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Stillbirths: why they matter

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In this first paper of *The Lancet's* Stillbirths Series we explore the present status of stillbirths in the world—from global health policy to a survey of community perceptions in 135 countries. Our findings highlight the need for a strong call for action. In times of global focus on motherhood, the mother's own aspiration of a liveborn baby is not recognised on the world's health agenda. Millions of deaths are not counted; stillbirths are not in the Global Burden of Disease, nor in disability-adjusted life-years lost, and they are not part of the UN Millennium Development Goals. The grief of mothers might be aggravated by social stigma, blame, and marginalisation in regions where most deaths occur. Most stillborn babies are disposed of without any recognition or ritual, such as naming, funeral rites, or the mother holding or dressing the baby. Beliefs in the mother's sins and evil spirits as causes of stillbirth are rife, and stillbirth is widely believed to be a natural selection of babies never meant to live. Stillbirth prevention is closely linked with prevention of maternal and neonatal deaths. Knowledge of causes and feasible solutions for prevention is key to health professionals' priorities, to which this Stillbirths Series paper aims to contribute.

Why stillbirths matter

A mother gives birth to her baby after many months of pregnancy. But her baby is dead. Few words are needed to convey the tragedy of stillbirth. At the beginning of the third-trimester of pregnancy, the baby weighs about 1 kg, and most babies have the capacity to live outside the womb.¹ At this stage of pregnancy, the risk of stillbirth is about 2%, and the risk of death at the very beginning of life is only matched when people reach their 80s.²⁻⁵ Once regular contractions have indicated that labour has begun, both the mother and her baby face a higher mortality risk than at any other stage of life. Almost one in three babies born dead was alive before labour began,⁶ and died as a result of causes often closely linked to maternal and neonatal deaths.^{7,8}

Almost 3 million families will be affected by third-trimester stillbirths every year.^{3-5,7} Yet, the total number of stillbirths including those earlier in gestation is far greater. Only the number of third-trimester stillbirths, with birthweights of 1000 g or more, or after 28 weeks of gestation, has been estimated in most countries (see panel for definitions). In high-income countries, stillbirths after 22 and before 28 completed weeks of gestation might represent more than a third of these losses,¹³ but are hardly ever counted in low-income countries.^{7,14} *The Lancet's* Series entitled *Who counts?*¹⁵ made a strong case for vital registries and their importance for the human rights of every child. To be registered, counted, and recognised also has profound humane implications. Although stillbirth can be as devastating as a child's death, often the baby is known and mourned solely by the parents.^{16,17} Even in high-resource settings in which psychological support might be available, one in five mothers has appreciable long-term depression, anxiety, or post-traumatic stress disorder after a stillbirth.¹⁷⁻¹⁹ Fathers are also affected by negative psychosocial consequences.²⁰ When

compared with the leading global causes of death in all age categories, all-cause stillbirths would rank fifth among the global health burdens—before diarrhoea, HIV/AIDS, tuberculosis, traffic accidents, and any form of cancer.²¹

This first paper of *The Lancet's* Stillbirths Series^{7,8,13,22,23} will explore the present status of stillbirth in the world:

Key messages

- In an era of global efforts in maternal health, most mothers' own aspiration—a live baby—has been absent from the global health agenda. Organisations currently advancing maternal and neonatal health should include plans for stillbirth reduction.
- Affected mothers are often subjected to stigma and marginalisation in communities that blame her stillbirth on her own sins, evil spirits, and destiny. Most stillborn babies around the globe are disposed of without any recognition such as being named, held, dressed, or given a funeral, and are often seen as taboo objects. Efforts are needed to provide education to lessen the stigma associated with stillbirth and provide bereavement support.
- A substantial minority of health professionals does not agree that stillbirth prevention should be prioritised as highly as the prevention of maternal and infant deaths. Much of this attitude is linked to a belief that few stillbirths are preventable. To prioritise stillbirth prevention, health professionals need data on rates, causes, and preventive opportunities, as well as global leadership.
- Stillbirths lack visibility and leadership both locally and internationally. Parental groups must join with professional organisations to bring a unified message to UN agencies regarding the need to include stillbirths in global health policy.

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Panel: Definitions and survey methods**Definitions of stillbirth**

According to WHO, stillbirth is the birth of a baby with a birthweight of 500 g or more, 22 or more completed weeks of gestation, or a body length of 25 cm or more, who died before or during labour and birth⁹ (for a more detailed definition and discussion of definitions, see the second paper of this Series⁷). For international comparisons, WHO recommends reporting of stillbirths with birthweight of 1000 g or more, 28 weeks' gestation or more, or a body length of 35 cm or more,⁹ reported as third-trimester stillbirths in this Series.

