

## Helpdesk Report: Cost-effectiveness of interventions for improving adolescent sexual and reproductive health

Date: 14 June 2016

**Query:** What are the most cost-effective interventions in improving sexual and reproductive health (SRH) in adolescent girls? In what contexts are they likely to be most effective?

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### 1. Overview

Research on the cost-effectiveness of interventions to improve SRH for adolescents is limited. This rapid review includes research on some interventions which focus specifically on girls and some research on programmes for both boys and girls.

Three studies were identified that specifically analysed cost-effectiveness of SRH interventions for adolescents in low- and middle-income countries:

- A randomised intervention in Kenya delivered teacher training on the national HIV/AIDS curriculum, which focuses on abstinence until marriage. Risk reduction strategies (such as condom use or selection of safer partners) were not discussed (Dupas, 2009). It is estimated that the information campaign cost was just under US\$100 per cross-generational pregnancy averted. A cost of US\$653 is estimated per primary HIV infection averted among teenage girls (this does not include averted secondary infections).
- A study in Botswana looking at secondary schooling as an HIV prevention intervention estimates cost-effectiveness ratios (CERs) of US\$4,387/disability-adjusted life year (DALY) with antiretroviral therapy (ART) and US\$1,703/DALY without ART (Bor & De Neve, 2014). CERs less than per capita GDP (US\$5,178 in this case) are deemed to be very cost-effective. The large benefits of secondary schooling beyond HIV transmission are excluded from the calculation. Education of girls is particularly important.
- A competitive voucher scheme in Nicaragua was studied for cost-effectiveness but identified cost per sexually-transmitted infection (STI) cured rather than cost per prevention (Borghi et al., 2005). The estimate was that the intervention cost US\$118 per STI cured. Without the scheme, the cost estimate was US\$200 per STI cured.

A number of other studies reported costs but did not look specifically at cost-effectiveness. Findings include:

- A conditional cash transfer programme in Malawi was found to be effective in reducing pregnancy among young women (Baird et al., 2010). Administrative costs were found to be 50% of programme costs. The authors estimate that a similar programme run through the government could use schools for administration and so reducing these costs.
- A study looked at costs of delivering sex education linked to adolescent-friendly services at health facilities interventions in Bangladesh for boys and girls (Bhuiya et al., 2004). The clinic-based intervention was the least costly and particularly low as it incurred an average incremental cost of US\$2,349 compared to the school-based intervention of US\$12,037 or the average community-based interventions of US\$12,309. However, the authors emphasise that it is unlikely that a clinic-based intervention alone would bring many adolescents to the clinic.
- An early study compared the costs of two SRH programmes in Mexico (Townsend et al., 1987). The interventions were: Integrated Youth Centers providing sex education and family planning services as well as counselling, academic tutoring, and recreational activities; and a Community Youth Programme where young adults and community youth counsellors were trained and work through informal networks to provide sex education and family planning information. Set-up and running costs were found to be considerably higher for the Integrated Youth Center. The Community Program was found to be more effective in reaching young adults. Two more recent reviews find literature that supports the notion that youth centres are not effective or cost effective for delivering family planning (Denno et al., 2015; Zurmond et al., 2012).
- An NGO review finds that peer programmes for SRH are not cost-effective (James-Traore et al, 2009).

Reviews on adolescent SRH agree that data on cost-effectiveness was severely lacking (Merrick, 2014; McQueston et al., 2012; Denno et al., 2015; Glinski et al., 2015).

