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Original article

Gender-sensitive indicators: Uses and relevance

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Summary

Objectives: Indicators are important for measuring progress, raising awareness of issues, improving the evidence base for decision-making and helping to identify which issues need priority-attention. As such, they can contribute to improved accountability and enhanced health system performance and responsiveness. Gender-sensitive health indicators, in particular, can provide a rigorous information base for policy actions that can improve health outcomes and reduce unjust health inequities resulting from the social construction of gender.
Methods: Several case studies are described in the paper to illustrate the effective use of gender-sensitive indicators in making influential contributions to health system development and reform, and improving accountability, performance and responsiveness.
Results/Conclusions: It is necessary for frameworks for health indicators to include the broad determinants of health, plus incorporate gender as a central component for analysis, so to be sensitive enough to detect gender differences in health experiences and enable consideration of equity in the analysis of health system performance. Some additional principles and strategies for the development and use of gender-sensitive health indicators include the building of effective monitoring and reporting systems which have linkages with governance, health system development and health sector reform processes, and adequate infrastructure and capacity building.

Keywords: Gender equity – Health indicators – Gender-sensitive indicators – Policy evaluation – Evidence-based decision-making.

Since the latter decades of the 20th century, performance indicators have become part of the routine of public policy development and program management. While the use of data (including health indicators) has always been important for public health action, the health policy discourse, internationally, has shifted to evidence-based decision-making in more recent times. Within this broader context, women's health advocates have argued for improving data collections and making sex-disaggregated data available. Such data could then be transformed into appropriate health indicators, which in turn can lead to improvements in decision-makers' understanding of the gendered dimensions of health policy, research, programs and legislation. The working premise then is that indicators are important for measuring progress, raising awareness of issues, improving the evidence base for decision-making and helping to identify which issues need to receive immediate and future priority-attention. Indicators are, therefore, conducive to better accountability and may contribute to improving health system performance and responsiveness.

Starting with such a premise, this paper aims to provide an explanation of what gender-sensitive health indicators are and how they might be used. A key issue is that while indicators have been developed to measure 'women's progress' and 'health', those which measure gender-sensitivity in health are limited. The paper is organised into the following sections: definitions of gender-sensitive health indicators; using gender-sensitive health indicators; successful applications of gender-sensitive health indicators and challenges and strategies for the future.

What are gender-sensitive health indicators?

What are gender-sensitive indicators?

For over a decade, work on gender-sensitive indicators has been a global concern of researchers and policy bodies. Beck

(1999) defines gender-sensitive indicators as those that enable us to identify, examine and monitor gender-related changes in society over time. In a discussion on indicators in the biennial report, *Progress of the World's Women*, the United Nations Development Fund for Women (UNIFEM 2000) defined gender-sensitive indicators as those constructed so as to compare the position of women and men at a point in time and over time, and therefore focus on gender gaps (i. e. the gap between men and women, particularly based on their socially constructed roles). Gender-sensitive indicators should also facilitate comparison between different groups of women (UNIFEM 2000) and be able to identify and assess whether equity is being achieved (Abdool & Vissandjée 2001).

To examine equality and equity in health, gender-sensitive indicators need to include a comparator (or denominator) which is an appropriate norm, reference group, or standard to be used to compare the situation of women and men, girls and boys, or indeed the situation of different groups of women and girls. The presence of such a comparator is one of the defining qualities of a gender-sensitive indicator. This means that gender-sensitive indicators go beyond 'gender statistics' (e. g. 60 % of women in country X are literate, as opposed to 30 % five years ago) through their inclusion of a pertinent norm, reference group or comparator (Beck 1999).

However, comparing information about the status of women to that of men may be insufficient because it restricts the focus to areas where such comparisons can be made. This limits the measurement of women's progress to areas where men have already achieved 'success' and potentially gives an incomplete picture of women's experiences, goals and interests (Austen et al. 2000). Equally, a full analysis of the situation of women (and men) may also require the use of sex-specific indicators because some conditions (such as maternal mortality) are only experienced by one sex, and it is important to know about absolute levels of achievement as well as gender gaps (UNIFEM 2000).

