brand drugs).

Aim

To determine the effects of cap and co-payment (cost-sharing) policies on drug use, healthcare utilisation, health outcomes and costs (expenditures).

Results

We included 30 evaluations (in 21 studies). Of these, 11 evaluated fixed co-payment, six evaluated coinsurance with a ceiling, four evaluated caps, three evaluated fixed co-payment with a ceiling, three evaluated tier co-payment, one evaluated ceiling, one evaluated fixed co-payment and coinsurance with a ceiling, and one evaluated a fixed co-payment with a cap. Most of the included evaluations were observational studies and the quality of the evidence was found to be generally low to moderate. Introducing or increasing direct co-payments reduced drug use and saved plan drug expenditures across studies. Patients responded through drug discontinuation or by cost-sharing. Investigators found reductions for life-sustaining drugs or drugs that are important in treating chronic conditions as well as other drugs. Few studies reported on the effects on health and healthcare utilisation. One study found adverse effects on health through increased healthcare utilisation when a cap was introduced in a vulnerable population. No statistically significant change in use of healthcare services was found in other studies when a cap was introduced on a drug

considered over-prescribed in a vulnerable population, or following a shift from a two-tier to a three-tier system with increased co-payments for tier-1 drugs in a general population.

Conclusions

We found a diversity of cap and co-payment policies. Poor reporting of the intensity of interventions and differences in setting, populations and interventions made it difficult to make comparisons across studies. Cap and co-payment polices can reduce drug use and save plan drug expenditures. However, although insufficient data on health outcomes were available, substantial reductions in the use of life-sustaining drugs or drugs that are important in treating chronic conditions may have adverse effects on health, and as a result increase the use of healthcare services and overall expenditures. Direct payments are less likely to cause harm if only non-essential drugs are included or exemptions are built in to ensure that patients receive needed medical care.

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Review

Impact of user fees on maternal health service utilization and related health outcomes: a systematic review

Dzakpasu et al., 2013

Health Policy and Planning, 1-14

http://heapol.oxfordjournals.org/content/early/2013/01/30/heapol.czs142.full.pdf+html

Aim

To assess the evidence of the impact of user fees on maternal health service utilization and related health outcomes in low- and middle-income countries, as well as their impact on inequalities in these outcomes.

Results

Twenty studies were included. Designs and analytic approaches comprised: two interrupted time series, eight repeated cross-sectional, nine before-and-after without comparison groups and one before-and-after in three groups. Overall, the quality of studies was poor. Few studies addressed potential sources of bias, such as secular trends over time, and even basic tests of statistical significance were often not reported. Consistency in the direction of effects provided some evidence of an increase in facility delivery in particular after fees were removed, as well as possible increases in the number of managed delivery complications. There was little evidence of the effect on health outcomes or inequality in accessing care and, where available, the direction of effect varied.

Conclusion

Despite the global momentum to abolish user fees for maternal and child health services, robust evidence quantifying impact remains scant. Improved methods for evaluating and reporting on these interventions are recommended, including better descriptions of the interventions and context, looking at a range of outcome measures, and adopting robust analytical methods that allow for adjustment of underlying and seasonal trends, reporting immediate as well as

longer-term (e.g. at 6 months and 1 year) effects and using comparison groups where possible.

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Review

Conditional cash transfers for improving uptake of health interventions in low- and middle-income countries: a systematic review

Lagarde et al., 2007

JAMA, Oct 24;298(16):1900-10

http://www.ncbi.nlm.nih.gov/pubmed/17954541

Background

Cash transfers conditional on certain behaviors, intended to provide access to social services, have been introduced in several developing countries. The effectiveness of these strategies in different contexts has not previously been the subject of a systematic review.

Aim

To assess the effectiveness of conditional monetary transfers in improving access to and use of health services, as well as improving health outcomes, in low- and middle-income countries.

Results

Overall, the evidence suggests that conditional cash transfer programs are effective in increasing the use of preventive services and sometimes improving health status.

Conclusions

Further research is needed to clarify the cost effectiveness of conditional cash transfer programs and better understand which components play a critical role. The potential success and desirability of such programs in low-income settings, with more limited health system capacity, also deserves more investigation.

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Review

The impact of user fees on access to health services in low- and middle-income countries.

Lagarde et al., 2011

Cochrane Database of Systematic Reviews, Issue 4. Art. No.: CD009094. DOI: 10.1002/14651858.CD009094

http://apps.who.int/rhl/reviews/CD009094.pdf

Background

Following an international push for financing reforms, many low- and middle-income countries introduced user fees to raise additional revenue for health systems. User fees are charges levied at the point of use and are supposed to help reduce 'frivolous' consumption of health services, increase quality of services available and, as a result, increase utilisation of services.

Aim

To assess the effectiveness of introducing, removing or changing user fees to improve access to care in low-and middle-income countries

Results

We included 16 studies out of the 243 identified. Most of the included studies showed methodological weaknesses that hamper the strength and reliability of their findings. When fees were introduced or increased, we found the use of health services decreased significantly in most studies. Two studies found increases in health service use when quality improvements were introduced at the same time as user fees. However, these studies have a high risk of bias. We found no evidence of effects on health outcomes or health expenditure.

Authors' conclusions

The review suggests that reducing or removing user fees increases the utilisation of certain healthcare services. However, emerging evidence suggests that such a change may have unintended consequences on utilisation of preventive services and service quality. The review also found that introducing or increasing fees can have a negative impact on health services utilisation, although some evidence suggests that when implemented with quality improvements these interventions could be beneficial. Most of the included studies suffered from important methodological weaknesses. More rigorous research is needed to inform debates on the desirability and effects of user fees.

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Review

Effects of prescription drug user fees on drug and health services use and on health status in vulnerable populations: a systematic review of the evidence

Lexchin et al., 2004

Int J Health Serv, 34(1):101-22

http://www.ncbi.nlm.nih.gov/pubmed/15088676

Summary

Rising pharmaceutical expenditures have led to the use of cost-sharing measures. The authors undertook a systematic review of the effects of cost sharing on vulnerable populations (the poor and those with chronic illnesses). Virtually every article reviewed supports the view that cost sharing decreases the use of prescription drugs in these populations. Copayments or a cap on the monthly number of subsidized prescriptions lower drug costs for the payer, but any savings may be offset by increases in other health care areas. Cost sharing also leads to patients foregoing essential medications and to a decline in health care status.

Review

Outreach strategies for expanding health insurance coverage in children

Meng et al., 2010

Cochrane Database of Systematic Reviews, Issue 8. Art. No.: CD008194. DOI: 10.1002/14651858.CD008194.pub2

http://www.who.int/alliance-hpsr/projects/alliancehpsr_chinaoutreachstrategiesinsurancechildren.pdf

Background
Health insurance has the potential to improve access to health care and protect people from healthcare costs when they are ill. However, coverage is often low, particularly in people most in need of protection.
Aim
To assess the effectiveness of outreach strategies for expanding insurance coverage of children who are eligible for health insurance schemes.
Results and Conclusions
We included two studies, both from the United States. One randomised controlled trial study with a low risk of bias showed that community- based case managers who provided health insurance information, application support, and negotiated with the insurer were effective in enrolling and maintaining enrolment of Latino American children into health insurance schemes (n = 257). The second quasi-randomised controlled trial, with an unclear risk of bias (n = 223), indicated that handing out insurance application materials in hospital emergency departments can increase enrolment of children into health insurance. The two studies included in this review provide evidence that in the US providing health insurance information and application assistance, and handing out application materials in hospital emergency departments can probably both improve insurance coverage of children. Further studies evaluating the effectiveness of different outreach strategies for expanding health insurance coverage of children in different countries are needed, with careful attention given to study design.

