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## Role of evidence in maternal health policy processes in Vietnam, India and China: findings from the HEPVIC project

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This paper explores the role of evidence in maternal health policy processes in Vietnam, India and China. Both formal and informal types of evidence were used; and differences were found between the stages of policy processes. Evidence used mostly covered easily quantifiable issues and clearly identifiable technical solutions. Different policy actors were involved; actors' evidence preferences were affected by their power, agendas, values and perceived characteristics of robust evidence. To enhance evidence role there is a need to: develop culture of evidence-informed policies; value different evidence types; ensure evidence use throughout policy processes; recognise and manage actors' agendas; and develop context-specific strategies.

**key words** health policy processes • evidence • Asia • developing countries

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### Glossary

ARH	adolescent reproductive health
ASRH	adolescent sexual and reproductive health
DV	domestic violence
HEPVIC	Health Policy-Making in Vietnam, India and China: key determinants and their inter-relationships
HMIS	health management information system
MMR	maternal mortality rate
MoH	Ministry of Health
NGO	non-governmental organisation
SBA	skilled birth attendance
SAVY	Survey Assessment of Vietnamese Youth
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund

## Introduction

Calls for evidence-informed policy making are frequently made in the literature (Cooper, 2003; Dobrow et al, 2004; Morgan, 2010; Niessen et al, 2000; Sutcliffe and Court, 2006; Lavis et al, 2009). Evidence, which can be defined as ‘... facts or testimony in support of a conclusion, statement or belief’ and ‘something serving as proof’ (Rychetnik et al, 2004), can include both formal (research) and informal (personal experiences, ideas and interests) types (Bowen and Zwi, 2005; Dobrow et al, 2004). Values and beliefs of different policy actors bear upon the interpretation of evidence and can be described as either different types of evidence or factors affecting the role of evidence.

Frameworks have been proposed for: categorising the types of evidence for policy and practice (Solesbury, 2001; Bowen and Zwi, 2005); assessing the strength/degree of robustness of evidence (Shaxson, 2005); describing the processes of evidence generation, dissemination and use (Lavis et al, 2009; Dobrow et al, 2004) or enhancing the utilisation of evidence in policy and practice (Hanney and Gonzalez-Block, 2009; Hanney et al, 2003). However, these frameworks are rarely brought together, or tested in different contexts, to advance the understanding of the role of evidence in health policy processes.

This paper contributes towards filling this gap in the literature. It does so by developing a conceptual framework for understanding the role of evidence in health policy processes and applying this framework in the analysis of the role of evidence in maternal health policy processes. It reports findings from the three-year HEPVIC project (Health Policy-Making in Vietnam, India and China: key determinants and their inter-relationships). The analysis of health policy processes is available elsewhere (Leeds HEPVIC team, 2009; Green et al, 2011). This paper focuses specifically on identification of key similarities and differences in understanding the role of evidence in maternal health policy processes in Vietnam, India and China.

The conceptual framework, reported in the next section, guides the presentation of findings. We then discuss the key findings and conclude with implications for enhancing the role of evidence in health policy processes.

## Methods

The HEPVIC project was a qualitative, multi-method, retrospective and comparative study. It focused on the assessment of health policy processes in the area of maternal health in Vietnam, India and China. One component was investigation into the role of evidence, which was defined in the project as: ‘relevant information, both formal and informal, that is either used or could be used to inform policy processes’ (Leeds HEPVIC team, 2009).

Three maternal health case studies were chosen in each country to analyse health policy processes. These were skilled birth attendance (SBA) and adolescent reproductive health (ARH) (both studied in all three countries with adolescent sexual and reproductive health (ASRH) being the focus in India), domestic violence (DV) (studied in Vietnam and China only) and abortion (India only). These were selected to represent three continua: intersectoral issues (such as DV) versus one-sector issues (SBA); socially accepted issues (SBA) versus socially sensitive issues (ARH, abortion, DV); and internationally accepted technical interventions (SBA) versus issues with less

clear consensus on the interventions (DV, ARH) (Green et al, 2011). In Vietnam, the national level was the study focus; in China and India, due to their size and complexity, the research focused primarily at sub-national levels (Guangxi Zhuang Autonomous Region and Gujarat State respectively). Data collected focused particularly on the previous decade (2000–10).

Similar research design, methods, tools and analysis procedures were used in each country to facilitate cross-country comparisons. As shown in Table 1, 124 semi-structured interviews and seven focus groups and participatory stakeholder workshops were conducted, and 553 documents reviewed.