What makes health indicators gender-sensitive?

Health indicators can be described as statistics or parameters that provide, over time, information on trends and changes in the condition and status of health (Tudiver et al. 2004). The frameworks and theoretical constructs used to understand health will critically influence the indicators developed, as will assumptions about men, women and their roles. Traditionally, the use of a biomedical approach combined with particular assumptions about women, has imposed a number of limitations on existing indicators for health. These include the many health indicators which focus on illness/disease rather than on health and well-being (Eckermann 2000; Nayar 2002; Abdool & Vissandjee 2000) and/or assume gender neutrality (Abdool & Vissandjee 2000; Eckermann 2000). A narrow focus on patterns of disease has resulted in limited development of indicators which reflect broader concepts of health, health seeking behaviours and positive strategies for achieving health (AbouZahr & Vaughn 2000; Tudiver et al. 2004). The reporting of these indicators seldom provides information on a sex-disaggregated basis, even when the original data collection makes such a differentiation (Licuanan 1999). In addition, some authors argue that the lack of participation by women and engagement of communities in indicator development has resulted in indicators which may not measure aspects of health, equity and progress relevant to women (Austen et al. 2000; Beck 1999).

These critiques point to the need to develop frameworks for health indicators that: (1) take into account the broad determinants of health; (2) include gender as a central component for analysis (Abdool & Vissandjee 2001); (3) not only focus on health outcomes, but also on the social and economic processes which influence health and well-being (Coleman 2003; Tudiver et al. 2004); (4) are sensitive enough to detect gender differences in health experiences (Tilley 1996); and (5) enable the consideration of equity in the analysis of health system performance, and include measures for issues of importance to women, or men (such as the relational and technical aspects of health care).

It should be noted, however, that these critiques of existing health indicators in the literature do not point to the need to develop new data collection and surveillance systems. Rather the challenge is how to modify current health information systems to ensure that they can adequately reflect gender equity issues, if not other equity concerns.

There are three key domains discussed in the literature in relation to making health indicators gender-sensitive. These are: (1) conceptual issues about both the theoretical concepts used to understand health and illness, and those that describe gender relations within the household, community, workplace, and the economy; (2) technical issues associated with indicator and data definition, data collection, and basing indicator development on the availability of existing data rather than constructing new structures to build gender-sensitive indicators; and (3) processes for developing and using indicators.

In other words, making health indicators gender-sensitive will, ideally, involve: identifying an appropriate conceptual framework for understanding health which both links health determinants and health outcomes and includes gender as a central component; and applying the lessons about gender-sensitive indicators to the development and use of indicators to the extent possible (that is, both the technical and process aspects of indicator development).

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Table 1 Matching evidence to decision-making (adapted from Butcher (1998))

Level	Decision Focus	Problem	Evidence
National or provincial government	Policy	Most efficient means in accordance with community values	Distributional/gender impact, costs, potential harm, community values, and benefits of current and proposed policies
Region/ community	Regional plan, community development	Efficient and effective means to achieve shared social ends (including gender equity)	Health needs of different population groups, community values, resource use and impact across programs
Service/ organisation	Program development, institutional priorities	Efficient means to meet institutional interests	Institutional client base (including diverse population groups), expertise needed, program costs and outputs

Using gender-sensitive health indicators

Why use gender-sensitive health indicators?

Gender as a determinant of health is well recognised. Many authors (Coleman 2003; Standing 1997; Beck 1999) have argued for consideration of the social, structural, and power relationships that shape the lives of women and men in relation to health. Similarly, arguments have been made about the importance of reducing health inequities created through *avoidable* disparities in health and its determinants, between groups of people who have different levels of underlying social advantage (Gomez 2000) (original emphasis).

The key reason for using gender-sensitive health indicators is to provide a rigorous information base for policy actions that can improve health outcomes (Coleman 2003) and thereby reduce unjust health inequities resulting from the social construction of gender. This requires the development of indicators that contribute to improved understanding of the pathways between inequity and disease so that effective interventions can be designed to operate at the "optimal points in these processes and pathways [where they] can interrupt and reverse the potential for disease onset", represent good return on investment, and do not cause harm to some groups while assisting others (Coleman 2003).