Review
The effect of new cooperative medical scheme on health outcomes and alleviating catastrophic health expenditure in China: A systematic review
Liang et al., 2012
PLoS ONE 7(8): e40850. doi:10.1371/journal.pone.0040850
http://www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0040850&representation=PDF

Background and Aim
In 2002, the Chinese government launched a new rural health financing policy to provide health insurance (New Cooperative Medical Scheme, NCMS) for its rural population. NCMS, jointly financed by governments and individual households, aims to protect households from impoverishment due to catastrophic health expenditure. In 2011, NCMS covered more than 96% of the rural population. We have systematically searched and reviewed available evidence to estimate the effects of NCMS on health outcomes and on alleviating catastrophic health expenditure.
Results
Fifteen studies out of the 6123 studies in the literature fulfilled criteria and were included in this review. Twelve studies identified the relationship between NCMS and health outcomes, among which six studies measured sickness or injury in the past four weeks, four measured sickness or injury in the past two weeks, and five measured self-reported health status. Four studies focused on the relationship between NCMS and alleviating catastrophic health expenditure. However, the results

from these studies were in conflict: individual studies indicated that NCMS had positive, negative, or no effect on health outcomes and/or the incidence of catastrophic health payments, respectively.

Conclusions

We still have no clear evidence that NCMS improves the health outcomes and decreases the alleviating catastrophic health expenditure of the China's rural population. In addition, the heterogeneity among individual studies reminds us that provider payment method reforms, benefit package and information systems around NCMS should be improved in the future.

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Review

The impact of health insurance in Africa and Asia: a systematic review

Spaan et al., 2012

Bulletin of the World Health Organization, 90:685-692. doi: 10.2471/BLT.12.102301

http://www.who.int/bulletin/volumes/90/9/12-102301.pdf

Aim

To evaluate the impact of health insurance on resource mobilization, financial protection, service utilization, quality of care, social inclusion and community empowerment in low- and lower-middle-income countries in Africa and Asia.

Results

Inclusion criteria were met by 159 studies – 68 in Africa and 91 in Asia. Most African studies reported on community-based health insurance (CBHI) and were of relatively high quality; social health insurance (SHI) studies were mostly Asian and of medium quality. Only one Asian study dealt with private health insurance (PHI). Most studies were observational; four had randomized controls and 20 had a quasi-experimental design. Financial protection, utilization and social inclusion were far more common subjects than resource mobilization, quality of care or community empowerment. Strong evidence shows that CBHI and SHI improve service utilization and protect members financially by reducing their out-of-pocket expenditure, and that CBHI improves resource mobilization too. Weak evidence points to a positive effect of both SHI and CBHI on quality of care and social inclusion. The effect of SHI and CBHI on community empowerment is inconclusive. Findings for PHI are inconclusive in all domains because of insufficient studies.

Conclusions

Health insurance offers some protection against the detrimental effects of user fees and a promising avenue towards universal health-care coverage.

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Topic: Contracting out

- What is the impact of contracting out public healthcare services to the private sector, on health outcomes in low and middle-income countries?

Literature

Review

The impact of contracting out on health outcomes and use of health services in low and middle income countries

Lagarde et al., 2009

Cochrane Database of Systematic Reviews, Issue 4. Art. No.: CD008133. DOI: 10.1002/14651858.CD008133

http://www.ncbi.nlm.nih.gov/pubmed/19821443

Background

Recent literature on the lack of efficiency and acceptability of publicly provided health services has led to an interest in the use of partnerships with the private sector to deliver public services.

Aim

The aims is to assess the effectiveness of contracting out healthcare services in improving access to care in low and middle-income countries and, where possible, health outcomes.

Results

Three studies met our inclusion criteria (one after re-analysis of data). These studies suggest that contracting out services to non-state providers can increase access and utilisation of health services. One study found a reduction in out-of-pocket expenditures and improvement in some health outcomes. However, methodological weaknesses and particularities of the reported programme settings limit the strength and generalisability of their conclusions. The impact of contracting out on health outcomes and use of health services in low and middle-income countries.

Conclusions

Three studies suggest that contracting out may be an appropriate response to scale up service delivery in particular settings, such as post-conflict or fragile states. Evidence was not presented on whether this approach was more effective than making a similar investment in the public sector, as there was not an exact control available in any of the settings. In addition, the introduction of non-state providers into some settings and not others also brings many potentially confounding variables, such as the presence of additional management expertise or expatriate doctors, which may improve drug supply or increase utilisation.

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Review

The effect of social franchising on access to and quality of health services in low- and middle-income countries

Koehlmoos et al., 2009

Cochrane Database of Systematic Reviews, Issue 1. Art. No.: CD007136. DOI: 10.1002/14651858.CD007136.pub2

http://www.who.int/alliance-hpsr/projects/alliancehpsr_csr_scopingreviewsocialfranchising.pdf

Background
Social franchising has developed as a possible means of improving provision of health services through engaging the non-state sector in low- and middle-income countries.
Aim
To examine the evidence that social franchising has on access to and quality of health services in low- and middle-income countries.
Results and Conclusions
No studies were found which were eligible for inclusion in this review. There is a need to develop rigorous studies to evaluate the effects of social franchising on access to and quality of health services in low and middle-income countries. Such studies should be informed by the wider literature to identify models of social franchising that have a sound theoretical basis and empirical research addressing their reach, acceptability, feasibility, maintenance and measurability.

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Review
The effectiveness of contracting-out primary health care services in developing countries: a review of the evidence.
Liu, X. et al., 2008
Health Policy and Planning, 23, pp. 1-13
http://www.3ieimpact.org/en/evidence/systematic-reviews/details/47/

Summary
The authors included evidence from 16 studies assessing the effectiveness of 13 contracted-out health-service interventions in Sub-Saharan Africa, Latin America and the Caribbean, Europe, South Asia and East Asia and the Pacific.
The results of the review are heterogeneous. On the one hand, the authors deduce that contracting-out health services significantly improves access and availability, especially within under-served regions. On the other hand, they fail to find conclusive evidence concerning the impact of contracting-out on other dimensions of health-system performance such as equity, quality and efficiency. Indeed, the authors report that these factors are addressed in only a very few studies, and they highlight the need for more rigorous studies exploring the impact of contracting-out health services on the equity, quality and efficiency of health systems.
The authors suggest that the effectiveness and success of contracting-out depend on a range of contextual and contract-design factors. More specifically, they observe that contractual financial incentives and the application of a payment-by-performance scheme have been demonstrated to be key determinants in the success of an intervention. Contextual factors related to the capacity of the public sector to develop the contracted-out services and the degree to which these services complement or replace existing services are also important determinants of the impact of contracted-out interventions on the equity, access, quality and efficiency of health systems. Finally, the authors highlight the need for more research on possible side effects of contracting-out interventions, which so far have been only barely assessed.