## 2. Cost-effectiveness studies

### **Do teenagers respond to HIV risk information? Evidence from a field experiment in Kenya**

Dupas P. (2009). National Bureau of Economic Research.  
<http://www.nber.org/papers/w14707.pdf>

This study data from a randomised field experiment involving 328 primary schools to compare the effects of providing abstinence-only versus detailed HIV risk information on teenage sexual behaviour. In Kenya and Zambia, prevalence in the 15-19 age group has been found to be at least three times higher among girls than among boys. The prevalence gap between young women and young men is also due to the fact that risk of male-to-female HIV transmission is greater than the risk of female-to-male transmission, but this biological factor, accounts for only a third of the gap observed sexual behaviour. Half of the schools, randomly selected, received teacher training on the national HIV/AIDS curriculum, which focuses on abstinence until marriage, but does not discuss risk reduction strategies (such as condom use or selection of safer partners). In 71 schools, randomly selected after stratifying by teacher training status, an information campaign provided teenagers with information on the prevalence of HIV disaggregated by age and gender group (the “relative risks information” campaign).

The information campaign reached about 1,300 girls in 71 schools and cost just under US\$2,000. The campaign reduced the incidence of childbearing by 1.5 percentage points in

the treatment group, which means that a total of 20 ( $1,300 \times 0.015$ ) pregnancies were averted thanks to the programme. All of the averted pregnancies would have resulted from a cross-generational partnership. Thus, the overall cost per cross-generational pregnancy averted is just under US\$100.

To calculate the cost per HIV infection averted, an estimate of the ratio of the risk of HIV infection to the risk of cross-generational pregnancy is needed, which is not available in the literature. Instead, cost-effectiveness estimates are computed using three hypothetical ratios: 5/100, 15/100, and 25/100. For a ratio of 15/100, US\$98 per cross-generational pregnancy averted corresponds to a cost of US\$653 per primary HIV infection averted among teenage girls. It is important to note, however, that these estimates consider only primary cases of HIV transmission, and thus do not include averted secondary HIV infections (i.e. transmission to subsequent sex partners).

These rough cost-effectiveness estimates compare favourably with other HIV prevention programmes, such as treating STIs other than HIV (estimated at US\$213 per HIV infection averted); male circumcision (estimated at US\$1,269-3911 per infection averted); or voluntary HIV testing (estimated at US\$537 per additional HIV positive person tested).

### **A social vaccine? HIV infection, fertility, and the non-pecuniary returns to secondary schooling in Botswana**

Bor J & De Neve JW. (2014). NEUDC conference paper (Not for citation).

[http://sites.bu.edu/neudc/files/2014/10/paper\\_211.pdf](http://sites.bu.edu/neudc/files/2014/10/paper_211.pdf)

To assess the cost-effectiveness of secondary schooling as an HIV prevention intervention, the authors estimate the cost per disability-adjusted life year (DALY) averted using estimates of the per-pupil-per-year costs of secondary education published by the UNESCO Institute for Statistics, and their own calculations of the treatment costs and DALYs associated with an HIV infection in Botswana. They also compare the cost per HIV infection averted due to secondary schooling vis-à-vis other proven HIV prevention interventions. It is estimated that an HIV infection at age 20 would lead to 16.3 lifetime DALYs for someone who did not initiate ART; and 3.5 lifetime DALYs for someone who initiated ART, with a lifetime treatment cost of US\$12,400; all costs and DALYs were discounted at 3%. These calculations imply cost-effectiveness ratios (CER) of US\$4,387/DALY with ART and US\$1,703/DALY without ART; each of these CERs is lower than Botswana's US\$5,178 per capita GDP (2009), implying that as an HIV prevention intervention secondary school is "very cost-effective" according to the standard benchmark of 1x per capita GDP. Compared with other HIV prevention interventions secondary schooling is more expensive than circumcision and treatment as prevention, but of similar cost-effectiveness to pre-exposure prophylaxis. Importantly, unlike other interventions, secondary schooling has large benefits beyond the reduction of HIV transmission – benefits that have been excluded from the above calculations.

### **The cost-effectiveness of a competitive voucher scheme to reduce sexually transmitted infections in high-risk groups in Nicaragua**

Borghi J, Gorter A, Sandiford P, and Segura Z. (2005) Health Policy & Planning vol 20(4): pp. 222-231.

