

Original Article

Task-sharing interventions for cardiovascular risk reduction and lipid outcomes in low- and middle-income countries: A systematic review and meta-analysis

T. N. Anand¹, Linju M. Joseph¹, A. V. Geetha, Joyita Chowdhury,
Dorairaj Prabhakaran, Panniyammakal Jeemon*

¹ Public Health Foundation of India, New Delhi, India (Drs Anand, Joseph, Geetha, and Prabhakaran); Centre for Chronic Disease Control, New Delhi, India (Drs Chowdhury and Prabhakaran); and Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, Kerala, India (Dr Jeemon)

KEYWORDS:

Cardiovascular;
Dyslipidemia;
LDL-cholesterol;
Task shifting;
Task sharing

BACKGROUND: One of the potential strategies to improve health care delivery in understaffed low- and middle-income countries (LMICs) is task sharing, where specific tasks are transferred from more qualified health care cadre to a lesser trained cadre. Dyslipidemia is a major risk factor for cardiovascular disease but often it is not managed appropriately.

OBJECTIVE: We conducted a systematic review with the objective to identify and evaluate the effect of task sharing interventions on dyslipidemia in LMICs.

METHODS: Published studies (randomized controlled trials and observational studies) were identified via electronic databases such as PubMed, Embase, Cochrane Library, PsycINFO, and CINAHL. We searched the databases from inception to September 2016 and updated till 30 June 2017, using search terms related to task shifting, and cardiovascular disease prevention in LMICs. All eligible studies were summarized narratively, and potential studies were grouped for meta-analysis.

RESULTS: Although our search yielded 2938 records initially and another 1628 in the updated search, only 15 studies met the eligibility criteria. Most of the studies targeted lifestyle modification and care coordination by involving nurses or allied health workers. Eight randomized controlled trials were included in the meta-analysis. Task sharing intervention were effective in lowering low-density lipoprotein cholesterol (-6.90 mg/dL; 95% CI -11.81 to -1.99) and total cholesterol (-9.44 mg/dL; 95% CI -17.94 to -0.93) levels with modest effect size. However, there were no major differences in high-density lipoprotein cholesterol (-0.29 mg/dL; 95% CI -0.88 to 1.47) and triglycerides (-14.31 mg/dL; 95% CI -33.32 to 4.69). The overall quality of evidence based on Grading of Recommendations Assessment, Development and Evaluation was either “low” or “very low”.

CONCLUSION: Available data are not adequate to make recommendations on the role of task sharing strategies for the management of dyslipidemia in LMICs. However, the studies conducted in LMICs demonstrate the potential use of this strategy especially in terms of reduction in

¹ These authors contributed equally to this article.

* Corresponding author. Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, Kerala, India, 695011.

E-mail address: pjeemon@gmail.com

Submitted October 17, 2017. Accepted for publication February 13, 2018.

low-density lipoprotein cholesterol and total cholesterol levels. Our review calls for the need of well-designed and large-scale studies to demonstrate the effect of task-sharing strategy on lipid management in LMICs.

© 2018 Published by Elsevier Inc. on behalf of National Lipid Association. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

Introduction

Consequent to epidemiologic transition, and population ageing, low- and middle-income countries (LMICs) are battling a double burden of disease. For example, LMICs are experiencing a rapid increase in noncommunicable diseases (NCDs), on top of the existing burden of communicable diseases, maternal health conditions, and nutritional disorders.¹ The population size of an LMIC is huge, and therefore, nearly 80% of the total 40 million deaths attributable to NCDs in absolute terms occur in these countries.² Cardiovascular diseases (CVDs) are the leading contributor to NCD mortality and morbidity even in LMICs. Largely CVD comprises of heart attack (myocardial infarction), angina, and stroke. The principal risk factors contributing to CVD are unhealthy diets, physical inactivity, exposure to tobacco smoke, and harmful alcohol consumption. These risk factors may lead to intermediate-level risk factors such as obesity, elevated levels of blood pressure, blood glucose, and blood lipids.³

Elevated blood lipids along with other risk factors are linked to CVD events, and the risk operates across the range of lipid profile, with moderate reduction at the population level resulting in huge gain in terms of averted mortality and morbidity.⁴ It has been estimated that, a 10% reduction in serum cholesterol in men aged 40 years is associated with a 50% reduction in heart disease within 5 years; the same serum cholesterol reduction for men aged 70 years may result in an average 20% reduction over the next 5 years.⁵

Shifting the population distribution of serum cholesterol toward the left of the distribution curve, even marginally, requires a combination of population-wide primary prevention efforts addressing multiple risk factors and high-risk secondary prevention strategies. However, the health workforce available in LMICs to address the dual burden of both communicable diseases and NCDs are very limited. For instance, on an average, there are 0.3, 1.2, and 2 physicians available for 1000 population in low-income countries, LMICs, and upper middle-income countries, respectively.⁶ In resource constrained settings with nonoptimal skilled workforce, it would be a desirable choice in using the existing nonphysician health care workers (NPHW) for the prevention and control of NCDs.

Task shifting or task sharing or task delegation or skills substitution are all referred as the process of engaging NPHW in prevention and control of NCDs in the context of LMICs.⁷ However, it is not clear whether these strategies would be effective in cholesterol

reduction in individuals and communities. Previous studies demonstrate that task-sharing strategies for hypertension and diabetes management are both viable^{8,9} and cost-effective¹⁰ options in LMICs. The primary focus of the current review is to identify and understand the various task-sharing interventions used in the management of dyslipidemia in LMICs, and their cumulative effect on total cholesterol (TC), low-density lipoprotein cholesterol (LDL-c), high-density lipoprotein cholesterol (HDL-c), and triglycerides (TGs). We aimed to generate evidence to support informed policy decisions on the role of task-sharing strategies for the management of dyslipidemia in LMICs and provide recommendations on the need for future research.

Methods

Definitions

Task sharing is defined as the rational redistribution of tasks to an existing or new cadre of health workers with either less training in general or lack of disease/skill-specific training. It involves sharing the delivery of the task from professionals to health workers with fewer qualifications or creating a new workforce with specific training for a specific task.¹¹ Health professionals working together in teams to deliver a task that they may not have undertaken previously is also considered as task sharing.⁵

We searched the published literature for studies (randomized controlled trials [RCTs], observational studies, and before and after studies) conducted in LMICs that included a task-shared intervention, delivered by nurses or NPHW in primary health centers or hospitals. Outcome measures included were TC, LDL-c, HDL-c, and TGs. Only studies in adult participants were considered.

Exclusions

Studies with patient's knowledge, attitudes, or intentions as outcome variables without measuring any of the relevant lipid outcomes were excluded. Interventions that involve only peer groups were excluded as they would be more likely to be informal support. In addition to these, task-sharing activities that are exclusive to traditional healers and those with just the promotion of self-care management or informal care giver health education were excluded in this review. Studies that do not report change in TC or LDL-c were also excluded.

Download English Version:

<https://daneshyari.com/en/article/8668354>

Download Persian Version:

<https://daneshyari.com/article/8668354>

[Daneshyari.com](https://daneshyari.com)