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Review

Private versus public strategies for health service provision for improving health outcomes in resource-limited settings

Montagu et al., 2011

Global Health Sciences, University of California, San Francisco

http://eppi.ioe.ac.uk/cms/LinkClick.aspx?fileticket=Ebnf2dD5jmc%3D&tabid=3307&mid=6210

Results

Twenty-one studies met our inclusion criteria and explicitly compared health outcomes between the public and private sectors. Of those, 17 were cohort studies, from 9 countries. Eleven studies were conducted in lower-middle-income countries ($996–$3,945 GNI per capita) and 10 studies from upper-middle-income countries ($3,946–$12,195 GNI per capita). Eighteen studies were conducted in urban settings. Fifteen of the 21 studies provided mortality for a health outcome, and studies examined a wide range of diseases, with tuberculosis (TB) being the most represented. A meta-analysis of all studies exploring the impact of healthcare type and mortality showed that patients in a private healthcare setting are less likely to die than patients in a public healthcare setting (OR 0.60; 95% CI 0.41–0.88). The pooled analysis showed that patients in a private healthcare facility are more likely to have unsuccessfully completed TB treatment than patients in a public healthcare facility (OR 2.04; 95% CI 1.07–3.89). Regardless of outcomes, the quality of evidence is rated, by objective measures, as either low or very low.

Conclusions

More evidence is needed to compare health outcomes between the public and private sectors. Governments and researchers can play a critical role in improving the evidence base for decision making about the contributions of the public and private sectors in a given country's health system. Governments should encourage data collection in both public and private settings that would permit ongoing comparison of clinical data. When government facilities are absent or insufficient, contracting with private-sector facilities or providers would appear to be an acceptable option. Governments must consider appropriate profit margins, regulations and training for private providers.

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Review

Can working with the private for-profit sector improve utilization of quality health services by the poor? A systematic review of the literature

Patouillard et al., 2007

J Equity Health, 6: 17

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2186328/pdf/1475-9276-6-17.pdf

Background and Aim

There has been a growing interest in the role of the private for-profit sector in health service provision in low- and middle-income countries. The private sector represents

an important source of care for all socioeconomic groups, including the poorest and substantial concerns have been raised about the quality of care it provides. Interventions have been developed to address these technical failures and simultaneously take advantage of the potential for involving private providers to achieve public health goals. Limited information is available on the extent to which these interventions have successfully expanded access to quality health services for poor and disadvantaged populations. This paper addresses this knowledge gap by presenting the results of a systematic literature review on the effectiveness of working with private for-profit providers to reach the poor.

Results

A total of 2483 references were retrieved, of which 52 qualified as impact evaluations. Data were available on the average socioeconomic status of recipient communities for 5 interventions, and on the distribution of benefits across socioeconomic groups for 5 interventions.

Conclusions

Few studies provided evidence on the impact of private sector interventions on quality and/or utilization of care by the poor. It was, however, evident that many interventions have worked successfully in poor communities and positive equity impacts can be inferred from interventions that work with types of providers predominantly used by poor people. Better evidence of the equity impact of interventions working with the private sector is needed for more robust conclusions to be drawn.

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Theme 6: Lay health workers (LHWs)

Question: Health system factors

- How have health systems factors (physical, human, intellectual & social resources; health systems financing mechanisms, delivery processes and governance mechanisms) influenced the outcomes and experiences of LHW programmes?

Literature

Review

Human resource aspects of antiretroviral treatment delivery models: current practices and recommendations

Assefa et al., 2010

Curr Opin HIV AIDS, 5(1):78-82. doi: 10.1097/COH.0b013e328333b87a

http://www.ncbi.nlm.nih.gov/pubmed/20046151

Aim

To illustrate and critically assess what is currently being published on the human resources for health dimension of antiretroviral therapy (ART) delivery models.

Recent findings

The use of human resources for health can have an effect on two crucial aspects of successful ART programmes, namely the scale-up capacity and the long-term retention in care. Task shifting as the delegation of tasks from higher qualified to lower qualified cadres has become a widespread practice in ART delivery models in low-income countries in recent years. It is increasingly shown to effectively reduce the workload for scarce medical doctors without compromising the quality of care. At the same time, it becomes clear that task shifting can only be successful when accompanied by intensive training, supervision and support from existing health system structures.

Conclusions

Although a number of recent publications have focussed on task shifting in ART delivery models, there is a lack of accessible information on the link between task shifting and patient outcomes. Current ART delivery models do not focus sufficiently on retention in care as arguably one of the most important issues for the long-term success of ART programmes. There is a need for context-specific re-designing of current ART delivery models in order to increase access to ART and improve long-term retention.

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Review

Impact of health systems strengthening on coverage of maternal health services in Rwanda, 2000–2010: a systematic review

Bucagu et al., 2012

Reproductive Health Matters, 20(39):50–61

http://www.msh.org/sites/msh.org/files/1._bucagu_et_al_hss_and_mch_in_rwanda.pdf

Summary

From 2000 to 2010, Rwanda implemented comprehensive health sector reforms to strengthen the public health system, with the aim of reducing maternal and newborn deaths in line with Millennium Development Goal 5, among many other improvements in national health. Based on a systematic review of the literature, national policy documents and three Demographic & Health Surveys (2000, 2005 and 2010), this paper describes the reforms and the policies they were based on, and provides data on the extent of Rwanda's progress in expanding the coverage of four key women's health services. Progress took place in 2000–2005 and became more rapid after 2006, mostly in rural areas, when the national facility-based childbirth policy, performance-based financing, and community-based health insurance were scaled up. Between 2006 and 2010, the following increases in coverage took place as compared to 2000–2005, particularly in rural areas, where most poor women live: births with skilled attendance (77% increase vs. 26%), institutional delivery (146% increase vs. 8%), and contraceptive prevalence (351% increase vs. 150%). The primary factors in these improvements were increases in the health workforce and their skills, performance-based financing, community-based health insurance, and better leadership and governance. Further research is needed to determine the impact of these changes on health outcomes in women and children.

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Review

What kinds of policy and programme interventions contribute to reductions in maternal mortality? The effectiveness of primary level referral systems for emergency maternity care in developing countries

Hussein et al., 2011

EPPI-Centre, Social Science Research Unit, Institute of Education, University of London

http://r4d.dfid.gov.uk/PDF/Outputs/SystematicReviews/Maternal-mortality-2011Hussein.pdf

Background and Aim

Many pregnancy complications are unpredictable and many women in developing countries live far away from where life-saving care is available. Referral interventions aim to address these problems. A systematic literature review was conducted to assess studies on the transfer of women with emergency obstetric complications from their homes, or from first contact with the health service, to an emergency obstetric care facility.

Results

Nineteen studies were included that assessed the effect of referral interventions from rural settings in Bangladesh, Burkina Faso, Guatemala, India, Indonesia, Malawi, Nepal, Pakistan, Zambia and Zimbabwe. In several South Asian settings, the organisation of communities to generate funds for transport, implemented as part of other community mobilisation activities, reduced neonatal deaths. The studies from Zambia and Zimbabwe suggested that the use of maternity waiting homes may reduce stillbirths.

Conclusions

There is some evidence that referral interventions improve the utilisation of health services. This review has strengthened the evidence for continuing to implement interventions that overcome delays in reaching obstetric care during emergencies. There are constraints limiting the conclusiveness of the evidence. Continued inclusion of referral interventions within maternal and newborn health programmes and as part of wider health system improvements is recommended, but practices in monitoring, research and evaluation of these interventions need to be improved.

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Review

Quality improvement interventions in public health systems: A systematic review

Dilley et al., 2012

Am J Prev Med, 42(5S1):S58–S71

http://www.rwjf.org/content/dam/farm/articles/journal_articles/2012/rwjf72690

Background

Public health leaders are making difficult decisions about how to maximize the effectiveness of public health services with diminishing funds. Quality improvement (QI) interventions seek to improve the efficiency and effectiveness of public health programs, services, or organizations.