**Table 1: Study sample, by method and study country**

Method	Vietnam	India	China	Total
Semi-structured interviews	40	42	42	124
Documents	138	317	98	553
Focus groups & participatory stakeholder workshops	4	1	2	7

Data were collected between August 2007 and March 2008, following piloting of the research tools. Purposive sampling was used to develop the initial list of documents and study respondents for each case study, followed by snowballing sampling to identify further respondents. The interviews were conducted with the following six respondent groups in each country:

1. *Politicians*: political figures at all levels (country, province/state), who may influence, often indirectly, health policy processes
2. *Civil society organisations*: non-governmental organisations, patients’ organisations, and women’s committees
3. *Policy makers /planners*: public sector officials in the health sector with responsibilities for development, monitoring and implementation of health policies
4. *Health managers*: programme managers and health staff (public and private sectors) at the frontline of service delivery
5. *Development partners*: international funding bodies represented in the country and affecting the health policy processes
6. *Academics*: academic scholars (individuals and organisations) who possess knowledge of the policy processes

Generic data collection tools were developed for different respondent types, which were then adapted and translated for each country, to take account of local context. Interview guides contained neutrally-worded questions covering four areas (wider policy context, stages of policy process, use of evidence in policy processes and recommendations for improving policy processes), with flexibility for respondents to introduce new topics and respond in their own frame of reference.

Interviews and facilitation of focus groups and workshops were conducted by members of the local research teams, who were trained in qualitative research and had no direct involvement in policy processes. Senior academics interviewed respondents holding more senior positions, to facilitate an open discussion. Interviews were

conducted usually in private at the respondent's office, and typically lasted up to two hours. The focus groups and participatory stakeholder workshops typically lasted half to a full day, and were facilitated by members of the research teams. These methods encouraged attendees to participate through small-group exercises and discussion. Documents were collected by the research team and a standard template was used to record notes on the content and context of each document. Interviews, focus groups and workshops were audio-recorded and transcribed. Triangulation of the data collected through the different data collection methods was used to increase the validity of findings and to gain a fuller picture of the policy processes.

Ethical approvals for research were obtained from the University of Leeds at the project level and from the relevant Ethical Review Boards in each study country. A research institution in each study country was responsible for the data collection and analysis, in partnership with a European institution. Country Research Advisory Committees were set up to advise on the research, and assist with dissemination and communication of findings.

Data analysis occurred at country and cross-country levels. Data analyses in each study country were conducted in local languages. A framework approach to analysis was used (Ritchie and Spencer, 1994), assisted by qualitative data analysis software (NVivo7). The five stages of framework analysis were familiarisation with the data; identifying a thematic framework; indexing; charting; and mapping and interpretation. A node tree (thematic framework) was identified and agreed based upon reading of an initial random sample of transcripts. This node tree was then used by coders to code transcripts (indexing), with checks on inter-coder reliability. Charting, mapping and interpretation were assisted by searches and matrices in NVivo, and regular meetings between research team members. Quality assurance checks (Tobin and Begley, 2004) were used to strengthen the reliability and validity of findings, and to minimise loss of clarity and meaning in language translation. Draft findings were discussed with, and validated by, research partners and other stakeholders. This activity reduced potential bias, which was important, given a few members of the research team had previous involvement in the policy processes being studied (for example, production of academic evidence).

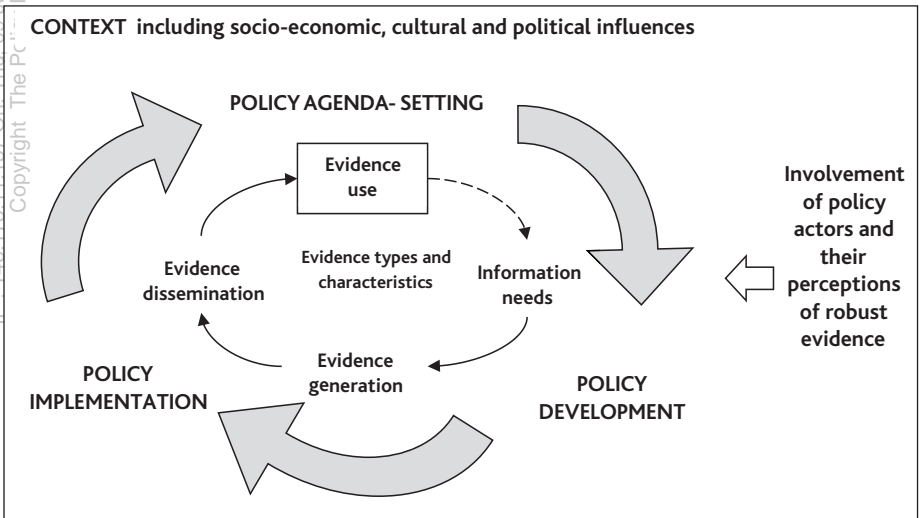
We acknowledge three limitations to this study. First is the potential loss of some meaning during translation, especially for terms such as evidence and thus omitting the important issues from the analysis. The project therefore developed a glossary to inform data collection and analysis. Quality assurance checks (such as joint coding of data) were used to minimise loss of clarity and meaning in language translation. Second is the reliance on country reports only for the comparative analysis, which may have affected the depth of analysis. To minimise this, findings and their interpretation were validated by research partners and other stakeholders to ensure the comprehensive coverage of key issues and reliability of analysis. Last, although our research aimed to protect the anonymity of respondents, the small group of key informants involved in national and sub-national-level policy making means some may have provided responses biased towards their institutional agendas rather than representing their personal views. Triangulation of the data collected through the different methods, a well-known technique for minimising such bias, was applied to address this issue.

