May 2017 – SUPPORT Summary of a systematic review

Do workplace programmes for the diagnosis and treatment of HIV improve workers' health outcomes and attitudes?

The HIV epidemic may threaten the health workforce by imposing heavier workloads and increasing complexity of care; by exposing health workers living with HIV and AIDS and other workers to tuberculosis (TB) and other infectious diseases; and through the psychological stress placed on health workers who have to administer care. HIV and AIDS may also have substantial impacts on the workforce in sectors other than health. Workplace programmes aim to improve access for health workers and other workers to HIV prevention, treatment and support.

Key messages

➔ **Workplace programmes for health workers may increase the uptake of HIV testing.**

➔ **Workplace programmes for health workers may increase awareness of post-exposure prophylaxis to prevent HIV infection.**

➔ **Onsite compared with offsite rapid HIV testing probably increases the uptake of voluntary counselling and testing among workers in sectors other than health.**

➔ **Workplace programmes offering free antiretroviral therapy may improve markers of effective antiretroviral therapy among workers living with HIV and AIDS in sectors other than health.**

➔ **All studies included in this review were conducted in low- and middle-income countries.**

Who is this summary for?

People making decisions about HIV, tuberculosis, or workplace programmes

! This summary includes:

- **Key findings** from research based on a systematic review
- **Considerations about the relevance of this research** for low-income countries

X Not included:

- Recommendations
- Additional evidence not included in the systematic review
- Detailed descriptions of interventions or their implementation

This summary is based on the following systematic review:

Yassi A, O'Hara LM, Lockhart K, Spiegel JM. Workplace programmes for HIV and tuberculosis: a systematic review to support development of international guidelines for the health workforce. AIDS Care 2013; 25:525-43.

What is a systematic review?

A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from the included studies

SUPPORT was an international project to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries, funded by the European Commission (FP6) and the Canadian Institutes of Health Research.

Glossary of terms used in this report: www.supportsummaries.org/glossary-of-terms

Background references on this topic: See back page

Background

Programmes to improve the diagnosis and treatment of HIV and AIDS can be located in healthcare or other workplaces. Workplace programmes can include treatment and care, follow-up, provision of voluntary counselling and testing, and prevention or education for staff and their families.

Workplace interventions that include only education and prevention resources and do not offer priority access to diagnosis and/or treatment were not included in this review. These excluded interventions include promotion of condom use and sharp injury prevention.

How this summary was prepared

After searching widely for systematic reviews that can help inform decisions about health systems, we have selected ones that provide information that is relevant to low-income countries. The methods used to assess the reliability of the review and to make judgements about its relevance are described here: www.supportsummaries.org/how-support-summaries-are-prepared/

Knowing what's not known is important

A reliable review might not find any studies from low-income countries or might not find any well-designed studies. Although that is disappointing, it is important to know what is not known as well as what is known.

A lack of evidence does not mean a lack of effects. It means the effects are uncertain. When there is a lack of evidence, consideration should be given to monitoring and evaluating the effects of the intervention, if it is used.

About the systematic review underlying this summary

Review objective: To determine the effectiveness of workplace programmes for the diagnosis or treatment of HIV or tuberculosis (TB)

Types of	What the review authors searched for	What the review authors found
Study designs & Interventions	Randomised trials, quasi-experimental or comparative observational studies assessing workplace programmes to diagnose and/or manage HIV and/or TB, and analytical studies if none of the previous designs were found.	Three studies among healthcare workers (1 controlled before-after study, 1 uncontrolled before-after study, and 1 descriptive study) and seven among employees in other sectors (1 cluster-randomised trial, 2 interrupted time series, 4 qualitative/quantitative descriptive studies)
Participants	Health workers and employees in any sector (including private and public workplaces)	Health workers at hospitals and medical centres. Small- and medium-sized businesses
Settings	Workplaces (all countries)	South Africa (7), Botswana (jointly with South Africa), Rwanda, Zambia and Zimbabwe (1 each)
Outcomes	Incidence of infection, absenteeism, worker retention, uptake of voluntary counselling and testing, uptake of treatment, morbidity, mortality, working conditions, cost (or cost-benefit), discrimination or stigma, job loss, services to the community	Mortality, active TB cases, adverse drug effects, uptake of HIV testing and appropriate treatment, adoption of HIV-preventative behaviours, knowledge and attitudes about HIV, stigma and morale
Date of most recent search: 2009		
Limitations: This is a well-conducted systematic review with only minor limitations.		