Aim

The purpose of this study was to review the literature to describe public health system QI interventions and their impact on public health practices and health outcomes.

Results

Fifteen studies were identified, reporting on 18 separate QI interventions. Studies fell naturally into three functional categories: organization-wide QI, program- or service specific QI, and administrative or management function QI. Few of the studies linked their improvements directly to a health outcome or predictors of health outcomes. Studies generally were implemented in state-level or large local public health departments.

Conclusions

Formally published QI interventions may not be representative of typical, smaller scale QI activities. Collection and distribution of QI results associated with proven, effective public health interventions and that quantify the benefits of QI practices in public health should be a goal. More research is needed to definitively "connect the dots" between QI efforts, resulting practice improvements, and actual (or predictors of) health outcome improvements. Future studies should examine QI in diverse public health systems.

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Review

What do we know about health care team effectiveness? A review of the literature

Lemieux-Charles et al., 2006

Med Care Res Rev, 63(3):263-300

http://www.ncbi.nlm.nih.gov/pubmed/16651394

Summary

This review of health care team effectiveness literature from 1985 to 2004 distinguishes among intervention studies that compare team with usual (nonteam) care; intervention studies that examine the impact of team redesign on team effectiveness; and field studies that explore relationships between team context, structure, processes, and outcomes. The authors use an Integrated Team Effectiveness Model (ITEM) to summarize research findings and to identify gaps in the literature. Their analysis suggests that the type and diversity of clinical expertise involved in team decision making largely accounts for improvements in patient care and organizational effectiveness. Collaboration, conflict resolution, participation, and cohesion are most likely to influence staff satisfaction and perceived team effectiveness. The studies examined here underscore the importance of considering the contexts in which teams are embedded. The ITEM provides a useful framework for conceptualizing relationships between multiple dimensions of team context, structure, processes, and outcomes.

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Question: Re-engineering

- Can CHWs be integrated into the primary health care (PHC) system as a health system strengthening initiative? The proposed health reforms outline a plan to re-engineer the PHC system. CHW's are seen as an important part of delivering PHC services, especially in rural areas where there is a critical shortage of human resources. CHW are the first point of entry into the health care system and serve at the community-health system interface. However, they currently operate outside of the formal health system as volunteers managed by a range of different NGOs. In addition, many rural areas have a fractured existing PHC system that lack the necessary supervision required for the CHW cadre.
- What are the challenges at each level (Provincial, District and local clinic) and what strategies exist to mitigate these challenges?)

Literature

Review

What fosters or prevents interprofessional teamworking in primary and community care? A literature review

Xyrichis et al., 2008

International journal of nursing studies, 45(1):140-53

http://www.ncbi.nlm.nih.gov/pubmed/17383655

Background

The increase in prevalence of long-term conditions in Western societies, with the subsequent need for non-acute quality patient healthcare, has brought the issue of collaboration between health professionals to the fore. Within primary care, it has been suggested that multidisciplinary teamworking is essential to develop an integrated approach to promoting and maintaining the health of the population whilst improving service effectiveness. Although it is becoming widely accepted that no single discipline can provide complete care for patients with a long-term condition, in practice, interprofessional working is not always achieved.

Aim

This review aimed to explore the factors that inhibit or facilitate interprofessional teamworking in primary and community care settings, in order to inform development of multidisciplinary working at the turn of the century.

Results

Following a thematic analysis of the literature, two main themes emerged that had an impact on interprofessional teamworking: team structure and team processes. Within these two themes, six categories were identified: team premises; team size and composition; organisational support; team meetings; clear goals and objectives; and audit. The complex nature of interprofessional teamworking in primary care meant that despite teamwork being an efficient and productive way of achieving goals and results, several barriers exist that hinder its potential from becoming fully exploited; implications and recommendations for practice are discussed.

Conclusions

These findings can inform development of current best practice, although further research needs to be conducted into multidisciplinary teamworking at both the team

and organisation level, to ensure that enhancement and maintenance of teamwork leads to an improved quality of healthcare provision.

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Theme 7: Evidence of effectiveness at scale

Question: LHW programmes at scale

- What is the extent and scope of the literature (grey and published) on CHW programmes implemented at scale?
  - To what extent are the issues of training, supervision and management addressed in this literature?
  - How much of the literature reports on empirical studies (of any method, including reports) and how much of it is opinion based (e.g. letters, essays)?

Literature

Review

Global experience of community health workers for delivery of health related millennium development goals: A systematic review, country case studies, and recommendations for integration into national health systems

Zulfiqar et al., 2010

Report

http://www.who.int/workforcealliance/knowledge/publications/alliance/Global_CHW_web.pdf

Summary

There is a wide range of services offered by the CHWs to the community, ranging from provision of safe delivery, counseling on breast-feeding, management of uncomplicated childhood illnesses, from preventive health education on malaria, TB, HIV/AIDs, STDs and NCDs to their treatment and rehabilitation of people suffering from common mental health problems. The services offered by CHWs have helped in the decline of maternal and child mortality rates and have also assisted in decreasing the burden and costs of TB and malaria. However, the coverage by such programs and the overall progress towards achieving the MDG targets is very slow. The growing consensus regarding this current pace of progress, especially in the low-income countries, is that it relates to fragile health and economic systems. Country case studies identified a wide range of CHW programs with different mix of CHW typology. Results confirm that CHWs provide a critical link between their communities and the health and social services system. Communities across all the countries that we studied recognized the value of CHWs as a member of the health delivery team and therefore have supported the utilization and skill development of CHWs. The region lagging far behind the MDG targets is Africa especially the sub-Saharan Africa. Various factors have been identified to be responsible. These include inadequate human resource especially work force who are dying with HIV/AIDS and poor remuneration for their work leading to high drop outs, lack of supervision, and equipment and drug supplies needed to provide essential maternal, child and

reproductive health services and those required to control and treat potentially preventable infectious diseases.

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Review

Applying the community health worker model to diabetes management: using mixed methods to assess implementation and effectiveness

Cherrington et al., 2008

J Health Care Poor Underserved, Nov;19(4):1044-59. doi: 10.1353/hpu.0.0077

http://chwcentral.org/sites/default/files/Cherrington-CHW%20Model%20Diabetes%20Mgmt.pdf

Background

The community health worker (CHW) model is a popular method for reaching vulnerable populations with diabetes. This study assessed implementation and effectiveness of the model within diabetes programs.

Results

Eight studies met inclusion criteria for review and their program managers were interviewed. Five CHW roles were identified: educator, case manager, role model, program facilitator, and advocate. Roles, responsibilities and training varied greatly across programs. Selected outcomes also varied, ranging from physiologic measures, to health behaviors, to measures of health care utilization and cost.

Conclusions

Research regarding application of the community health worker model in diabetes management is limited and consensus regarding the scope of the CHW's role is lacking. Future studies should rigorously examine how best to integrate this promising model into chronic disease management.