## Conceptual framework

A conceptual framework for understanding the role of evidence in health policy processes (Figure 1) was developed from the literature to guide the analysis and the presentation of findings in this paper.

Our conceptual framework stems from a framework for evidence-informed policy making proposed by Green and Bennett (2007), which distinguished different functions or *evidence processes* (for example, priority-setting, knowledge generation and dissemination), organisations or *actors* (funders, research institutions, government) and *contextual* influences (for example, decision culture and regulatory framework). The role of evidence in health policy processes in our framework is interpreted as the interrelationship between policy processes and evidence processes. The primary focus of the research is the use of evidence for policy processes, which may occur either within a single stage of the policy process (such as agenda-setting or policy development) or during more than one stage. The role of evidence in policy processes is determined by available evidence types and characteristics; involvement of policy actors in evidence (and policy) processes and their perceptions of robust evidence; and the wider context, as set out next.

**Figure 1: Conceptual framework for understanding the role of evidence in health policy processes**



Frameworks have been proposed for understanding health policy processes, ranging from simple four-stage models (Walt, 1994; Sutcliffe and Court, 2006) to nine stage models (Hogwood and Gunn, 1984; Jenkins, 1978). In our framework we distinguish three stages of *policy processes*: agenda-setting (when the policy issue is recognised and put on the policy agenda), policy development (when the policy is formulated, typically in a written document) and policy implementation (when policy is implemented, for example through the provision of health services). Monitoring and evaluation is seen as cutting across all three stages of the policy process. Different frameworks also exist for understanding *evidence processes*, commonly including identification of information needs of the key decision makers, evidence generation, dissemination

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and use in health policy processes (Bowen and Zwi, 2005; Dobrow et al, 2004). We adopt these four stages in our framework.

Five *types of evidence* may potentially affect health policy making: research, knowledge and information, ideas and interests, and the wider political and economic environment (Bowen and Zwi, 2005). A similar classification distinguished academic research, personal experiences, shared norms and values (Solesbury, 2001). These types can be categorised as formal and informal evidence. Each evidence type can be analysed by its *characteristics*, which include perceptions of quality, availability and timeliness of evidence by the different policy actors involved in both evidence and policy processes (Innvaer et al, 2002; Tomson et al, 2005).

The involvement of *policy actors* in evidence processes and their *perceptions about evidence* can influence, either positively or negatively, the role of evidence in health policy processes. These actors can be government and non-government, individuals and organisations and national and international (Buse et al, 2005; Walt and Gilson, 1994). The actors can have different values, interests, agendas and relative powers (Gaventa, 2005; Walt, 1994), affecting their perceptions of robust evidence. Typically, the perceived attributes of robust evidence include: reliability, objectivity, credibility, generalisability, relevance, availability, timeliness, rootedness and practical applicability (Shaxson, 2005; Spencer et al, 2003; Court et al, 2005; Sutcliffe and Court, 2006; Solesbury, 2001). These perceptions can be context-specific and may differ between different groups of policy actors.

All the above interaction between evidence and policy processes occurs within, and is influenced by, a *wider context* which includes both national and international factors (Walt and Gilson, 1994; Buse et al, 2005). Specific contextual factors that may affect the role of evidence in policy processes include political regime, ideology, resource framework, decision culture within the public sector, public policy and the configuration of the public sector reflected in the administrative and legal environment (LaFond and Brown, 2003; Green and Collins, 2006; Hailey, 2008; Dobrow et al, 2004).

## Role of evidence in maternal health policy processes in Vietnam, India and China

Many respondents and documents suggested that policy processes in Vietnam, India and China were evidence-informed. For example, a health manager from India suggested that 'evidence has played a major role in the maternal and child health policy in the country right from late 70s onwards...' and a policy maker from China reflected that:

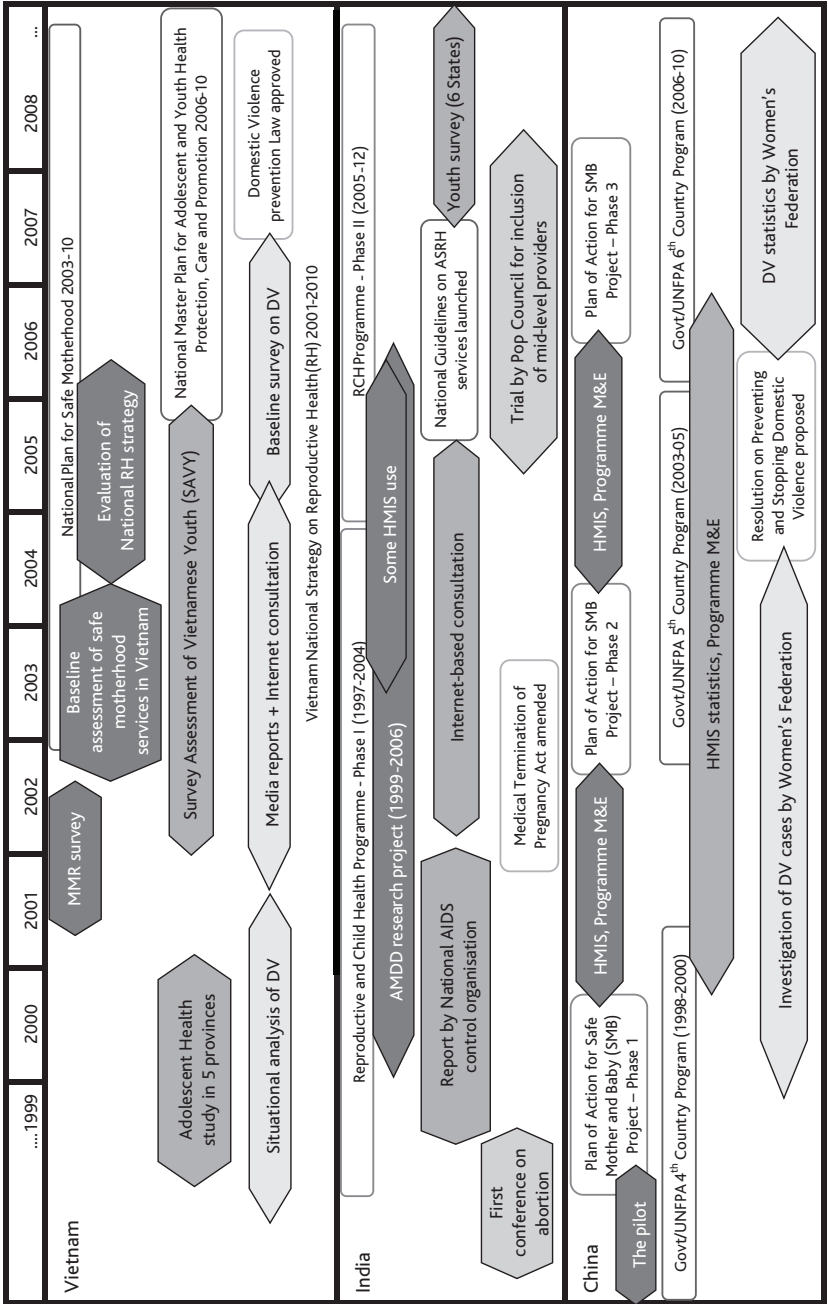
... evidence-based policy-making has become more common in China in the past 10 years. We are now actively encouraging evidence-based decision-making... our government has been paying more attention to this. (ARH policy maker, China)

Figure 2 summarises the use of evidence (shown in hexagonal shapes) identified across the nine case studies of maternal health policy processes in Vietnam, India and China, which we discuss next.

We present findings under broad headings, which follow the structure of the conceptual framework.

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**Figure 2: Overview of evidence use in maternal health policies in Vietnam, India and China**



## Types and characteristics of evidence used

Different formal (such as academic evidence, HMIS and programme monitoring and evaluation) and informal (personal experiences) *types of evidence* were available for, and informed, policy processes in all three countries, as set out next.

- *Academic evidence*, including research, was used in particular in Vietnam and India. This included surveys, such as the maternal mortality ratio (MMR) survey in Vietnam and findings from research projects, for example Averting Maternal Deaths and Disability (AMDD) project in India. One development partner from Vietnam reported that

SAVY [Survey Assessment of Vietnamese Youth] has provided very useful baseline data... Everybody had seen the data. So people used and shared the results. You know, there were many... 'break-throughs' after this very comprehensive survey was completed. (Development Partner, Vietnam)

- *Academic literature reviews* were referred to by the respondents in Vietnam and China but less in India. This is interesting, given the greater availability of literature in English for Indian policy makers. However, this may relate to a perceived better reliability of the HMIS-generated statistics in India and China as we discuss further in this section, and reflect influences by powerful international community actors to rely on academic evidence in Vietnam.

- *Internationally-generated evidence*, such as proceedings from international conferences (in particular, the International Conference on Population in Development in 1994) and WHO guidelines, appear to be influential in all case studies, particularly in SBA in Vietnam and India and in ARH in China. However, policy makers raised the importance of interpreting international evidence within their own contexts and, where appropriate, generating evidence within their countries.

- *Expert opinions*, of both national and international actors, were used in all three countries in policy development, typically through their involvement in working groups established by Ministry of Health. For example, one policy maker explained that:

On a case-by-case basis, we invite people to work with us. For example, we relied on ideas from our officers who have undergone ASRH training recently in Sweden. In collaboration with SIDA [Swedish Development Cooperation Agency] and MAMTA [Health Institute for Mother and Child, a Delhi based national NGO], eight doctors from the state were sent to Sweden for ASRH training. (Policy maker, India)

- *Health management information system (HMIS)* statistics were used variably. HMIS data were particularly used as evidence for the SBA policies in China, where a politician reflected that:



Every month... I read the statistics data of the institutional delivery rate and maternal mortality. Maternal death notifications were sent out every three months. They were a source of evidence.