The development and use of appropriate gender-sensitive indicators to monitor equity/inequity trends in health status and healthcare access and utilisation can support policy by answering the key questions: "Is the gap in health status improving or worsening over time?" and "How are policies and interventions working to narrow the gap?" (Evans et al. 2001).

Linking indicators to decision-making

A suite of indicators, rather than single indicators, are often chosen for monitoring purposes. The purposes for which indicators are to be used will influence the type of indicators that are most relevant, while the conceptual framework used for understanding health and illness will also shape how suites of indicators are chosen. Additionally, different types of indicators can be used for different purposes (i.e. to identify both the circumstances associated with equity/equality, and progress towards achieving equity/equality and outcomes).

The choice of indicators may also depend on the level at which they will be used – local, community, national, regional or international – which raises the issue of how best to aggregate and organise indicators at differing levels to inter-connect in a meaningful way that can potentially lead to action toward improvements for women. This might mean that different indicators are required for different levels of activity and ideally that women, as the 'affected community', should be involved in determining which indicators are most meaningful for a particular level.

It is important to recognise, however, that different levels of decision-making (and different decision-makers) are attempting to solve different problems and that there is a need for appropriate evidence. Table 1 illustrates the types of evidence that interest decision-makers at different levels, and gender-sensitive indicators should be part of the evidential basis for decision-making.

Indicators can also be used for all aspects of a policy cycle – from identification of problems, to setting policy objectives, to implementing policy and evaluating policy outcomes. At each level there should be a logical set of questions to inform indicator selection. These include: What is the issue to be addressed? What changes are we trying to effect? How will we know if we have succeeded? What activities need to occur to bring about change? What resources will be required? Thus, monitoring will require indicators about inputs, processes, outputs, and outcomes.

It is important, however, to recognise that policy, program, and legislative processes do not rely on indicators alone. Data can contribute towards the development of shared meaning in the decision-making process. For example, surveillance data can contribute in a number of ways, according to Tudiver et al. (2004). These include: (1) identification of 'sentinel events' that require immediate policy action (such as disease outbreaks); (2) tracking disease incidence and health behaviours over time to effectively target policy and program development; (3) monitoring policy implementation and as-

sessing the effectiveness of interventions; (4) monitoring cross cutting issues (such as working conditions) that are relevant to many aspects of health; (5) examination of social trends to identify if they correlate with other determinants and influence the development of healthy public policy; and (6) highlighting policy and program failure and identifying the lessons learned.

Informing research, policy making, legislation and program development

There are a number of key issues to consider when using indicators to inform research, policy, legislation and program development; and to raise awareness and monitor systems performance. These include: (1) consideration of the types of decisions that have to be made and who makes them; (2) indicators are only one input; (3) indicators need to lead to or link with gender based analysis; (4) indicators have to engage the broader community; and (5) the focus should be on indicators that promote action. To achieve these intended purposes there is a need to strengthen capacity at all levels to implement systems for monitoring gender equity in health. This involves having the right data, having quality data, and having a social process to review the data.

The value of good quality and conceptually sound indicators is limited if there is not an appropriate monitoring system for examining gender-sensitive indicators. Such a system requires not only adequate infrastructure for collection and collation of valid and reliable data but also a participatory process through which the meaning/s of indicators are reviewed, implications for action are distilled, and decisions are taken to effect greater equity. Such an ongoing system of monitoring will also contribute to the identification of emerging issues that need to be researched or acted upon. The most cost-effective system would be to build on (i.e. genderise or gender-sensitise) existing infrastructure for data collection and analysis, as well as link in with mainstream policy and management decision-making.

Using indicators as a social process

If indicators are to be used by decision-makers, the importance of effectively communicating the data cannot be underestimated. Not only should the data be timely (for purposes of specific decision-making), it also needs to be accessible. This means being effectively communicated or presented, readily comprehensible to the intended audience and able to engage a wide range of stakeholders and interested parties. As data do not speak for themselves, their uptake into decision-making requires attention to a range of social and organisational factors, including: (1) organisational elements, infrastructure, administration, culture, communication, policy making, and funding; (2) the contextual factors of individuals and organisations involved (i.e. personal disposition, attitudinal stance, situational requirements, program demands, and research orientation); (3) dissemination efforts that include considered strategies, methods, targets; and (4) linkage systems between data producers and users that enable widespread adoption and implementation and are cost effectiveness (Oldenburg et al. 1997).