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Review

Thirty years after Alma-Ata: a systematic review of the impact of community health workers delivering curative interventions against malaria, pneumonia and diarrhoea on child mortality and morbidity in sub-Saharan Africa

Christopher et al., 2011

Hum Resour Health, Oct 24;9(1):27. doi: 10.1186/1478-4491-9-27

http://www.human-resources-health.com/content/pdf/1478-4491-9-27.pdf

Background

Over thirty years have passed since the Alma-Ata Declaration on primary health care in 1978. Many governments in the first decade following the declaration responded by developing national programmes of community health workers (CHWs), but evaluations of these often demonstrated poor outcomes. As many CHW programmes have responded to the HIV/AIDS pandemic, international interest in them has returned and their role in the response to other diseases should be examined carefully so that lessons can be applied to their new roles. Over half of the deaths in African children under five years of age are due to malaria, diarrhoea and

pneumonia - a situation which could be addressed through the use of cheap and effective interventions delivered by CHWs. However, to date there is very little evidence from randomised controlled trials of the impacts of CHW programmes on child mortality in Africa. Evidence from non-randomised controlled studies has not previously been reviewed systematically.

Results

The review identified seven studies evaluating CHWs, delivering a range of interventions. Limited descriptive data on programmes, contexts or process outcomes for these CHW programmes were available. CHWs in national programmes achieved large mortality reductions of 63% and 36% respectively, when insecticide-treated nets and anti-malarial chemoprophylaxis were delivered, in addition to curative interventions.

Conclusion

CHW programmes could potentially achieve large gains in child survival in sub-Saharan Africa if these programmes were implemented at scale. Large-scale rigorous studies, including RCTs, are urgently needed to provide policymakers with more evidence on the effects of CHWs delivering these interventions.

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Review

Outcomes of community health worker interventions

Viswanathan et al., 2009

Evidence Reports/Technology Assessments, No. 181

http://www.ncbi.nlm.nih.gov/books/NBK44601/pdf/TOC.pdf

Aim

To conduct a systematic review of the evidence on characteristics of community health workers (CHWs) and CHW interventions, outcomes of such interventions, costs and cost-effectiveness of CHW interventions, and characteristics of CHW training.

Results

We included 53 studies on characteristics and outcomes of CHW interventions, 6 on cost-effectiveness, and 9 on training. CHWs interacted with participants in a broad array of locations, using a spectrum of materials at varying levels of intensity. We classified 8 studies as low intensity, 18 as moderate intensity, and 27 as high intensity, based on the type and duration of interaction.

Regarding outcomes, limited evidence (five studies) suggests that CHW interventions can improve participant knowledge when compared with alternative approaches such as no intervention, media, mail, or usual care plus pamphlets. We found mixed evidence for CHW effectiveness on participant behavior change (22 studies) and health outcomes (27 studies): some studies suggested that CHW interventions can result in greater improvements in participant behavior and health outcomes when compared with various alternatives, but other studies suggested that CHW interventions provide no statistically different benefits than alternatives. Low or moderate strength of evidence suggests that CHWs can increase appropriate health care utilization for some interventions (30 studies). The literature showed mixed

results of effectiveness when analyzed by clinical context: CHW interventions had the greatest effectiveness relative to alternatives for some disease prevention, asthma management, cervical cancer screening, and mammography screening outcomes. CHW interventions were not significantly different from alternatives for clinical breast examination, breast self-examination, colorectal cancer screening, chronic disease management, or most maternal and child health interventions. Six studies with economic and cost information yielded insufficient data to evaluate the cost-effectiveness of CHW interventions relative to other community health interventions. Limited evidence described characteristics of CHW training; no studies examined the impact of CHW training on health outcomes.

Conclusions

CHWs can serve as a means of improving outcomes for underserved populations for some health conditions. The effectiveness of CHWs in numerous areas requires further research that addresses the methodological limitations of prior studies and that contributes to translating research into practice.

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The following are not reviews but references to CHW programmes at scale

http://1millionhealthworkers.org/files/2013/01/1mCHW_TechnicalTaskForceReport.pdf

Recent trends in maternal, newborn, and child health in Brazil: progress toward Millennium Development Goals 4 and 5
Fernando et al., 2010
American Journal of Public Health, 100(10): p. 1877-89
http://www.researchgate.net/publication/45721023_Recent_trends_in_maternal_newborn_and_child_health_in_Brazil_progress_toward_Millennium_Development_Goals_4_and_5

The health effects of decentralizing primary care in Brazil
Guanais et al., 2009
Health Affairs (Millwood), 28(4): p. 1127-35
http://content.healthaffairs.org/content/28/4/1127.full.pdf+html

Evaluation of the impact of the Family Health Program on infant mortality in Brazil, 1990-2002
Macinko et al., 2006
Journal of Epidemiology and Community Health, 60(1): p. 13-9
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2465542/pdf/13.pdf

Going to scale with community-based primary care: an analysis of the family health program and infant mortality in Brazil, 1999-2004
Macinko, J., et al. 2007
Social Science and Medicine, 65(10): p. 2070-2080
http://www.sihealthpolicy.org/wp-content/uploads/2013/06/Going-to-scale-with-community-based-primary-care.pdf

The female community health volunteer programme in Nepal: Decision makers' perceptions of volunteerism, payment and other incentives.
Glenton et al., 2010
Social Science & Medicine, 70: 1920-1927
http://econpapers.repec.org/article/eeesocmed/v_3a70_3ay_3a2010_3ai_3a12_3ap_3a1920-1927.htm

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Question: From small scale to national scale

- What has been the impact of taking models of training, supervision and management of healthcare workers from small scale studies to national scale?

Literature

Review

Costs of scaling up health interventions: a systematic review
Johns et al.,
Health Policy and Planning, 20(1): 1–13
http://heapol.oxfordjournals.org/content/20/1/1.full.pdf+html

Background

National governments and international agencies, including programmes like the Global Alliance for Vaccines and Immunizations and the Global Fund to Fight AIDS, Tuberculosis and Malaria, have committed to scaling up health interventions and to meeting the Millennium Development Goals (MDGs), and need information on costs of scaling up these interventions. However, there has been no systematic attempt across health interventions to determine the impact of scaling up on the costs of programmes.

Aim

This paper presents a systematic review of the literature on the costs of scaling up health interventions. The objectives of this review are to identify factors affecting costs as coverage increases and to describe typical cost curves for different kinds of interventions.

Results

Thirty-seven studies were found, three containing cost data from programmes that had already been scaled up. The other studies provide either quantitative cost projections or qualitative descriptions of factors affecting costs when interventions are scaled up, and are used to determine important factors to consider when scaling up. Cost curves for the scaling up of different health interventions could not be derived with the available data.

Conclusions

This review demonstrates that the costs of scaling up an intervention are specific to both the type of intervention and its particular setting. However, the literature indicates general principles that can guide the process: (1) calculate separate unit costs for urban and rural populations; (2) identify economies and diseconomies of scale, and separate the fixed and variable components of the costs; (3) assess

availability and capacity of health human resources; and (4) include administrative costs, which can constitute a significant proportion of scale-up costs in the short run. This study is limited by the scarcity of real data reported in the public domain that address costs when scaling up health interventions. As coverage of health interventions increases in the process of meeting the MDGs and other health goals, it is recommended that costs of scaling up are reported alongside the impact on health of the scaled-up interventions.

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Review

Effectiveness of nutrition training of health workers toward improving caregivers' feeding practices for children aged six months to two years: a systematic review

Bruno et al. 2013

Nutr J, 12: 66

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3668136/pdf/1475-2891-12-66.pdf

Background and Aim

Nutrition training of health workers can help to reduce child undernutrition. Specifically, trained health workers might contribute to this end through frequent nutrition counseling of caregivers. This may improve child-feeding practices and thus reduce the risk of undernutrition among children of counseled caregivers. Although studies have shown varied impacts of health workers' nutrition training on child feeding practices, no systematic review of the effectiveness of such intervention has yet been reported. Therefore, we conducted this study to examine the effectiveness of nutrition training for health workers on child feeding practices including feeding frequency, energy intake, and dietary diversity among children aged six months to two years.