Yassi A, O'Hara LM, Lockhart K, Spiegel JM. Workplace programmes for HIV and tuberculosis: a systematic review to support development of international guidelines for the health workforce. AIDS Care 2013; 25:525-43.

Summary of findings

Three studies with the lowest risk of bias are summarised here: one targeted at health workers and two at employees in other (non-health) sectors. The additional descriptive and qualitative studies included in the review consistently showed acceptance of counselling, testing and treatment for HIV and AIDS in the workplace.

1) Workplace programmes for health workers

A controlled before-after study in Zambia assessed the effects of a peer-led HIV risk reduction programme for hospital-based health workers.

➔ **Workplace programmes for health workers may increase the uptake of HIV testing. The certainty of this evidence is low.**

➔ **Workplace programmes for health workers may increase awareness of post-exposure prophylaxis to prevent HIV infection. The certainty of this evidence is low.**

About the certainty of the evidence (GRADE) *

⊕⊕⊕⊕
High: This research provides a very good indication of the likely effect. The likelihood that the effect will be substantially different† is low.

⊕⊕⊕◯
Moderate: This research provides a good indication of the likely effect. The likelihood that the effect will be substantially different† is moderate.

⊕⊕◯◯
Low: This research provides some indication of the likely effect. However, the likelihood that it will be substantially different† is high.

⊕◯◯◯
Very low: This research does not provide a reliable indication of the likely effect. The likelihood that the effect will be substantially different† is very high.

* This is sometimes referred to as 'quality of evidence' or 'confidence in the estimate'.

† Substantially different = a large enough difference that it might affect a decision

See last page for more information.

Workplace programme for health workers focusing on HIV risk reduction compared to no programme

People	Health workers
Settings	Five hospitals in Zambia
Intervention	Peer-led workplace programme focusing on HIV risk reduction
Comparison	No programme

Outcomes	**Impact**	Certainty of the evidence (GRADE)
Been tested for HIV	Attending peer-led education sessions may increase the rate of testing (AOR 1.7 (95% CI 1.1 to 2.6)), compared to those health workers who were not aware of the programme	⊕⊕◯◯ Low
Aware of post-exposure prophylaxis to prevent HIV infection	Attending peer-led education sessions may increase awareness of post-exposure prophylaxis (AOR 5.5 (95% CI 2.9 to 10.2), compared to those health workers who were not aware of the programme	⊕⊕◯◯ Low

GRADE: GRADE Working Group grades of evidence (see above and last page)
CI: Confidence interval AOR: Adjusted odds ratio

2) Workplace programmes for workers in sectors other than health

Two studies are summarized here: the first is a cluster-randomised trial of two strategies of voluntary counselling and testing for HIV (onsite rapid HIV testing versus vouchers for offsite testing) offered to 24 small- and medium-sized businesses in Zimbabwe. The second is an interrupted time series study of a workplace HIV care programme in South Africa, which described treatment outcomes in sequential groups of individuals starting antiretroviral therapy.

➔ **Onsite compared with offsite rapid HIV testing probably increases the uptake of voluntary counselling and testing. The certainty of this evidence is moderate.**

➔ **Workplace programmes offering free antiretroviral therapy may improve markers of effective antiretroviral therapy among workers living with HIV and AIDS. The certainty of this evidence is low.**

Workplace HIV programmes for workers in sectors other than health, compared to no programme

People	Public and private sector workers
Settings	Medium and small-sized companies in South Africa and Zimbabwe
Intervention	Workplace programmes to improve the diagnosis or treatment of HIV
Comparison	Vouchers for offsite testing (Zimbabwe) or usual care (South Africa)

Outcomes	**Impact**	Certainty of the evidence (GRADE)
Uptake of voluntary counselling and testing for HIV	Workplace programmes probably increase the uptake of voluntary counselling and testing for HIV, compared with vouchers for offsite testing (RR 2.8 (95% CI 1.8 to 3.8))	⊕⊕⊕◯ Moderate
Effective antiretroviral therapy (ART), measured by CD4 count and viral load	Workplace programmes offering free, nurse-managed ART may increase CD4 counts (90, 113 and 164 cells/microl. at 6, 12 and 24 months on treatment) and decrease viral load (below 400 copies/ml in 75, 72 and 72% of patients at 6, 12 and 24 months on treatment)	⊕⊕◯◯ Low

GRADE: GRADE Working Group grades of evidence (see above and last page)
RR: Relative risk CI: Confidence interval ART: Antiretroviral therapy CD4: Type of white blood cell

