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Equity issues were not fully addressed in Cochrane human immunodeficiency virus systematic reviews

Theresa Aves[a,b], Tamara Kredo[c], Vivian Welch[d], Sara Mursleen[a], Stephanie Ross[a], Babalwa Zani[c,e], Nkengafac Villyen Motaze[c,e], Leah Quinlan[f], Lawrence Mbuagbaw[a,b,*]

[a]*Department of Clinical Epidemiology and Biostatistics, McMaster University, 1280 Main Street West, Hamilton, Ontario, Canada L8S 4K1*
[b]*Biostatistics Unit, Father Sean O'Sullivan Research Centre, St Joseph's Healthcare, 50 Charlton Ave E, Hamilton, Ontario, Canada L8N 4A6*
[c]*Cochrane South Africa, South African Medical Research Council, Cape Town, PO Box 19070, Tygerberg 7505, South Africa*
[d]*Centre for Global Health, Institute of Population Health, University of Ottawa, 43 Bruyère St, Annex E, Ottawa, Ontario, Canada K1N 5C8*
[e]*Centre for Evidence-Based Health Care, Department of Interdisciplinary Health Sciences, Faculty of Medicine and Health Sciences, Stellenbosch University, PO Box 241, Cape Town 800, South Africa*
[f]*Bruyère Continuing Care, Bruyère Research Institute, University of Ottawa, 43 Bruyère Street, Ottawa, Ontario, Canada K1N 5C8*

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Abstract

Objective: To describe and summarize equity reporting in human immunodeficiency virus (HIV) systematic reviews and explore the extent to which equity issues are addressed and reported in HIV reviews using the PROGRESS Plus framework.

Study Design and Setting: Application of the PROGRESS Plus framework to a bibliometric analysis of HIV reviews in the Cochrane Database of Systematic Reviews.

Results: The analysis included 103 reviews published as of March 2014, with a median of five studies per review (first quartile; Q1 = 2; third quartile; Q3 = 11). Reporting of PROGRESS Plus factors was as follows: Place of residence (low, middle, and high income; 55.3%), place of residence (urban or rural; 24.3%), race or ethnicity (20.4%), occupation (10.7%), gender (65.0%), religion (1.9%), education (7.8%), socioeconomic position (10.7%), social networks and capital (1.0%), age (1.9%), and sexual orientation (3.8%).

Conclusion: Gaps in the reporting of relevant equity indicators were identified within Cochrane HIV systematic review indicating that research is not consistently conducted through an equity lens. There is a need to incorporate PROGRESS Plus factors into both primary and secondary studies.

Keywords: HIV research; Equity; PROGRESS plus; Cochrane; Systematic reviews; Bibliometric analysis

1. Introduction

In recent years, the human immunodeficiency virus (HIV) epidemic has been stabilized, with fewer new infections and people with HIV living longer and more productive lives [1]. This progress is mostly due to advances in prevention and treatment. Despite these gains, HIV continues to be one of the conditions that disproportionately affect the poor. The Joint United Nations Programme on HIV and AIDS recognizes 10 main challenges limiting HIV disease control. Of these 10 challenges related to disease control, there are four that focus directly on equity. They are (1) the resource gap: a higher prevalence of HIV in resource-limited settings; (2) gender inequalities and abuse that prevent women from protecting themselves against HIV infection; (3) HIV-related stigma, discrimination, punitive laws, and practices; and (4) HIV-related restrictions on entry, stay, and residence [1]. The role of such inequities in undermining efforts to curb the HIV epidemic is increasingly being documented. Examples of these inequities in the literature are gender-based differences in prevention and treatment [2,3], the role of religion in sexual behavior and adherence to care [4,5], access to social capital in prevention and engagement with care [6,7], and level of education in HIV testing [8,9]. These issues would suggest that elements of inequity should be integral parts of HIV research, practice, and policy.

Conflict of interest: B.Z. has worked for the Cochrane HIV Group as assistant trial search coordinator at Cochrane South Africa; T.K. is the center manager of Cochrane South Africa; V.W., L.M., S.M., B.Z., T.K., and N.V.M. are authors of Cochrane reviews.

* Corresponding author. Tel.: +1 (905) 522-1155x35929; fax: +1 (905) 528-7386.
E-mail address: mbuagblc@mcmaster.ca (L. Mbuagbaw).

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What is new?