<http://heapol.oxfordjournals.org/content/20/4/222.long>

Current evidence suggests that STI interventions can be an effective means of HIV prevention in populations at an early stage of the epidemic. However, evidence as to their cost-effectiveness when targeted at high-risk groups is lacking. This paper assesses the cost-effectiveness of a competitive voucher scheme in Managua, Nicaragua aimed at high-risk groups, who could redeem the vouchers in exchange for free STI testing and treatment, health education and condoms, compared with the status quo (no scheme). A provider

perspective was adopted, defined as: the voucher agency and health care providers from the public, NGO and private sectors. The cost of the voucher scheme was estimated for a 1-year period (1999) from project accounts using the ingredients approach. Outcomes were monitored as part of ongoing project evaluation. Costs and outcomes in the absence of the scheme were modelled using project baseline data and reports, and relevant literature.

The annual cost of providing comprehensive STI services through vouchers was US\$62,495, compared with an estimated US\$17,112 for regular service provision in the absence of the scheme. 4,815 vouchers were distributed by the voucher scheme, 1,543 patients were tested for STIs and 528 STIs were effectively cured in this period. In the absence of the scheme, only an estimated 85 cases would have been cured from 1,396 consultations. The average cost of the voucher scheme per patient treated was US\$41 and US\$118 per STI effectively cured, compared with US\$12 per patient treated and US\$200 per STI cured in its absence. The incremental cost of curing an STI through the voucher scheme, compared with the status quo, was US\$103. A voucher scheme offers an effective and efficient means of targeting and effectively curing STIs in high-risk groups, as well as encouraging quality care practices.

### 3. Studies reporting costs

#### **The short-term impacts of a schooling conditional cash transfer program on the sexual behavior of young women**

Baird S, Chirwa E, McIntosh C, & Özler B. (2010). *Health economics*, 19(S1), 55-68.  
<http://www.ncbi.nlm.nih.gov/pubmed/19946887>

This research found a conditional cash transfer programme in Malawi to be effective. Following intervention, the probability of getting married and becoming pregnant declined by more than 40 and 30%, respectively. The incidence of the onset of sexual activity was 38% lower among all programme beneficiaries than the control group. The following is noted on cost:

The total cost of the programme consists of the cash transfers themselves, as well as the administrative costs of running the programme. For every US\$1 that is transferred to a programme beneficiary, approximately US\$0.50 is spent on administrative costs. The main items under the administrative costs are delivering the cash payments and monitoring attendance, both of which are underlined by large costs of transportation. The authors estimate that a similar programme implemented by the government itself would spend significantly less on administrative costs. This is because the cash transfers could be conducted at schools and the programme administrators could rely on school records (with spot checks) to monitor attendance, significantly reducing transport costs and producing scale economies. Furthermore, the government would benefit from collecting less research-oriented data during cash transfers, which takes significant time to collect and enter.

#### **Improving adolescent reproductive health in Bangladesh**

Bhuiya I, Rob U, Chowdhury AH, Rahman L, Haque N, Adamchak S, Homan R, & Khan ME. (2004). *Frontiers Reproductive Health Program*, Population Council, Family Health International, Washington DC  
<http://www.eldis.org/vfile/upload/1/document/0708/DOC18994.pdf>

An operations research project was launched in north-western Bangladesh with the objective of preventing adverse outcomes and promoting healthy lifestyles among adolescents by providing reproductive health education and services. The Population Council, in collaboration with the Urban Family Health Partnership (UFHP) and its three non-governmental service delivery partners, working in urban sites of Pabna (Site A), Dinajpur (Site B), and Rangpur (Site C) carried out the study. Sites A and B were intervention sites

while Site C served as a control. A quasi-experimental design with pre-post measurements and two experimental strategies was used. Strategy I (Site A) provided reproductive health education to out-of-school adolescents linked with adolescent-friendly services at health facilities while Strategy II (Site B) provided reproductive health education to both in-school and out-of-school adolescents linked with adolescent-friendly services at health facilities. Teachers and facilitators were trained to provide reproductive health education to in-school and out-of-school adolescents respectively, while service providers were trained to offer friendly services to adolescents at the health facilities. Two population-based surveys among about 6,000 adolescents were carried out; the baseline and endline data were collected during February to April 2000 and April to June 2002, respectively.