Contextual factors may be the most important determinant of whether indicators will be used to inform policy making. In a study about factors that influence evidence-based decision-making in the Canadian health system, Tranmer et al. (1998) found that multiple positive and negative factors were at work. Decision makers often find the evidence difficult to interpret, not specifically relevant to the policy being considered, not timely enough, and contradictory in relation to other expert opinions. The values and beliefs, professional or educational backgrounds, and the organisational imperatives of the decision makers were also important influences.

The above suggests that a particular aim in building an effective system for using indicators for policy development and monitoring is to ensure that the stakeholder community has access to information and is empowered by access to data. Given that health policies and programs are not solely the result of the deliberations of decision-makers, but also reflect the input of civil society interest groups, policy development and monitoring processes for the purpose of achieving gender equity in health are not only of interest to consumers and community groups, but also a mechanism for their empowerment. Thus, regardless of the philosophical basis of public policy-making, the use of indicators has become an important part of consumer empowerment.

Successful applications of gender-sensitive health indicators

There are several international examples of the use of gender-sensitive indicators as part of policy and program development and implementation. National governments, international agencies, research and advocacy bodies have undertaken various efforts to develop and use gender-sensitive health indicators for tracking progress towards equity, including gender equity. Four examples of the practical application of gender-sensitive indicators are described below.

Gender-based analysis

– A program to promote the equitable use of eye services and reduction of eye disease and blindness in Tanzania, India, Egypt, and Nepal found that by using gender-sensitive indicators, an assessment could be made of the as-

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sociation between gender and blindness, the identification of potential reasons for differences, and the local factors associated with use of eye services. The key findings were that women consistently have lower rates of utilization of cataract surgical services compared to men; women bear about 75 % of trachoma related blindness; the barriers that restrict the use of eye care services by men and women are different due to differences in gender roles and behaviours; and that young girls who become blind due to congenital cataract are much less likely than young boys to be brought to hospital for surgery.

These findings were used to develop strategies that reduced travel access problems and the cost of surgery, improved awareness, access, and acceptance of eye care services, set up 20 different referral sites in reach of every village, reduced hospital-based barriers to the utilisation of services; and to introduce counselling for eye disease patients to improve their decision making and acceptance by family members – particularly for elderly females (Courtright 2004; Courtright 2003).

– In Botswana, a multi-sectoral, gender-sensitive public health response to the HIV/AIDS epidemic was implemented following the use of several indicators that revealed the increasing vulnerability of women to HIV/AIDS; the disproportionately high risk rates for young people, particularly young women; the lack of access to comprehensive information and services by women and girls; and the risk of marriage, sexual coercion and violence leading to a greater chance of infection.

  As AIDS is seen as a development rather than health issue, strategies to empower women and girls were implemented. Based on prevention, testing and treatment, they included the encouragement of abstinence and postponement of sex, normalization of condom carrying, integration of voluntary counselling and testing into other health services, an annual "Miss HIV Stigma-Free" and a programme to prevent mother-to-child transmission of HIV (AZT and infant formula) for HIV positive pregnant women (de Korte et al 2004; Watson (undated)).

Policy advocacy

Over the past 30 years Australia has acknowledged that violence against women is a major social issue and significant health determinant for women and their children. During the 1970s and early 80s women's advocacy groups used qualitative data to bring the issue to the attention of policy makers and decision makers which led to the establishment of the first services and some policy changes. As reforms and programs were implemented, indicators and their measurement were built into data collection. For example, the New South Wales Bureau of Crime Statistics and Research and the Women's Coordination Unit worked with the police to design forms so that useful data was collected as part of the apprehended violence order (AVO) process.