HIV systematic reviews in this bibliometric analysis frequently addressed at least one equity issue outlined in the PROGRESS Plus framework, with gender being most commonly mentioned. However almost 20% of the HIV reviews did not report any PROGRESS Plus equity items. Additionally, our findings showed variation in reporting PROGRESS Plus factors between HIV reviews, with different types of reviews reporting more or less items. It is important to take into account both the area of research and type of systematic review when applying the PROGRESS Plus tool as they may affect its range of use. Results from this analysis suggest a need for improved uptake of socially stratifying factors in HIV research in order to differentiate disparities within and between populations and to reduce health care inequities.

Systematic reviews are a valuable tool in keeping up to date with current research as well as providing guidance for guideline development and justification of further research [10]. Following the 2011 World Conference on Social Determinates of Health in Rio, there has been a recent shift to conduct systematic reviews through an equity lens in an effort to reduce health inequities [11]. Cochrane advocates for the consideration of equity issues in its systematic reviews and recommends the use of the PROGRESS Plus framework to identify population and individual factors across which health inequities may exist [11,12].

The PROGRESS framework was developed by Evans and Brown in 2003, intended to be used as a tool to measure variation in health across socially stratifying forces [13]. The individual items are what create the acronym "PROGRESS" which refers to place of residence (P), race or ethnicity (R), occupation (O), gender (G), religion (R), education (E), socioeconomic status (S), and social capital (S). In 2008, the PROGRESS framework was modified to incorporate additional important factors that influence health equity such as sexual orientation, age, disability, and other vulnerable groups [14]. Since its development, it has been used to describe new ways in which research methods for primary and secondary studies can address inequities [15,16].

As part of a larger bibliometric analysis of HIV reviews in the Cochrane library [17], we secondarily explored the extent to which equity issues are addressed in HIV systematic reviews using the PROGRESS Plus framework.

2. Methods

A full description of the methods can be found in the primary study [17]. In brief, we conducted a bibliometric analysis, known as the application of quantitative analysis to publications [18], of all systematic reviews published by the Cochrane HIV/AIDS group (now the Cochrane Infectious Diseases Group) as of March 2014.

The reviews were grouped into four categories: behavioral, social or policy interventions ($n = 16$); biomedical prevention ($n = 16$); health services and care ($n = 9$); and therapeutics, prognostics, and diagnostics ($n = 62$) giving a total of 103 reviews. Full text for the most recent updated version of each review was obtained. PROGRESS Plus items were identified and recorded by any pair of the seven reviewers (L.M., T.K., V.W., S.M., S.R., B.Z., and N.V.M.) using a standardized data extraction form. Disagreements were resolved by discussion and consensus.

Each of the 11 items was recorded as either present or absent in the reviews. The median number of reported PROGRESS Plus factors was evaluated for each review category. Data are described as frequencies and percentages, means and standard deviations, or medians with first and third quartiles, where appropriate. The reporting quality of the reviews was appraised using the A Measurement Tool to Assess Reviews (AMSTAR) instrument [19].

3. Results

In this study, we describe 103 reviews which included a median of five primary studies per review (first quartile; Q1 = 2; third quartile; Q3 = 11). They were of high quality, with a mean AMSTAR rating of 9.43 (standard deviation = 1.5). The studies were conducted in 67 individual countries.

Gender was most commonly reported (65.0%) followed by place of residence (high, middle or low income; 55.3%). Place of residence (urban or rural) was reported in 24.3% and race or ethnicity reported in 20.4% of reviews. Occupation was reported in 10.7%, religion in 1.9%, education in 7.8%, socioeconomic status in 9.7% and social capital in 1.0%. Age was reported in 1.9% and sexual orientation was reported in 3.8% of the reviews (Fig. 1).

Of the 103 reviews, 26.2% reported one PROGRESS Plus item. Twenty-two percent of reviews reported two items. When two items were reported, place of residence (high, middle or low income) and gender were most commonly reported together, which occurred in 43.6% of the reviews. Almost 14% (13.6%) reported three items and only 8.7%, 3.9%, and 4.9% of the studies reported four, five, or six items, respectively. Only 1.0% reported seven items. Nineteen percent (19.4%) did not report any items. No reviews reported all of the 11 PROGRESS Plus items.