Results

Ten RCTs and cluster RCTs out of 4757 retrieved articles were eligible for final analyses. Overall, health workers' nutrition training improved daily energy intake of children between six months and two years of age. The pooled evidence from the three studies reporting mean energy intake per day revealed a standardized mean difference (SMD) of 0.76, 95% CI (0.63-0.88). For the two studies with median energy intake SMD was 1.06 (95% CI 0.87-1.24). Health workers' nutrition training also improved feeding frequency among children aged six months to two years. The pooled evidence from the three studies reporting mean feeding frequency showed an SMD of 0.48 (95% CI 0.38-0.58). Regarding dietary diversity, children in intervention groups were more likely to consume more diverse diets compared to their counterparts.

Conclusions

Nutrition training for health workers can improve feeding frequency, energy intake, and dietary diversity of children aged six months to two years. Scaling up of nutrition training for health workers presents a potential entry point to improve nutrition status among children.

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Review

Interventions to improve outpatient referrals from primary care to secondary care

Akbari et al., 2008
Cochrane Database Syst Rev. 2008 Oct 8;(4):CD005471. doi: 10.1002/14651858.CD005471.pub2
http://www.ncbi.nlm.nih.gov/pubmed/18843691

Background

The primary care specialist interface is a key organisational feature of many health care systems. Patients are referred to specialist care when investigation or therapeutic options are exhausted in primary care and more specialised care is needed. Referral has considerable implications for patients, the health care system and health care costs. There is considerable evidence that the referral processes can

Aim

To estimate the effectiveness and efficiency of interventions to change outpatient referral rates or improve outpatient referral appropriateness.

Results

Seventeen studies involving 23 separate comparisons were included. Nine studies (14 comparisons) evaluated professional educational interventions. Ineffective strategies included: passive dissemination of local referral guidelines (two studies), feedback of referral rates (one study) and discussion with an independent medical adviser (one study). Generally effective strategies included dissemination of guidelines with structured referral sheets (four out of five studies) and involvement of consultants in educational activities (two out of three studies). Four studies evaluated organisational interventions (patient management by family physicians compared to general internists, attachment of a physiotherapist to general practices, a new slot system for referrals and requiring a second 'in-house' opinion prior to referral), all of which were effective. Four studies (five comparisons) evaluated financial interventions. One study evaluating change from a capitation based to mixed capitation and fee-for-service system and from a fee-for-service to a capitation based system (with an element of risk sharing for secondary care services) observed a reduction in referral rates. Modest reductions in referral rates of uncertain significance were observed following the introduction of the general practice fundholding scheme in the United Kingdom (UK). One study evaluating the effect of providing access to private specialists demonstrated an increase in the proportion of patients referred to specialist services but no overall effect on referral rates.

Conclusions

There are a limited number of rigorous evaluations to base policy on. Active local educational interventions involving secondary care specialists and structured referral sheets are the only interventions shown to impact on referral rates based on current evidence. The effects of 'in-house' second opinion and other intermediate primary care based alternatives to outpatient referral appear promising.

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Theme 8: Task shifting

Question: Role of mid-level workers

- What is the role of mid-level workers in the provision of the full scope of health services?

Literature

Review

The effectiveness and cost implications of task-shifting in the delivery of antiretroviral therapy to HIV-infected patients: a systematic review.

Mdege et al., 2013

Health Policy Plan, 28(3):223-36. doi: 10.1093/heapol/czs058

http://www.ncbi.nlm.nih.gov/pubmed/22738755

Background and Aim

Human resource shortages are a challenge to the rollout of antiretroviral therapy (ART) for HIV-infected patients, particularly in sub-Saharan Africa. Task-shifting has been recommended as an approach to reduce the impact of human resource shortages. We conducted a systematic review of randomized controlled trials and quasi-experimental studies to assess the effectiveness of task-shifting, and its impact on costs of ART provision.

Results

We identified six effectiveness studies including a total of 19 767 patients. Non-inferior patient outcomes were achieved with task-shifting from doctors to nurses, or from health care professionals to mid-level workers or lay health workers. However, most of the identified studies were underpowered to detect any difference. Three studies were identified on the cost implications of task-shifting. Task-shifting resulted in substantial cost and physician time savings.

Conclusions

The reviewed evidence suggests that task-shifting from doctors to nurses, or from health care professionals to lay health workers can potentially reduce costs of ART provision without compromising health outcomes for patients. Task-shifting is therefore a potentially effective and cost-effective approach to addressing the human resource limitations to ART rollout. However, most of the studies conducted were relatively small and more evidence is needed for each task-shifting model as it is currently limited.

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A recent WHO guideline makes evidence based recommendations on task shifting for maternal and newborn health (http://www.optimizemnh.org/)

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Review

Effect of outpatient pharmacists' non-dispensing roles on patient outcomes and prescribing patterns

Nkansah et al., 2010

Cochrane Database Syst Rev, 7;(7):CD000336. doi: 10.1002/14651858.CD000336.pub2
http://www.ncbi.nlm.nih.gov/pubmed/20614422

Background
The roles of pharmacists in patient care have expanded from the traditional tasks of dispensing medications and providing basic medication counseling to working with other health professionals and the public. Multiple reviews have evaluated the impact of pharmacist-provided patient care on health-related outcomes. Prior reviews have primarily focused on in-patient settings. This systematic review focuses on services provided by outpatient pharmacists in community or ambulatory care settings. This is an update of the Cochrane review published in 2000.
Aim
The aim is to examine the effect of outpatient pharmacists' non-dispensing roles on patient and health professional outcomes.
Results
Forty-three studies were included; 36 studies were pharmacist interventions targeting patients and seven studies were pharmacist interventions targeting health professionals. For comparison 1, the only included study showed a significant improvement in systolic blood pressure for patients receiving medication management from a pharmacist compared to usual care from a physician. For comparison 2, in the five studies evaluating process of care outcomes, pharmacist services reduced the incidence of therapeutic duplication and decreased the total number of medications prescribed. Twenty-nine of 36 studies reported clinical and humanistic outcomes. Pharmacist interventions resulted in improvement in most clinical outcomes, although these improvements were not always statistically significant. Eight studies reported patient quality of life outcomes; three studies showed improvement in at least three subdomains. For comparison 3, no studies were identified meeting the inclusion criteria. For comparison 4, two of seven studies demonstrated a clear statistically significant improvement in prescribing patterns.
Conclusions
Only one included study compared pharmacist services with other health professional services, hence we are unable to draw conclusions regarding comparisons 1 and 3. Most included studies supported the role of pharmacists in medication/therapeutic management, patient counseling, and providing health professional education with the goal of improving patient process of care and clinical outcomes, and of educational outreach visits on physician prescribing patterns. There was great heterogeneity in the types of outcomes measured across all studies. Therefore a standardized approach to measure and report clinical, humanistic, and process outcomes for future randomized controlled studies evaluating the impact of outpatient pharmacists is needed. Heterogeneity in study comparison groups, outcomes, and measures makes it challenging to make generalised statements regarding the impact of pharmacists in specific settings, disease states, and patient populations.

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Review

Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes

Zwarenstein et al., 2009
Cochrane Database Syst Rev, 8;(3):CD000072. doi: 10.1002/14651858.CD000072.pub2
http://www.ncbi.nlm.nih.gov/pubmed/19588316

Background

Poor interprofessional collaboration (IPC) can negatively affect the delivery of health services and patient care. Interventions that address IPC problems have the potential to improve professional practice and healthcare outcomes.