Relevance of the review for low-income countries

➔ Findings	▷ Interpretation*
APPLICABILITY	
➔ All studies included in this review were conducted in low- and middle-income African countries. **➔ Workplace programmes for the diagnosis and treatment of HIV may improve uptake of HIV testing and health outcomes among workers.**	▷ *The applicability of these findings to low-income countries may be influenced by:* – *The financial and organizational resources to provide workplace programmes. The feasibility of such programmes may be influenced by the proportion of workers employed within the formal sector* – *The supplies necessary to deliver services in these settings* – *The ability of the health system to respond to the demand for additional services that may be stimulated by widespread implementation of workplace programmes* – *The acceptability of the interventions to workers in the health sector and in other sectors, and to other stakeholders*
EQUITY	
➔ The systematic review did not address equity issues.	▷ *Workplace programmes may improve overall access to information and care on HIV and AIDS, but could also increase inequities in access between employed and unemployed populations.* ▷ *Workplace programmes may increase inequities in access between those employed in the formal and informal sectors as these programmes may be difficult to implement in the informal sector.*
ECONOMIC CONSIDERATIONS	
➔ Few cost outcomes were reported in the included studies. **➔ One study found that the cost per worker of providing nurse-managed antiretroviral therapy decreased over time.**	▷ *The cost of workplace programmes is likely to be highly variable and needs to be estimated based on specific local conditions. Factors affecting these costs will include the scale of implementation, the range of health workers involved, the range of services offered and the logistics involved in ensuring a reliable supply of required commodities.* ▷ *It is unclear whether the wider implementation of workplace programmes for HIV and AIDS will increase or decrease demand on other parts of the health system.* ▷ *Before workplace programmes are scaled up, robust evidence is needed regarding the cost-effectiveness of these interventions.*
MONITORING & EVALUATION	
➔ The available evidence is generally of low certainty due to risk of bias in the included studies. **➔ There is little evidence on potential adverse effects, costs or cost-effectiveness.**	▷ *If decision makers from low-income countries choose to implement workplace programmes, they should ensure that these programmes include robust evaluation including health outcomes, potential adverse effects (such as stigma, discrimination or job loss), and costs.* ▷ *The acceptability of workplace programmes to recipients and providers may need to be evaluated before such programmes are taken to scale.*

*Judgements made by the authors of this summary, not necessarily those of the review authors, based on the findings of the review and consultation with researchers and policymakers in low-income countries. For additional details about how these judgements were made see: www.supportsummaries.org/methods

Additional information

Related literature

Kisting S, Wilburn S, Protsiv M, Hsu LN. Improving health workers' access to HIV and TB prevention, treatment, care and support services. World Hosp Health Serv 2010; 46:34-5.

Buregyeya E, Nuwaha F, Wanyenze RK, et al. Utilization of HIV and tuberculosis services by health care workers in Uganda: implications for occupational health policies and implementation. PloS One 2012; 7(10):e46069.

Legido-Quigley H, Montgomery CM, Khan P, et al. Integrating tuberculosis and HIV services in low- and middle-income countries: a systematic review. Trop Med Int Health 2013; 18:199-211.

Weihs M, Meyer-Weitz A. Barriers to workplace HIV testing in South Africa: a systematic review of the literature. AIDS Care. 2016;28(4):495-9.

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Conflict of interest

None declared. For details, see: www.supportsummaries.org/coi

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This review should be cited as

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About certainty of the evidence (GRADE)

The "certainty of the evidence" is an assessment of how good an indication the research provides of the likely effect; i.e. the likelihood that the effect will be substantially different from what the research found. By "substantially different" we mean a large enough difference that it might affect a decision. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the study design (randomised trials versus observational studies), factors that reduce the certainty (risk of bias, inconsistency, indirectness, imprecision, and publication bias) and factors that increase the certainty (a large effect, a dose response relationship, and plausible confounding). For each outcome, the certainty of the evidence is rated as high, moderate, low or very low using the definitions on page 3.

For more information about GRADE: www.supportsummaries.org/grade

SUPPORT collaborators:

The Cochrane Effective Practice and Organisation of Care Group (EPOC) is part of the Cochrane Collaboration. The Norwegian EPOC satellite supports the production of Cochrane reviews relevant to health systems in low- and middle-income countries . www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking in low- and middle-income countries. www.evipnet.org

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration that promotes the generation and use of health policy and systems research in low- and middle-income countries. www.who.int/alliance-hpsr

Norad, the Norwegian Agency for Development Cooperation, supports the Norwegian EPOC satellite and the production of SUPPORT Summaries. www.norad.no

The Effective Health Care Research Consortium is an international partnership that prepares Cochrane reviews relevant to low-income countries. www.evidence4health.org

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