However, HMIS data was used to a lesser extent in India, where there were concerns that data were incomplete, often unreliable and where

... the use of evidence... from the government sponsored data collection machinery is arbitrary. It is dependent on the influence and power of those providing the evidence and also on the expertise and understanding of the decision makers. (India HEPVIC Team, 2009, 164)

In Vietnam, the use of HMIS data was not reported which, according to the respondents, was attributed to poor quality of the HMIS data as perceived by the policy makers. This may reflect the well known challenges of ensuring reliability of information from government information systems in many countries and the resultant preferences, by the influential international community, for independent academic research.

Where policies were related to national or sub-national programmes, *programme monitoring and evaluation data* were perceived by policy makers as important to inform the next phase of the programme. This was particularly evident for the Chinese ARH and SBA policies. However, in reality there was limited monitoring and evaluation of a number of programmes, for example in the Indian Chiranjeevi scheme (contracting private doctors for SBA), where the lack of good quality data was cited as the main reason.

*Personal experiences of policy makers*, shaping their opinions and views on specific policy issues, were also perceived by the study respondents as important evidence in all three countries. For example, a local governor from China reflected:

I always had two nightmares, one of which was about maternal death, another was AIDS... The two nightmares always disturbed me a lot and I decided not to let women die from delivery and children infected with HIV/AIDS... The two nightmares make me always strong, insistent, and fearless of any difficulty. (Local Governor, China)

Other types of used evidence, that were less frequently raised, included advocacy material by civil society organisations, knowledge and experience from international study tours and visits to field sites to inform policy development. Media coverage was also cited as generating evidence to inform health policies, for example coverage of easily preventable cases of maternal death in Vietnam.

It was clear that formal evidence, such as surveys and government documents, existed alongside that from informal sources, such as reports of domestic violence cases by the media in Vietnam and China. However, the conceptual understanding of *formal* and *informal* evidence differed, and was often blurred, between different respondent groups. For example, government regulatory documents were referred to as 'evidence' for sub-national levels in China, though in the other two countries these were perceived as mechanisms for disseminating government decisions and guidance

rather than evidence *per se*. Different personal experiences were clearly identified as ‘evidence’, with less recognition of their informal nature and that they may not constitute methodologically rigorous evidence though are likely to influence actors’ ideas and interests through shaping their views and opinions on policy issues. On the other hand, the formal HMIS-generated statistics were not recognised in Vietnam and were often substituted by *ad hoc* surveys.

As for the *characteristics of evidence* used, we found that easily quantifiable issues with tangible outcomes and clearly identifiable technical solutions (such as maternal mortality in the SBA policy) were taken up more readily by policy makers. In contrast, evidence related to more social issues (such as ARH) were harder to measure and apparently were used less in determining the size of the problem or to monitor progress. Evidence reflecting mortality seemed to have a greater impact on policy makers than evidence reflecting morbidity or wider health status or social issues. However one exception to this was the importance of media reports of socially sensitive examples of domestic violence in Vietnam and China which, although reported on health and social issues in an anecdotal manner, were influential for agenda setting. A further characteristic was the sensitivity of the issue covered. Evidence on culturally sensitive topics, notably Adolescent’s Reproductive Health and Domestic Violence, was not widely used in Vietnam and China, possibly because it challenged policy makers’ values.

No respondents identified a single ‘ideal’ type of evidence. The respondents in all three countries suggested that different types of evidence can influence policy processes.

The types and characteristics of evidence used in policy processes were not static; this was illustrated by a shift in India in the nature of evidence from committee-based expert opinions to wider sources of evidence such as in internet-based consultation. This may reflect the dynamic nature of health policy processes and the changing social and political contexts in all three countries.

## Evidence processes in the three countries

Respondents were asked to reflect on how different evidence was generated, disseminated and used. Most responses indicated that none of the studied cases had a systematic and transparent approach to this process. Rather, evidence was generated, disseminated and used in an *ad hoc* manner, based on what is readily available to policy actors. An example of these processes, and the roles of different actors, is given by a respondent discussing the ARH policy processes in Vietnam:

The first thing we did was to collect all materials and documents related to adolescent health in three different directions... I wrote a 100-page overview of adolescent and reproductive health in Vietnam. WHO presented a review of the international literature, SIDA presented a Swedish view. Then we discussed our viewpoints... We agreed that we had to search for more evidence. We decided that we would have to make some evaluations using rapid assessment methods.” (Researcher, Vietnam)

Our analysis revealed that *evidence generation* depended greatly on the type of evidence (discussed in the previous section), with processes being generally more structured for

formal types of evidence such as HMIS. According to policy actors, particularly from India, the internationally available evidence (foreign case studies, international reviews and frameworks) required adaptation to the country contexts. Some policy makers reported the use of technologically innovative and potentially wide-reaching ways of generating evidence. One example of this is the use of internet-based consultation mechanisms on Indian ASRH and on Vietnamese DV policies. For the latter case, however, some technical challenges limited its effectiveness.

Respondents reported events such as formal presentations, workshops, conferences, and meetings as the dominant mechanism for dissemination of evidence in all case studies, as reflected below.

The first time I clearly heard of the concept of 'safe motherhood' was at the Shantou Conference in May 1998, when a plan of action for Chinese 'safe motherhood' was advocated. (Policy maker, China)

We found that the way that evidence flowed between the levels of health system differed. In the Chinese SBA policy, evidence originating from numerous national government regulatory and guidance documents was disseminated using top-down approaches through government channels. In contrast, the Indian National Rural Health Mission applied workshop-based approaches to disseminate evidence.