Aim

To assess the impact of practice-based interventions designed to change IPC, compared to no intervention or to an alternate intervention, on one or more of the following primary outcomes: patient satisfaction and/or the effectiveness and efficiency of the health care provided. Secondary outcomes include the degree of IPC achieved.

Results

Five studies met the inclusion criteria; two studies examined interprofessional rounds, two studies examined interprofessional meetings, and one study examined externally facilitated interprofessional audit. One study on daily interdisciplinary rounds in inpatient medical wards at an acute care hospital showed a positive impact on length of stay and total charges, but another study on daily interdisciplinary rounds in a community hospital telemetry ward found no impact on length of stay. Monthly multidisciplinary team meetings improved prescribing of psychotropic drugs in nursing homes. Videoconferencing compared to audio conferencing multidisciplinary case conferences showed mixed results; there was a decreased number of case conferences per patient and shorter length of treatment, but no differences in occasions of service or the length of the conference. There was also no difference between the groups in the number of communications between health professionals recorded in the notes. Multidisciplinary meetings with an external facilitator, who used strategies to encourage collaborative working, was associated with increased audit activity and reported improvements to care.

Conclusions

In this updated review, we found five studies (four new studies) that met the inclusion criteria. The review suggests that practice-based IPC interventions can improve healthcare processes and outcomes, but due to the limitations in terms of the small number of studies, sample sizes, problems with conceptualising and measuring collaboration, and heterogeneity of interventions and settings, it is difficult to draw generalisable inferences about the key elements of IPC and its effectiveness. More rigorous, cluster randomised studies with an explicit focus on IPC and its measurement, are needed to provide better evidence of the impact of practice-based IPC interventions on professional practice and healthcare outcomes. These studies should include qualitative methods to provide insight into how the interventions affect collaboration and how improved collaboration contributes to changes in outcomes.

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Review

Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases

Lewin et al., 2010

Cochrane Database Syst Rev, Mar 17;(3):CD004015. doi: 0.1002/14651858.CD004015.pub3

http://www.ncbi.nlm.nih.gov/pubmed/20238326

Background

Lay health workers (LHWs) are widely used to provide care for a broad range of health issues. Little is known, however, about the effectiveness of LHW interventions.

Aim

To assess the effects of LHW interventions in primary and community health care on maternal and child health and the management of infectious diseases.

Results

Eighty-two studies met the inclusion criteria. These showed considerable diversity in the targeted health issue and the aims, content, and outcomes of interventions. The majority were conducted in high income countries (n = 55) but many of these focused on low income and minority populations. The diversity of included studies limited meta-analysis to outcomes for four study groups. These analyses found evidence of moderate quality of the effectiveness of LHWs in promoting immunisation childhood uptake (RR 1.22, 95% CI 1.10 to 1.37; P = 0.0004); promoting initiation of breastfeeding (RR = 1.36, 95% CI 1.14 to 1.61; P < 0.00001), any breastfeeding (RR 1.24, 95% CI 1.10 to 1.39; P = 0.0004), and exclusive breastfeeding (RR 2.78, 95% CI 1.74 to 4.44; P <0.0001); and improving pulmonary TB cure rates (RR 1.22 (95% CI 1.13 to 1.31) P <0.0001), when compared to usual care. There was moderate quality evidence that LHW support had little or no effect on TB preventive treatment completion (RR 1.00, 95% CI 0.92 to 1.09; P = 0.99). There was also low quality evidence that LHWs may reduce child morbidity (RR 0.86, 95% CI 0.75 to 0.99; P = 0.03) and child (RR 0.75, 95% CI 0.55 to 1.03; P = 0.07) and neonatal (RR 0.76, 95% CI 0.57 to 1.02; P = 0.07) mortality, and increase the likelihood of seeking care for childhood illness (RR 1.33, 95% CI 0.86 to 2.05; P = 0.20). For other health issues, the evidence is insufficient to draw conclusions regarding effectiveness, or to enable the identification of specific LHW training or intervention strategies likely to be most effective.

Conclusions

LHWs provide promising benefits in promoting immunisation uptake and breastfeeding, improving TB treatment outcomes, and reducing child morbidity and mortality when compared to usual care. For other health issues, evidence is insufficient to draw conclusions about the effects of LHWs.

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Review
Free-standing midwife-led maternity units: a safe and effective alternative to hospital delivery for low-risk women?
Muthu et al., 2004
Evidence-Based Healthcare and Public Health, 8:325-331
http://www.crd.york.ac.uk/crdweb/PrintPDF.php?AccessionNumber=12005008076&Copyright=Database+of+Abstracts+of+Reviews+of+Effects+%28DARE%29%3Cbr+%2F%3EProduced+by+the+Centre+for+Reviews+and+Dissemination+%3Cbr+%2F%3ECopyright+%26copy%3B+2014+University+of+York%3Cbr+%2F%3E

Aim
To assess the safety and effectiveness of intra-partum care in free-standing (physically remote from a hospital) midwife-led maternity units (MLMUs) compared with that in traditional obstetric-led units.
Results
Four cohort studies and four case series were included. Three of the cohort studies were retrospective and one gave no further details of design. The cohort studies included 1,518 participants in the MLMU group and 33,985 controls. The four uncontrolled case series included 4,980 participants. Details of the primary studies were summarised in tables. Women were transferred from the MLMU to a hospital in 4 to 36% of cases; the highest figure was for ante-natal transfers in a case series. Neonates were transferred from the MLMU to a hospital in up to 4% of cases, which comparable to the rate of admission to intensive care for neonates born in hospital. Pethidine was used less often in the MLMU than in controls. Maternal and neonatal morbidity (with the exception of perineal tears) and mortality were generally rare in both MLMUs and obstetric units. The rates of Caesarean birth were reported for two cohort studies: 6% and 3% in the MLMU groups and 9% and 5% in the respective control groups. Further outcomes were reported in one or more studies.
Conclusions
Based on currently available data, it is not possible to be certain whether delivery in a free-standing MLMU is more or less safe or effective than delivery in a hospital obstetric unit.

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Theme 9: Linkage to care

- What interventions improve linkages between the formal health system (primary care facilities) and community based delivery systems?

Literature
Review
Retention in HIV care between testing and treatment in Sub-Saharan Africa: A systematic review
Rosen et al., 2011
PLoS Med 8(7): e1001056. doi:10.1371/journal.pmed.1001056

http://www.plosmedicine.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pmed.1001056&representation=PDF

Background
Improving the outcomes of HIV/AIDS treatment programs in resource-limited settings requires successful linkage of patients testing positive for HIV to pre–antiretroviral therapy (ART) care and retention in pre-ART care until ART initiation. We conducted a systematic review of pre-ART retention in care in Africa.
Results
Results were categorized as Stage 1 (from HIV testing to receipt of CD4 count results or clinical staging), Stage 2 (from staging to ART eligibility), or Stage 3 (from ART eligibility to ART initiation). Medians (ranges) were reported for the proportions of patients retained in each stage. We identified 28 eligible studies. The median proportion retained in Stage 1 was 59% (35%–88%); Stage 2, 46% (31%–95%); and Stage 3, 68% (14%–84%). Most studies reported on only one stage; none followed a cohort of patients through all three stages. Enrollment criteria, terminology, end points, follow-up, and outcomes varied widely and were often poorly defined, making aggregation of results difficult. Synthesis of findings from multiple studies suggests that fewer than one-third of patients testing positive for HIV and not yet eligible for ART when diagnosed are retained continuously in care, though this estimate should be regarded with caution because of review limitations.
Conclusions
Studies of retention in pre-ART care report substantial loss of patients at every step, starting with patients who do not return for their initial CD4 count results and ending with those who do not initiate ART despite eligibility. Better health information systems that allow patients to be tracked between service delivery points are needed to properly evaluate pre-ART loss to care, and researchers should attempt to standardize the terminology, definitions, and time periods reported.