When the statistical data and its analysis became available, it was used by advocates, both within government and outside, to achieve greater reform through increased services, improved practices and attitudinal change. The data and analysis was also used to formulate policies such as the 1992 National Strategy on Violence Against Women which was developed with community representatives and endorsed by the Council of Australian Governments (COAG).

In 1996, the Australian Bureau of Statistics conducted a major Violence Against Women Survey, which was followed in 1997 by the COAG initiated Partnerships Against Domestic Violence, a whole-of-government approach that reduces and prevents domestic violence in Australia through 12 strategies monitored by 13 indicators. Phase 1, which included more than 100 projects across Australia, was completed in June 2001. The subsequent Phase 2 ended in June 2005 (Partnerships Against Domestic Violence 2002).

In 2003, the Victorian Health Promotion Foundation conducted a detailed study of intimate partner violence to measure the attributable burden of disease. This study found that for women under 45 years of age, such violence was responsible for an estimated 9 % of the total disease burden (VicHealth 2004).

Accountability

In 2004, the *Report Card,* the third in a series assessing the overall health of women in the USA found that there had been a failure to meet national goals. The Report Card is distributed to policy makers and women's health advocates nationwide. The Report Card is an advocacy tool that uses a broad definition of health and evaluates 34 health status indicators, 67 health policy indicators, and assesses the nation's progress, or lack thereof, state-by-state, in reaching key benchmarks related to the status of women's health. It also provides an important overview of key disparities in the health of women based on race, ethnicity, sexual orientation, disability status, and other factors. The 2000 and 2001 Report Cards prompted activities such as legislative hearings, town meetings, forums, and new materials on women's health across the country. The Report Card also measures women's health by looking at their economic security in the states. The 2004 Report found that little progress had been made in this area, with Alaska being the only state with a minimum wage that allows a family of three to reach the federal poverty threshold (National Women's Law Center and Oregon Health and Science University 2004).

Comparative research

Profiling domestic violence, nine-country study (Kishor & Johnson 2004), uses household and individual-level data from the Demographic and Health Surveys (DHS) program to examine the prevalence and correlates of domestic violence and the health consequences of domestic violence for women and their children. Nationally representative data from nine countries – Cambodia, Colombia, the Dominican Republic, Egypt, Haiti, India, Nicaragua, Peru, and Zambia are analysed within a comparative framework to provide a multifaceted analysis of the phenomenon of domestic violence. The DHS survey is considered by its authors to be an ideal vehicle for studying not only the linkages between domestic violence and health and demographic outcomes but also the context in which violence takes place. The report seeks to both raise awareness and inform the work of policy makers and program planners. The study measured 18 indicators including the prevalence of the different types of domestic violence, risk factors for the experience of domestic violence, domestic violence and women's empowerment, domestic violence and demographic and health outcomes. It found that domestic violence has an impact on the health and well being of the women being abused, and that there were high rates of domestic violence in all countries studied (over 40 % of women in several countries reporting spousal or intimate partner abuse). In most countries, the highest rates of violence occur in moderately wealthy households, and not, as often assumed, among the poorest households. Infant and child mortality rates are also higher among women who have ever experienced violence when compared with women who have not. This multi country study helps advocates by providing comparative information on key issues which can readily translate to action plans (Kishor & Johnson 2004).

These case studies of the use of gender-sensitive indicators have aspects in common. They often started out using the basic available sex disaggregated data, then improved and refined the indicators to be more gender-sensitive using a social process that was participatory in that members of civil society worked with government agencies, and were often critical to the success of the project. The case studies measured the outcome or impact of a situation rather than the input, raised awareness of issues, provided or improved the evidence base for decision-making including informing gender based analysis. The emerging issues needing priority attention were identified, which often lead to health indicators pointing to underlying issues common for a range of health problems. The current issues requiring priority attention were also identified. They served as alerts or early warnings for future problems and were predictive of other problems. The information the programs provided galvanized action which was taken at national, state, local and community levels by individuals as well as organised groups and public and private agencies. The programs benefited a large number of women, had a significant impact on women's quality of life, functioning and well-being and acknowledged the importance of health determinants. The indicators and their uses were influential in contributing to health system development and health sector reform processes, making health systems more accountable and improving health system performance and responsiveness. The measurement of the effectiveness of the programs over time reflected the results of action while the tangible results indicated improvement.