### Evidence use across the stages of policy processes

Although the respondents in all three countries claimed that health policy processes were evidence-informed, we found that the *use of evidence* varied at different stages of policy processes. In all three countries the *agenda-setting* stage was informed by a greater variety of types of evidence than other stages. The reported types of evidence used at agenda-setting ranged from evidence disseminated following international events such as the WHO inter-country consultation, which informed the development of adolescent sexual and reproductive health policy in India, through to media reports, which informed the Vietnamese and Chinese policies on domestic violence (DV). Respondents suggested that this variety of evidence presented opportunities to better understand the nature of the policy issue, including its health and wider social dimensions.

During *policy development* the reported range of used evidence was often restricted to confirm (or refute) a single policy option, rather than exploring alternatives. An exception was the ARH policy in Vietnam where

... recognizing the limitations of the SAVY for providing suggestions for policy options due to its cross-sectional survey design, SIDA funded a group of researchers... to provide technical support, to produce eight policy briefs on different topics (Vietnam HEPVIC Team, 2009, 98)

which were then used to assess different policy alternatives. 'Newer' policy issues such as adolescent reproductive health (ARH) tended to have smaller and more fragmented evidence bases than more familiar and technical policy issues such as skilled birth attendance (SBA), which had a more easily available and internationally-accepted evidence base for effective interventions.

Our analysis revealed that programme monitoring and evaluation was the main source of evidence for *policy implementation*. Although not widely shared by the respondents, one senior government officer in India also reflected that they

‘... have got our own informal channels that would tell us what is happening in each district [which include]... information provided by the health workers, block health officers (BHO), Chief District Health Officers (CDHO) to the higher authorities during informal discussions on their routine visits. (India HEPVIC Team, 2009, 57)

The respondents in all countries described *policy implementation* as generally weakly informed by evidence. One specific factor cited by many respondents to explain this was insufficient technical capacity of relevant policy actors to plan and assign responsibilities for adequate monitoring and evaluation. However, ARH and DV policies had not experienced sufficiently long periods of policy implementation which may explain the lack of sufficient and usable evidence for policy processes.

Evidence may be used across the different stages of policy processes, for example in phased implementation. This was particularly illustrated in China, where, according to the respondents, evaluation results were used to inform the planning of the next stage of programme implementation between the Fifth and Sixth Country Programmes of the ARH policy.

## Policy actors and their perceptions of evidence

We found that different *national and international policy actors* were involved in evidence processes. Researchers in Vietnam reflected that:

The engagement by recognisable governmental and international agencies and bodies in the production and the dissemination... [of evidence] had a remarkable impact and made a significant contribution to its utilization in the policy making process. (Vietnam HEPVIC Team, 2009, 97)

*International actors* can be categorised from the interview data into two groups: those who were involved in the provision of technical advice on methodological issues, for example WHO in Vietnam and UNFPA in China, and those who provided funding, for example the Royal Netherlands Embassy in Vietnam in relation to the SBA policy.

We also identified four groups of *national actors* in relation to evidence: policy makers, academia, media and civil society organisations. National policy makers often drove the processes of evidence generation and dissemination, particularly when there were clear policy champions such as the MoH Reproductive Health Department in Vietnam or the Province Health Bureau in China. Although not mentioned explicitly by the respondents, this appears important in developing the culture of evidence-informed health policies.

Involvement of research/academic institutions was exemplified by literature reviews on SBA policy by the Hanoi School of Public Health in Vietnam, literature and policy reviews on ARH policy commissioned by the UNFPA to the Fudan University in China and organisation of a workshop on Emergency and Obstetric Care by the Indian Institute of Management Ahmadabad. Although this view was not widely

shared by the respondents, one policy maker expected more proactive engagement of researchers in the ARH policy processes:

Researchers had done a lot of work... but should have cooperated [more] with an active department..., have shared their research. We were encouraging evidence-based decision making. Researchers should have known which government department was coordinating the ARH program, so that they could provide suggestions to them. (Policy maker, China)

Media was particularly visible at the agenda-setting stage of DV and SBA policies in Vietnam and China through covering severe cases of domestic violence or maternal deaths. A politician from Vietnam reflected that information disseminated by media:

... is good as reference material. However, [we] don't rely entirely on them when making policy and law otherwise it can fail... .(Politician, Vietnam)

The participation of civil society organisations in evidence processes, although also evident in Vietnam and China, appears to be greatest in India where policy makers were confident about the quality of their work:

When an NGO is presenting you with certain facts, or research findings, you know the source they are citing, how confident they are, what their credentials are... . (Policy maker, India)

The involvement of actors in evidence processes can change throughout policy processes. The respondents reflected that the media's role differed depending on the stage of health policy processes; from being an advocate at the agenda-setting stage to a disseminator of the Government-approved Law on Domestic Violence in Vietnam.

We found that policy actors had different *evidence preferences*. These preferences, and the resultant use (or otherwise) of evidence, were affected by actors' agendas, values and relative powers.