Total financial costs incurred in Site A and in Site B were Taka 0.69 million (US\$11,562) and Taka 1.56 million (US\$ 26,139) respectively, while the non-financial costs incurred in both the experimental sites were Taka 0.22 million (US\$3,686). Thus, total costs of both the sites were about Taka 2.47 million (US\$41,388).

The total incremental cost of all the interventions at Site B was more than two times higher than at Site A because of the additional school-based intervention. The incremental cost of over Taka 700,000 (US\$11,729) for the school-based intervention was mainly due to training of teachers and service delivery expenses while the planning cost involved behaviour change communication materials and sensitisation meetings. The service delivery expenses for the school intervention were primarily for payments of Taka 500 (\$US8) per month to the teachers and a portion of the programme organiser's monthly stipend of Taka 5,000 (\$US84). Other service delivery expenses included transportation costs of UFHP staff and peer educators, and periodic programmes like cultural and game events in coordination with the community-level intervention. The non-financial cost mainly involved the clinicians' time spent for planning and supervising the school-based intervention.

The wide difference in financial costs for planning and service delivery of the community-based intervention between the two sites suggests that the interventions were implemented at different levels of intensity. It was reported that there was a greater number of sensitisation meetings, cultural and game events conducted at Site B.

The financial costs of the clinic-based interventions by contrast are quite low in both sites because they used the existing structures and personnel that were already motivated to serve adolescents. The training cost of the service providers was also the lowest as instead of using a training agency the Population Council staff gave service providers on-the-job training.

One of the main objectives of the cost component was to illustrate the costs of replication and scaling up to a national programme. In this regard, it is important to highlight that the clinic-based intervention was the least costly and remarkably low as it incurred an average incremental cost of Taka 140,214 (US\$ 2,349) compared to the school-based intervention of Taka 718,382 (US\$ 12,037) or the average community based interventions of Taka 734,583 (US\$ 12,309).

However, the high demand of clinical services at Site B was thought to be a result of a combination of effects derived from both the school and community-based interventions. It is unlikely that a stand-alone clinic-based intervention would bring many adolescents to the clinics. Therefore, education interventions either in the community or in the school are effective if launched with the clinic-based intervention. However, if the government has to choose between the school and community components due to budget constraints, it should consider what additional financial costs are required. For example, if the monthly payments to teachers that were used in this intervention are not payable if the government replicates the model, then the total financial cost of the school based intervention comes down to only Taka 550,339 (US\$9,221) (experiences from the expansion of the school based intervention in

more 34 schools showed that teachers are ready to conduct reproductive health sessions without extra payment).

Given that the school and community-based interventions incur costs of a similar magnitude, it is important to consider that the former is easier to implement for the government within existing structures. Moreover, if the majority of the cost of the school-based intervention, that is, the training cost, can be accumulated from the existing training budget, then the incremental financial cost is reduced further. On the other hand, replicating the community-based intervention will entail programmatic costs and additional budget allocations; while replicating the school-based and clinic-based interventions requires mostly a re-assignment of existing staff resources from one set of activities to another (a non-financial cost). Therefore, it may be easier to replicate the clinic and school-based interventions compared to the community-based one.

### **Biological and behavioural impact of an adolescent sexual health intervention in Tanzania: a community-randomized trial**

Ross DA, Changalucha J, Obasi AIN, Todd J, Plummer ML, Cleophas-Mazige B, Anemona A, Everett D, Weiss H, Mabey DC, Grosskurth H, Hayes RJ. (2007). *AIDS*, 21: 1943-1955. <http://www.ncbi.nlm.nih.gov/pubmed/17721102>

The objective of this community-randomised trial was to assess the impact of a multicomponent intervention programme on the sexual health of adolescents in rural Tanzania.