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Review
Risk factors, barriers and facilitators for linkage to antiretroviral therapy care: a systematic review
Govindasamy et al., 2012
AIDS, Oct 23, 26(16):2059-67
http://www.ncbi.nlm.nih.gov/pubmed/22781227

Aim
To characterize patient and programmatic factors associated with retention in care during the pre-antiretroviral therapy (ART) period and linkage to ART care.
Results
Seven hundred and sixty-eight citations were identified. Forty-two studies from 12 countries were included for review, with the majority from South Africa (16). The most commonly cited category of factors was transport costs and distance. Stigma and fear of disclosure comprised the second most commonly cited category of

factors followed by staff shortages, long waiting times, fear of drug side effects, male sex, younger age and the need to take time off work.

Conclusions

This review highlights the importance of investigating interventions that could reduce transport difficulties. Decentralization, task-shifting and integration of services need to be expedited to alleviate health system barriers. Patient support groups and strategic post-test counselling are essential to assist patients deal with stigma and disclosure. Moreover, well tolerated first-line drugs and treatment literacy programmes are needed to improve acceptance of ART. This review suggests a combination of interventions to retain specific groups at risk for attrition such as workplace programmes for employed patients, dedicated clinic and support programmes for men and younger individuals.

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Review

Interventions to improve continuity of care in the follow-up of patients with cancer

Aubin et al., 2012

Cochrane Database of Systematic Reviews, Issue 7. Art. No.: CD007672. DOI: 10.1002/14651858.CD007672.pub2

http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007672.pub2/abstract

Background

Care from the family physician is generally interrupted when patients with cancer come under the care of second-line and third-line healthcare professionals who may also manage the patient's comorbid conditions. This situation may lead to fragmented and uncoordinated care, and results in an increased likelihood of not receiving recommended preventive services or recommended care.

Aim

To classify, describe and evaluate the effectiveness of interventions aiming to improve continuity of cancer care on patient, healthcare provider and process outcomes.

Results

Fifty-one studies were included. They used three different models, namely case management, shared care, and interdisciplinary teams. Six additional interventional strategies were used besides these models: (1) patient-held record, (2) telephone follow-up, (3) communication and case discussion between distant healthcare professionals, (4) change in medical record system, (5) care protocols, directives and guidelines, and (6) coordination of assessments and treatment. Based on the median effect size estimates, no significant difference in patient health-related outcomes was found between patients assigned to interventions and those assigned to usual care. A limited number of studies reported psychological health, satisfaction of providers, or process of care measures. However, they could not be regrouped to calculate median effect size estimates because of a high heterogeneity among studies.

Conclusions

Results from this Cochrane review do not allow us to conclude on the effectiveness of included interventions to improve continuity of care on patient, healthcare provider or process of care outcomes. Future research should evaluate interventions that target an improvement in continuity as their primary objective and describe these interventions with the categories proposed in this review. Also of importance, continuity measures should be validated with persons with cancer who have been followed in various settings.

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Topic: Service delivery

- What constitutes effective service delivery models in PHC facilities?
- How does “patient-centred care” influence the organisation of health care activities?
- What is the most-effective service delivery model to optimise case-holding for clients with chronic conditions?

Literature

Review

Strategies for integrating primary health services in low- and middle-income countries at the point of delivery

Dudley et al., 2011

Cochrane Database of Systematic Reviews, Issue 7. Art. No.: CD003318. DOI: 10.1002/14651858.CD003318.pub3

http://www.k4health.org/sites/default/files/Cochrane%20Review.pdf

Background

In some low- and middle-income countries, separate vertical programmes deliver specific life-saving interventions but can fragment services. Strategies to integrate services aim to bring together inputs, organisation, and delivery of particular functions to increase efficiency and people's access. We examined the evidence on the effectiveness of integration strategies at the point of delivery (sometimes termed 'linkages'), including integrated delivery of tuberculosis (TB), HIV/AIDS and reproductive health programmes.

Aim

To assess the effects of strategies to integrate primary health care services on healthcare delivery and health status in low- and middle-income countries.

Results

Five randomised trials and four controlled before and after studies were included. The interventions were complex. Five studies added an additional component, or linked a new component, to an existing service, for example, adding family planning or HIV counselling and testing to routine services. The evidence from these studies indicated that adding on services probably increases service utilisation but probably does not improve health status outcomes, such as incident pregnancies. Four studies compared integrated services to single, special services. Based on the included studies, fully integrating sexually transmitted infection (STI) and family planning, and maternal and child health services into routine care as opposed to delivering them as

special 'vertical' services may decrease utilisation, client knowledge of and satisfaction with the services and may not result in any difference in health outcomes, such as child survival. Integrating HIV prevention and control at facility and community level improved the effectiveness of certain services (STI treatment in males) but resulted in no difference in health seeking behaviour, STI incidence, or HIV incidence in the population.

Conclusions

There is some evidence that 'adding on' services (or linkages) may improve the utilisation and outputs of healthcare delivery. However, there is no evidence to date that a fuller form of integration improves healthcare delivery or health status. Available evidence suggests that full integration probably decreases the knowledge and utilisation of specific services and may not result in any improvements in health status. More rigorous studies of different strategies to promote integration over a wider range of services and settings are needed. These studies should include economic evaluation and the views of clients as clients' views will influence the uptake of integration strategies at the point of delivery and the effectiveness on community health of these strategies.

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Theme 10: Life course approach

- What interventions take a life course approach and include components of promotion and prevention and not simply treatment?

Literature

Review

The building blocks collaborative: Advancing a life course approach to health equity through multi-sector collaboration

Shrimali et al., 2014

Matern Child Health J, Feb;18(2), 373-9. doi: 10.1007/s10995-013-1278-x

http://www.ncbi.nlm.nih.gov/pubmed/23807714

Summary

Too many children are born into poverty, often living in disinvested communities without adequate opportunities to be healthy and thrive. Two complementary frameworks-health equity and life course-propose new approaches to these challenges. Health equity strategies seek to improve community conditions that influence health. The life course perspective focuses on key developmental periods that can shift a person's trajectory over the life course, and highlights the importance of ensuring that children have supports in place that set them up for long-term success and health. Applying these frameworks, the Alameda County Public Health Department launched the Building Blocks Collaborative (BBC), a countywide multi-sector initiative to engage community partners in improving neighborhood conditions in low-income communities, with a focus on young children. A broad cross-section of stakeholders, called to action by the state of racial

and economic inequities in children's health, came together to launch the BBC and develop a Bill of Rights that highlights the diverse factors that contribute to children's health. BBC partners then began working together to improve community conditions by learning and sharing ideas and strategies, and incubating new collaborative projects. Supportive health department leadership; dedicated staff; shared vision and ownership; a flexible partnership structure; and broad collective goals that build on partners' strengths and priorities have been critical to the growth of the BBC. Next steps include institutionalizing BBC projects into existing infrastructure, ongoing partner engagement, and continued project innovation-to achieve a common vision that all babies have the best start in life.

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