Our analysis suggests that evidence use may be contested where it is not seen as acceptable. One example of this was when, according to some respondents, Vietnam MOH initially criticised the results of the MMR survey as potentially '... questioning the MOH contribution to reducing MMR' (Policy maker, Vietnam). Another example of actors' agendas affecting evidence is from India where according to the respondents the private doctors referred difficult cases to the public sector to maintain their reputation through avoiding the potentially bad publicity of deaths recorded within the Chiranjeevi scheme.

Policy makers in all countries, although seeing international evidence as high quality and authoritative, reflected that they preferred evidence that was locally produced or adapted to the local context. According to the respondents, some powerful national actors, such as the National Assembly in Vietnam, exercised their evidence preferences through commissioning of studies. Other actors were perceived crucial in endorsing the results of surveys and hence being perceived as 'gateways' for evidence dissemination and amplification:

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The investigation reports confirmed by the Women's Federation are the main evidences [and] other results of some experts' research are hardly adopted. (Policy maker, China)

Although we do not have data to directly support this, the potential use of evidence appears to also relate to *perceived characteristics of robust evidence* by policy actors. Three broad characteristics were particularly emphasised by the respondents in all three countries: methodological credibility, generalisability or representativeness, and timeliness.

The involvement of recognised actors was often seen by the policy actors as a reflection of the methodological rigour or credibility of evidence, as was illustrated by cases of involvement of UNFPA in the ARH policy in China, or WHO in the MMR survey and Survey Assessment of Vietnamese Youth (SAVY) in Vietnam. However, international funding and technical support were not seen by the respondents as the only determinants of methodological credibility. For example, the baseline assessment for the Vietnam policy on Domestic Violence, although funded by the Danish Embassy and supported technically by UNICEF and UNFPA, was still perceived by the MoH as poor quality (though was used because no alternative evidence existed).

The importance of timeliness of evidence for policy decisions was raised by respondents in all three countries. Representativeness of evidence was also seen as important, particularly in China. For example, results of academic studies, though seen as good quality, were perceived by policy makers as being less representative of the target population than HMIS-sourced statistics.

## The role of the wider context

The wider contextual environment plays an important role in determining the role of evidence. A range of contextual influences on the role of evidence are evident from earlier findings. These are: degree of political support (such as by Women's Federation in endorsing evidence), cultural sensitivity of policy issues (such as contribution of media in agenda-setting of DV and SBA policies through coverage of specific cases) and availability of resources (in conducting surveys and programme monitoring and evaluation).

The interpretations of quality evidence by the policy actors can also be context specific. For example in Vietnam, the perceived quality of evidence seems to be related to the methodologically rigorous academic research, as shown by the MMR survey for SBA and SAVY survey for ARH policies. In India, perceptions of high quality evidence appear to be associated with reliable and representative statistics, as shown by the use of HMIS data for the SBA policy. In China, many references were made to government regulatory/guidance documents such as policies, plans and instructions. The context specificity of interpretations of quality evidence was also evident in the wider perceived role of personal experiences in Vietnam and China, perhaps as a reflection of the centralised nature of, and more prominent role of powerful individuals in, policy decisions. The fast-paced socioeconomic changes to the contexts of China and Vietnam suggest that it is important to ensure the timeliness of future research in this area.

## Discussion and implications for improving evidence use in health policies

Five key issues emerge from our findings. First, the culture of evidence-informed policies appears important in ensuring the use of evidence in policy decisions. Second, different types of evidence can inform policy processes. Third, the different stages of health policy processes, particularly agenda setting, provide opportunities for use of different types of evidence. Fourth, the perceptions of robust evidence as well as actors' relative powers and agendas affect involvement of key actors in evidence generation, dissemination and use. Last, but not least, the importance of socioeconomic, cultural and political contexts on the role of evidence cannot be underestimated. Below we discuss these issues, followed by identification of key implications for improving evidence-informed health policies, and of study limitations and questions for further research.

It is generally recognised that greater use of evidence improves design and implementation of policies. However, how does one create demand for evidence and its use in highly politicised environments such as in Vietnam or China or in diverse social contexts such as in India? Developing a culture of integrating evidence into policy and practice, possibly supported by initial pressure from the international community for more evidence-informed policies, appears crucial. The strengthening of capacity of powerful policy actors to recognise, and value, different types of evidence can be one step towards this culture. It is important, however, to establish mechanisms for institutional memory in the long term.

Many interpretations of evidence emphasise formal types, particularly research (Lavis et al, 2009; Hanney and Gonzalez-Block, 2009) whereas we found that informal types, such as the personal experiences, may also be influential for policy processes. This recognition is particularly important in resource-constrained contexts where different evidence may 'compete' for resources and, ultimately, for space in policy decisions. The conventional interpretation of evidence, synonymous with research, provides an opportunity for academic institutions to engage more in health policy processes. At the same time, most international funding appears to be invested in one-off surveys (perhaps because of perceived unreliability of HMIS statistics), and improvements to mainstream government information systems or institutionalisation of *ad hoc* surveys by the national governments can be more sustainable means of ensuring supply of evidence. We suggest that it is important to ensure the availability of different types of evidence around complex health and social problems, particularly intersectoral issues such as domestic violence. Different evidence types should allow policy makers to form a more comprehensive understanding of the policy issue as well as test different policy options.