Twenty communities were randomly allocated to receive either a specially designed programme of interventions (intervention group) or standard activities (comparison group). The intervention had four components: community activities; teacher-led, peer-assisted sexual health education in years 5–7 of primary school; training and supervision of health workers to provide 'youth-friendly' sexual health services; and peer condom social marketing. Impacts on HIV incidence, herpes simplex virus 2 (HSV2) and other sexual health outcomes were evaluated over approximately 3 years in 9,645 adolescents recruited in late 1998 before entering years 5, 6 or 7 of primary school.

The intervention had a significant impact on knowledge and reported attitudes, reported STI symptoms, and several behavioural outcomes. Only five HIV seroconversions occurred in boys, whereas in girls the adjusted rate ratio (intervention versus comparison) was 0.75 [95% confidence interval (CI) 0.34, 1.66]. Overall HSV2 prevalences at follow-up were 11.9% in male and 21.1% in female participants, with adjusted prevalence ratios of 0.92 (CI 0.69, 1.22) and 1.05 (CI 0.83, 1.32), respectively. There was no consistent beneficial or adverse impact on other biological outcomes. The beneficial impact on knowledge and reported attitudes was confirmed by results of a school examination in a separate group of students in mid-2002.

This trial has demonstrated the feasibility of large-scale implementation of an adolescent sexual health intervention using existing government staff and structures in sub-Saharan Africa. External evaluations of this multicomponent package of interventions showed that they were of high quality, well implemented and achieved high coverage. The average annual cost of the intervention was almost US\$30,000 per trial community (approximately equivalent to an administrative ward, mean total population approximately 15,000) during the trial phase, including all start-up and capital costs, approximately equivalent to US\$10 per adolescent per year within the primary target age range (12–19 years). Within a district-wide programme, first-year costs are projected to be US\$22,000 per ward (US\$7.30 per 12–19 year old), decreasing to US\$3,600 per ward (US\$1.20 per 12–19 year old) in subsequent years.



In conclusion the intervention substantially improved knowledge, reported attitudes and some reported sexual behaviours, especially in boys, but had no consistent impact on biological outcomes within the 3-year trial period.

### **Sex education and family planning services for young adults: alternative urban strategies in Mexico.**

Townsend JW, de May ED, Sepulveda Y, & Rosenhouse S. (1987). *Studies in Family Planning*, 18(2), 103-108.

[http://www.jstor.org/stable/1966701?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/1966701?seq=1#page_scan_tab_contents)

In Mexico, youth face difficulties in obtaining reliable information on sex education and family planning through existing community programmes. Two alternative strategies to provide these services are being tested in poor urban areas of Monterrey. In one experimental area, Integrated Youth Centers were established, which provide sex education and family planning services as well as counselling, academic tutoring, and recreational activities. In another area, trained young adults and community counsellors work through informal networks to provide sex education and family planning information (Community Youth Program).

The average marginal cost of establishing each Integrated Youth Center (US\$4,992) was nearly twice that of setting up a Community Youth Program (US\$2,530). The monthly cost of operating each Integrated Center was 28% higher than each Community Program. The cost of maintaining an active user of contraception for one year in the Integrated Program would be US\$203.47, whilst costing US\$63.64 for the Community Program, roughly 30%.

Both programmes were found to be successful in delivering sex education and family planning services. In terms of cost-effectiveness the results suggest that the development of an Integrated Youth Center is neither the most cost-effective nor least expensive way of providing these services. However there may be some additional benefits of working more with unmarried females rather than males. On the other hand, the Community Youth Program, has been much more effective in reaching young adults at less than one third of the cost of the operating the Integrated Youth Center.