Within the four main categories of reviews, behavioral, social, or policy interventions for HIV prevention reported a median of four items (Q1 = 4, Q3 = 6). Reviews of therapeutics, prognostics, and diagnostics reported a median of one item (Q1 = 1, Q3 = 2). Reviews of biomedical

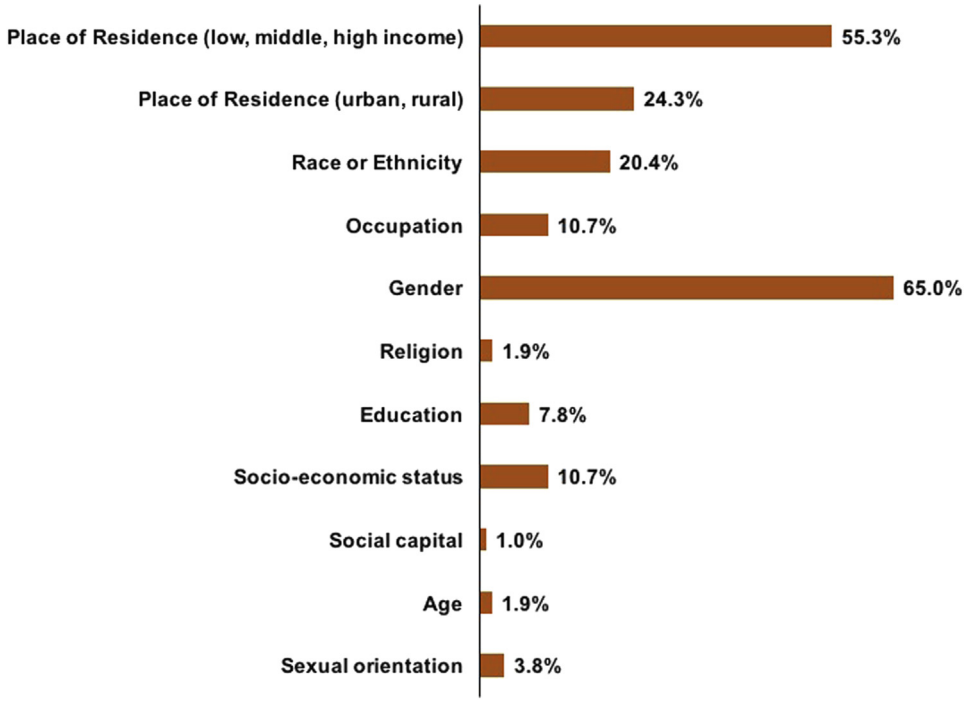

Fig. 1. The percentage of Cochrane HIV/AIDS reviews reporting PROGRESS Plus items (N = 103). HIV, human immunodeficiency virus.

prevention reported a median of two PROGRESS Plus items (Q1 = 2, Q3 = 3), whereas reviews of health services and care reported a median of 1 (Q1 = 0, Q3 = 2). A median of 2 (Q1 = 1, Q2 = 3) items were reported in all 103 reviews (Fig. 2).

4. Discussion

We found that HIV reviews in this analysis frequently addressed at least one equity issue, with gender being most commonly mentioned. However, previous literature has

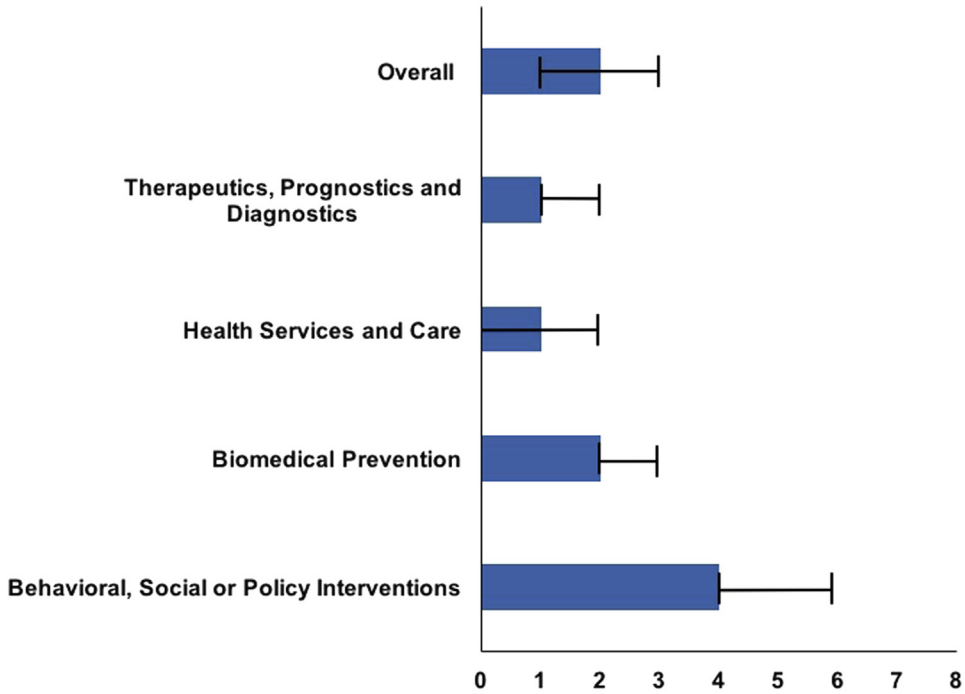

Fig. 2. Median and interquartile range of PROGRESS Plus items reported overall and per review category (N = 103).