The academic literature focuses separately on either stages of policy processes (Hogwood and Gunn, 1984; Gilson and Raphaely, 2008) or stages of evidence processes (Dobrow et al, 2004). However, these two are rarely brought together. We found that complex relationships exist between the evidence and policy processes and the use of evidence can vary across the stages of policy processes. The wider range of evidence at the agenda-setting stage may be important to open the 'policy window' (Kingdon, 1995). However, greater use of evidence is needed during policy development and implementation, possibly through exploring different policy alternatives and investing

in sustainable means of generating evidence such as mainstream HMIS. We recognise, however, that this may be a challenge in the resource-constrained contexts.

Different policy actors are increasingly involved in evidence generation, dissemination and use, possibly as a reflection of the general trend towards participatory policy processes (Tantivess and Walt, 2008). We found that the perceived quality of evidence depended largely on the reputation of actors and methodology. Powerful actors were able to utilise their preferred evidence, and methodological rigour alone does not guarantee the use of evidence and, evidence perceived as low-quality may also be used in an information vacuum, as was the case in DV in Vietnam. Actors' agendas and practices in evidence processes relate to their perceptions of good-quality evidence. It is important, therefore, for governments to recognise and, where appropriate, manage, those agendas and practices to promote evidence-informed policy processes. Our findings suggest that no single actor has the only legitimate role in evidence processes, not least due to their different agendas, values and resultant practices. For example, though international agencies can contribute to methodological rigour, it is important to recognise their interests in prioritising particular research topics.

The interpretations of quality evidence are context-specific, as shown by greater reliance on research in Vietnam, on government HMIS data in India and China, and on programme monitoring and evaluation in China. One possible explanation for this might be an increasing role of academic institutions in Vietnam (perhaps due to international influences); the historically greater reliance on statistics in India and health systems centralism in China. Due to the context-specificity of interpretations of evidence it is not easy to identify what constitutes the 'best' evidence. The characteristics of robust evidence, as perceived by policy actors, provide however a starting point for this debate. The perceived characteristics of robust evidence from our study are similar to those found in the literature, including the concepts of evidence filtration and amplification (Green and Gadsby, 2007) which were particularly evident in China.

Due to the differences in the country contexts, it is difficult to compare effectiveness of different strategies for ensuring evidence-informed policies, for example top-down versus bottom-up approaches to evidence dissemination. However, it seems likely that strong vertical governance systems (such as in China) have a more favourable environment for the top-down approaches whereas it appears easier to deploy a bottom-up approach in the decentralised context of Indian States. This reinforces the need highlighted earlier for context-specific strategies for enhancing the role of evidence in policy making.

Based on the above discussion, we suggest five implications for enhancing the use of evidence in maternal health policy processes. First, there is a need to develop a culture of evidence-informed policies. Second, policy makers and other actors should recognise, and value, different types of evidence within policy processes. Third, greater use of evidence is needed during policy development and implementation, possibly through exploring different policy alternatives and investing in sustainable means of generating evidence. Fourth, actors' relative powers, agendas and perceptions of robust evidence need to be recognised and, where appropriate, managed to ensure evidence-informed and inclusive policies. Last, different socio-economic, cultural and political factors affect the role of evidence and can be targeted in strategies for enhancing the role of evidence and policy makers should recognise these influences within policy processes to allow availability of different types of evidence in the policy



processes. Although these implications are developed based on the nine case studies of maternal health policies in Vietnam, India and China, we believe these can also apply to other health areas and other countries. Readers, however, need to interpret the findings within their socioeconomic, cultural and political environments and design context-specific strategies.

This paper seeks to contribute to the existing knowledge through the analysis of the role of evidence in selected maternal health policies in the three Asian countries. Earlier we identified three potential methodological limitations and, on reflection, feel that the use of different strategies to address each limitation ensured no significant implications for interpreting the study results. We recognise, however, that more research is needed to further advance the field and we identify three possible research questions. First, there is a need to better understand the complex interplay between evidence and health policy processes in different contexts. Second, research is needed to compare the use of evidence across the different health areas to contribute to learning across different programmes. Last, the role of the wider health system factors (such as governance, which was beyond the scope of this study) needs to be better understood.

## Conclusions

Different formal and informal types of evidence inform health policy processes. Different national and international actors are involved in evidence processes, each with their own practices, values and agendas. The use of evidence is affected by the perceived characteristics of robust evidence. The influence of the wider context on the role of evidence is important and developing the culture of evidence-informed policy and practice is important in creating and sustaining the demand for evidence-informed policy decisions.

Five broad implications for enhancing the role of evidence are developed, including the need to develop a culture of evidence-informed policies; value different types of evidence; ensure use of evidence throughout all policy processes; recognise and manage actors' relative powers, agendas and perceptions of robust evidence; and develop context-specific strategies.

## Notes

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