### **Improving the reproductive health of adolescents in Senegal**

Diop NJ, Bathidja H, Toure ID, Dieng T, Mane B, RamaRao S, Adamchak S, Wong E, Ndoye CA, Sy A, & Fall B. (2004). *Frontiers in Reproductive Health*, Population Council, Dakar, Senegal

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.175.8923&rep=rep1&type=pdf>

This paper includes a cost analysis and discusses effectiveness but does not provide a formal measure of cost-effectiveness. The highest costs were incurred during the preparation stage at the beginning of the study, especially during the planning and setting up of the service delivery phase. Approximately 38% of total costs was related to implementing the community component, 31% for clinic component, and 28% for the school component. The costs borne in the service delivery phase were considerably lower. From the perspective of scaling up, costs would be approximately US\$40,000 over a two year period, mainly for training and service delivery.

## 4. Reviews

### **Making the case for investing in adolescent reproductive health. A Review of Evidence and PopPov Research Contributions**

Merrick TW. (2014) Population and Poverty Research Initiative and Population Reference Bureau

<http://www.prb.org/pdf16/poppov-report-adolescent-srh.pdf>

Costing and cost-effectiveness comparisons are a key element in a business case. When financial and institutional resources are limited, decision-makers need to know which interventions are most effective and at what cost. Cost-effectiveness comparisons are made across outcomes as well as across specific interventions to address outcomes.

Overall, the evidence base on costs and cost-effectiveness is still very weak, especially in low-income countries. Calculations of the relative cost of investing in programmes to meet unmet contraceptive needs of adolescents (as well as to delay early marriage) would provide advocates for these programmes with a useful tool to persuade governments and donors to invest in them. Unfortunately there is very little research that quantifies the economic costs and benefits of such programmes available for low- and middle-income countries. A key recommendation of this review is to fund more research to address this gap.

### **Adolescent Fertility in Low- and Middle-Income Countries: Effects and Solutions**

McQueston K, Silverman R, & Glassman A. (2012). Center for Global Development Working Paper, no. 295

[http://www.cgdev.org/sites/default/files/1426175\\_file\\_McQueston\\_Silverman\\_Glassman\\_AdolescentFertility\\_FINAL\\_0.pdf](http://www.cgdev.org/sites/default/files/1426175_file_McQueston_Silverman_Glassman_AdolescentFertility_FINAL_0.pdf)

This systematic review identified 21 studies that met the following criteria: 1) included an intervention targeted toward youth or adolescents (broadly identified as ages 10-25), or a broader population that evaluated adolescents or youth as a subset of the intervention; 2) evaluated an intervention to reduce adolescent fertility or a related outcome; and 3) measured outcomes including at least one indicator for fertility-related knowledge or attitudes, contraceptive use, sexual activity, marriage, or fertility. None of these studies included information about the cost of the intervention.

### **Effective Strategies to Provide Adolescent Sexual and Reproductive Health Services and to Increase Demand and Community Support**

Denno DM, Hoopes AJ, & Chandra-Mouli V. (2015). Journal of Adolescent Health, 56(1), S22-S41.

<http://www.sciencedirect.com/science/article/pii/S1054139X14004248>

This review finds a relatively large body of literature that does not support youth centres as an effective or cost-effective strategy to deliver sexual and reproductive health services. The authors conclude that on the whole, cost-effectiveness analyses and even cost data were largely unavailable.

### **Understanding the adolescent family planning evidence base**

Glinski A, Sexton M and Petroni S. (2014) ICRW.

<http://www.icrw.org/files/publications/FINAL%20Understanding%20the%20Adolescent%20Family%20Planning%20Evidence%20Base%207.30.pdf>



When exploring the effectiveness of CCTs in regard to influencing desired fertility, it should be noted that CCTs do not typically take into account participants' previous compliance or intent to comply with the conditional behaviour, such as the likelihood of school enrolment, making it difficult to measure both effectiveness and cost-effectiveness against behaviour change.