There is seldom, however, the opportunity at the community or national level, of introducing new systems for measurement and monitoring. The key successes seem to lie with the effective use of existing data collections, partnership between researchers and advocates (within and outside government), and focused use of indicators to drive and monitor strategies in relation to particular policy concerns.

Challenges and strategies for the future

Based on the discussion above, some principles and strategies can be suggested for development and use of gender-sensitive health indicators. They are:

The conceptual basis for gender-sensitive health indicators: Reported indicators should include a broad concept of health and the full continuum of care; incorporate a life-cycle approach and extend beyond reproductive health issues; and ensure conceptual clarity and soundness, particularly in relation to 'gender' and 'sex'.

Monitoring system: For gender-sensitive health indicators to be influential there is a need to build systems for monitoring and information uptake which could include the following features (based on WHO Kobe Centre (2003)). To ensure the relevance of indicators, linkages must be made with governance processes, including other reporting and monitoring systems (e. g. at the international level – Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), Beijing Platform for Action); and there must be linkages with, and contributions to health system development and health sector reform processes (including monitoring of health system performance; and analysis and interpretation which addresses key policy concerns and potential for action).

Effective and efficient data collection can be facilitated by: building on existing systems for data collection (including surveys and administrative data); working on both improving specificity of national reporting and harmonizing of provincial data systems (through common data definitions and

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standards); building on indicators proposed through key international consensus and reporting frameworks, including *The World Health Report*, *Human Development Report*, *State of the World's Children,* Millennium Development Goals, Beijing Platform for Action, International Conference on Population and Development (ICPD), and CEDAW; using proxy indicators when collecting additional data is not feasible; and having designated jurisdictional focal points, located within appropriate settings, with accountability for data collection and dissemination.

Reporting: The development and use of gender-sensitive health indicators is a relatively new phenomenon. The challenge then is how to achieve an optimal reporting system that: has a regular reporting time frame, offers sufficient specificity (including, where possible, sex, ethnicity, age, socioeconomic status); monitors and understands risk and protective indicators (including highlighting action potential, in a way to increase monitoring and understanding); provides quantitative and qualitative indicators and analyses which ensure that local contexts are explicitly taken into account in the reporting system; enables analysis and reporting of trend data on the core set of indicators; enables analysis and reporting by appropriate peer groupings for comparative performance assessment (WHO Kobe Centre 2003); has a manageable set of core indicators nationally but can also develop optional modules that allow for harmonization and comparison across peer communities or regions; ensures data collection and dissemination processes are ethical; sets benchmarks for performance monitoring where possible; and has an accessible, appealing, user-friendly reporting style that engages stakeholders.

Infrastructure and capacity building: It is also important to have an appropriate infrastructure to support the development of indicators, collection of data, monitoring and reporting processes, as well as the social processes associated with ongoing linking between use of indicators for policy development and related social processes. Strengthening existing data collection and surveillance systems is the most cost-effective approach.

Key elements of an effective infrastructure include: adequate and sustainable infrastructure for collection, analysis and reporting; capacity-building mechanisms and processes in place to train and support enhanced understanding of meaning and action potential of the set of leading health indicators that integrate gender perspectives; capacity building at provincial, regional and community levels; creation of a continuing social process for accountability by developing mechanisms to bring together key stakeholders at both national and global levels to review and discuss action requirements arising from leading health indicators; and an accountability process for regular review and evaluation of the whole leading health indicators system, including data elements and definitions, collection methods, analysis and reporting, data access and dissemination, and accountability processes.

These principles and strategies could lead readily to more sophisticated forms of indicators, as well as to a range of possible research questions. For the policy-maker and the health services manager, however, it is important to focus on the decision contexts, and ensure there is a small, manageable group of indicators that can be the basis for meaningful dialogue between key stakeholders.

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References

Abdool SN, Vissandjée B (2001). An Inventory of Conceptual Frameworks and Women's Health Indicators. Montreal: Centre of Excellence for Women's Health.