stated that inequalities in health status result from a combination of PROGRESS factors and not from any single factor alone [15]. The same literature discussed how equity considerations are often limited to only one factor; therefore, the use of PROGRESS can help researchers apply an equity lens through a spectrum of factors across which there might be differences in effects on health equity [15]. Results from this review suggest a need for improved uptake of socially stratifying factors in HIV research. Primary studies should focus on addressing and reporting key equity concerns such as those outlined in PROGRESS Plus.

The PROGRESS Plus framework enables disaggregation of data which can lead to identifying gaps between the most and least disadvantaged [15]. Although the degree of health-associated disadvantage typically increases for persons or populations of which multiple categories of PROGRESS Plus apply [15], there are conditions in which one or more PROGRESS Plus items may be challenging to apply or not applicable. In a systematic review involving young people's health, the authors describe the difficulties in applying occupational class to young people directly but using parental occupation as a surrogate measure may raise concerns about accurate data collection from young people rather than parents [20]. A situation where a PROGRESS Plus factor might not apply is in reviews of studies where only a single location is being studied; a common occurrence in HIV research conducted in developing countries. Another situation where the application of the PROGRESS Plus framework might be limited is in reviews of studies where interventions are targeted at solving health inequities. Although the PROGRESS Plus framework identifies populations at disadvantage, there may be further inequities that exist within them that remain unseen or unreported, particularly in systematic reviews focused on vulnerable or disadvantaged groups. Unfortunately, the PROGRESS Plus framework is not designed to capture inequities at this level of granularity despite how comprehensive it is. Moreover, although PROGRESS Plus items reflect the extent to which equity considerations are investigated and reported, it does not reflect actual access to care in the participants studied.

Although PROGRESS Plus comprises a large range of equity factors, they may not all be measured easily or all apply to systematic reviews and primary studies across varying areas of research. However, it is still important for authors to report both relevant and nonrelevant factors to illustrate that equity was assessed comprehensively and that multiple factors affecting disadvantage were taken into consideration. At the very least, authors should report on PROGRESS Plus factors that could reasonably be expected to affect outcomes in their field of research. Our findings showed variation in reporting PROGRESS Plus factors between HIV reviews, with different categories of reviews reporting different numbers of items. Therefore, both the area of research and type of systematic review should be taken into consideration when applying the PROGRESS Plus tool as they may affect its range of use.

In practice, PROGRESS Plus may be used to determine where and how to apply interventions. The interventions must be accessible, acceptable, effective in, and used by the most disadvantaged group within that population to be successful at reducing inequities in health [15]. PROGRESS Plus is structured to identify potential threats to inequity while remaining practical yet comprehensive. As upcoming systematic reviews report equity-focused outcomes, it is anticipated they will generate evidence to inform future research, practice, and policy.

Some limitations of this research include the narrow focus on HIV. As well, findings in this research should be interpreted with caution as they are limited one database, the Cochrane Library, and therefore reflect only a fraction of HIV research conducted globally. HIV reviews that were not included in this analysis could have reported PROGRESS Plus items differently. Many other conditions are linked to these PROGRESS Plus items, such as cardiovascular disease with age, gender, and ethnicity or diabetes with place of residence, education, and socioeconomic status. Conditions such as these would benefit from more equitable interventions and review of the research with consideration of equity factors.

Strengths of the review include the novelty of reporting PROGRESS Plus in a body of HIV research which to our knowledge, has not been previously addressed. We are confident the PROGRESS Plus factors are accurately reported in our results due to the rigor of double-data extraction performed by the seven independent reviewers. We are optimistic our research will help inform the conduct of future systematic reviews in health equity. We anticipate it will bring further attention to the importance of reporting equity factors in primary studies and systematic reviews.

5. Conclusion

We have described an application of the PROGRESS Plus tool in an equity relevant condition. As well, we identified equity reporting gaps in the reviews suggesting HIV research is not consistently conducted through an equity lens. There is an important need for improved uptake of PROGRESS Plus factors in both primary and secondary studies to characterize the disparities within and between populations and to reduce health care inequities.

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