Very little attention has been paid to assessing the cost-effectiveness of interventions that aim to improve adolescent reproductive health.

#### **Intervention strategies that work for youth: summary of FOCUS on young adults end of program report**

James-Traore T, Magnani R, Murray N, Senderowitz J, Speizer I, & Stewart L. (2009). Arlington, VA: Family Health International.  
<https://www.iywq.org/sites/iywq/files/yi1e.pdf>

Three peer programmes were found to show positive results. However, the broader review of evidence indicated that peer programmes have not been shown to be sustainable, cost-effective, or able to overcome selection bias. The primary impact of peer education programmes may be on the peer educators themselves, not on their peer contacts. Also, peers may tend to contact mainly youth like themselves, which means that various types of youth need to be recruited to reach a wide range of groups.

#### **The effectiveness of youth centers in increasing use of sexual and reproductive health services: A systematic review**

Zuurmond MA, Geary RS, & Ross DA. (2012). *Studies In Family Planning*, 43(4), 239-54.  
<http://www.icrw.org/files/publications/FINAL%20Understanding%20the%20Adolescent%20Family%20Planning%20Evidence%20Base%207.30.pdf>

All 17 studies were reviewed for cost data, but these data were only presented in three studies. The studies showed that providing clinical services through youth centres was expensive, mainly because uptake of services was low, with costs ranging from US\$4–\$10 in South Africa, US\$5–\$13 in Tanzania, and \$102 in Kenya per person attending a clinical service on site or per contraceptive adopter. Concern regarding sustainability, including the challenge of maintaining recreational equipment, was a consistent theme, even in studies that did not attempt to measure costs. The most detailed costing data came from the South Africa study, which demonstrated that youth centres with more on-site recreational/educational/vocational activities increased the cost per clinic visit by 40 percent, from less than US\$8 per visit to US\$11 per visit, largely because health staff worked on activities unrelated to seeing clinical clients. This study concluded that if the centre was meeting other, non-SRH needs, then the cost-effectiveness would have been better if other outcomes were taken into account rather than only considering the cost per clinic visit. Furthermore, costs of the peer educational outreach programme were not included, despite being a key component of the programmes. Where cost data were provided, the information available was often limited, as the authors themselves recognised. Care therefore needs to be taken in interpreting some of the cost analysis. Direct comparisons cannot be made across studies because data were collected differently, outcomes may have been different (uptake of contraceptives or counselling, for example), and different time periods (1980–2001) and countries were covered.

#### **Community Health Workers' Provision of Family Planning Services: A Systematic Review on Effectiveness**

Scott VK, Gottschalk LB, Wright KW, Twose C, Bohren M, Schmitt ME, Ortayl, N. (2015). *Studies in family planning*, 46(3), 241-261.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1728-4465.2015.00028.x/abstract?userIsAuthenticated=false&deniedAccessCustomisedMessage=>

The sustainability of community health worker (CHW) family planning (FP) programmes, in terms of both duration of impact and cost, has also been raised as an important consideration as many countries seek to strengthen their formal health systems. Few studies have explored either the impact of CHW FP programmes over long periods of time or their cost-effectiveness. The relatively low cost of CHWs' services has made them an attractive workforce, but the long-term cost-effectiveness of these programmes remains unclear. Lack of or low payment provided to CHWs likely affects retention rates and thus recruitment and training costs, raising questions about long-term sustainability. However, in regions where access to facilities requires substantial client travel time, CHWs increase access to information and methods while reducing users' out-of-pocket expenses, which should be factored into cost-effectiveness calculations. Given that FP programme resources are limited and must be optimised for impact, additional rigorous research is needed to better understand the cost-effectiveness of CHW FP programmes and their impact over time. It is also important to consider the unique advantages of CHW programmes, including greater privacy for clients and the opportunity to reach populations that have limited mobility, particularly women who live in socially conservative societies.

## 5. Additional information

### Author

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