AbouZahr C, Vaughn JP (2000). Assessing the burden of sexual and reproductive ill-health: questions regarding the use of disability-adjusted life years. Bull World Health Organ *78*: 655–66.

Austen S, Jefferson T, Preston AC (2000). The challenges of defining and measuring women's social and economic progress. Perth: Women's Economic Policy Analysis Unit, Curtin University of Technology.

Beck T (1999). Using Gender-Sensitive Indicators: A Reference Manual for Governments and Other Stakeholders. London: Commonwealth Secretariat.

Butcher R (1998). Foundations for evidence-based decision-making. Canada Health Action: Building on the Legacy: Evidence and Information. Vol. 5. Ottawa: Editions MultiMondes.

Coleman R (2003). A Profile of Women's Health Indicators in Canada. Prepared for the Women's Health Bureau, Health Canada. Ottawa: Health Canada. www.gpiatlantic.org/pdf/health/womens/whbreport.pdf.

Courtright P (2004). Gender and blindness. www.kcco.net/Courtright/gender.ppt [11 October 2005].

Courtright P (2003). Gender and blindness: eye disease and the use of eye care services. Community Eye Health 16*(45)*: 11–2.

de Korte D. et al. (2004). Strategies for a National AIDS Treatment programme in Botswana, ACHAP Program Series 1(1). www.achap.org/downloads/ProgramSeries2004.pdf [11 October 2005].

Eckermann L (2000). Gendering indicators of health and well-being: Is quality of life gender neutral? Social Indicators Research *52*: 29–54.

Evans T et al. (2001). Challenging inequities in health: from ethics to action. New York: Oxford University Press.

Gomez E. (2000). Integrating gender and ethnicity issues in monitoring health equity. Proceedings of the Health Equity Gauges International Meeting. Kwa Martine, South Africa, 17–20 August.

Kishor S, Johnson K (2004). Profiling Domestic Violence: A Multi-Country Study. Calverton, Maryland: ORC Macro. www.measuredhs.com/pubs/pdf/OD31/OD31.pdf.

Licuanan P (1999). Monitoring and evaluating strategies for the empowerment of women. Bangkok: Economic and Social Commission for Asia and the Pacific.

National Women's Law Center and Oregon Health & Science University (2004). Making the Grade on Women's Health: A National and State-by-State Report Card 2004.

Nayar SB (2002). Some methodological issues in the measurement of women's health. Paper presented at the 6th Asia-Pacific Social Science and Medicine Conference, Kunming, China.

Oldenburg B, O'Connor M, French M, Parker E (1997). The Dissemination Effort in Australia: strengthening the links between health promotion research and practice. Canberra: Australian Government Publishing Service.

Partnerships Against Domestic Violence (2002). A Substantial Beginning to a new Commitment: Annual Report 2000–2001. Canberra: Commonwealth of Australia.

Standing H (1997). Gender and equity in health sector reform programmes: a review. Health Policy Plan *12*: 1–18.

Tilley L (1996). Measuring Women's Health Outcomes. Canberra: Australian Health Outcomes Clearing House.

Tranmer J et al. (1998). Factors that Influence Evidence-based Decision-making. Canada Health Action: Building on the Legacy. Vol. 5. Evidence and Information. Ottawa: Editions MultiMondes.

Tudiver S, Kantiebo M, Kammermayer J, Mavrak M (2004). Women's Health Surveillance: Implications for Policy. BMC Women's Health 2004*(4 Suppl)*. www.biomedcentral.com/1472-6874/4/SI/S31.

United Nations Development Fund for Women (UNIFEM) (2000). Progress of the World's Women 2000: UNIFEM Biennial Report. New York: United National Development Fund for Women.

VicHealth (2004). The Health Costs of Violence: Measuring the burden of disease caused by intimate partner violence – A summary of findings. Melbourne: VicHealth and the Victorian Department of Human Services.

Watson PA (undated). The Frontline in the War Against HIV/AIDS in Botswana: Case studies from the African Comprehensive HIV/AIDS Partnership.

WHO Kobe Centre (WKC) (2003). Report of the Expert Working Group on Gender-sensitive Leading Health Indicators. Kobe: WHO Centre for Health and Development.

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