Survey methods

The web-based health professional survey collected anonymous information on (1) basic demographics of the responder, (2) the responder's own perception of preventability and priorities for stillbirth prevention, (3) the clinical and legal definitions for stillbirth and induced abortions in their community, and (4) their report of common perceptions in their lay community regarding women affected by stillbirths, the stillborn baby, and the causes of stillbirth.

The targeted audience was health-care professionals working in maternal, perinatal, neonatal, or child health, and the survey was distributed through email lists for such audiences from WHO's Department for Making Pregnancy Safer, Regional offices of WHO, Save the Children/Saving Newborn Lives, the International Confederation of Midwives, and national and international associations of obstetrics, midwifery, and perinatal medicine.

There were 2731 responses from 138 countries, of which 2490 responders from 135 countries identified their profession and were included in further analyses. Because the distribution of invitations to the survey was done mainly by the organisations, no assessment of response rates was available. Core demographics of the participants in the survey of health professionals is presented in the webappendix p 1. A shorter version of the same web-based survey, only collecting items (1) and (4) from the professionals' survey, was developed. The targeted audience was affected parents, and the survey was distributed through email lists of the parental member organisations of the International Stillbirth Alliance and MISS Foundation. We recruited 1127 parents (95% women and 59% in the age group of 30–39 years) from 32 countries, mainly high-income countries. Details on participating parents are not presented, but are available from the authors on

request. Questions on perceptions (tables 1 and 3 and figures 1–3 and 5) were scored in Likert scales as “always”, “often”, “sometimes”, “rarely”, or “never”. Questions on agreement (table 2) were scored as “fully agree”, “partly agree”, “neither”, “partly disagree” or “disagree completely”.

To develop global estimates correcting both for an uneven distribution of responders from different countries and an uneven distribution of countries represented from each region, individual responses were weighted by the number of stillbirths per year that each responder represented. For responses from country A in WHO region A,¹⁰ this correction was done as in the following equation:

$$\frac{\text{Annual number of stillbirths in country A}}{\text{Number of responders from country A}} \times \frac{\text{Annual number of stillbirths in WHO region A}}{\text{Annual number of stillbirths in countries in WHO region A participating in the survey}}$$

The first factor of the equation adjusts weight by the number of responders from each country, and the second adjusts for the number of stillbirths in non-participating countries in each WHO region. This model assumes that missing countries in a region would respond as the mean of all responding countries in their region, and variance components analysis finds that the WHO region explains a large proportion of the variance in average country score—on average 44% and 38% for questions in tables 1 and 3, respectively. Countries not covered by the survey are represented in grey in figures 1–3 and 5.

Additional country-level variables, such as per-head gross domestic product, human development index, prevalence of use of contraceptives, and percentage of girls in secondary education, were included from the latest UN statistics available by Aug 1, 2010, and detailed definitions and methods for data collection and management for these variables are available from the UN Development Program¹¹ and UN Statistics Division.¹² Stillbirth rates and numbers were obtained from Cousens and colleagues³. All statistical comparison of different groups of responders, with χ^2 or univariate general linear models as appropriate, were done with SPSS 17, and all comparisons mentioned in the text of the report were significant at the $p < 0.01$ level.

how are the issues related to stillbirth perceived in society and among health professionals? Is stillbirth prevention prioritised, and how visible are the organisations and institutions concerned with the issue? We will review literature and key documents in global health policies, and present the findings of two web-based surveys of common perceptions of stillbirth, one among health professionals and one among parents (see panel for methods). In the professional survey,

2490 health professionals in 135 countries were included, and 1127 parents from 32 countries responded to the parental survey.

Stillbirth in the global health arena

In global health policies, the high burden of stillbirths seems incongruent with global action to prevent them. Stillbirths have been the invisible losses. Whereas motherhood has been the focus of global initiatives and

See Online for webappendix

interventions over the past decades, there has been a lack of focus on most mothers' own aspiration: a live baby. Unlike the intertwined issues of maternal and infant deaths, prevention of stillbirths is not among the priorities of the UN Millennium Development Goals.²⁴ At the 2010 Women Deliver conference, acclaimed as "the most significant event for the future of women and children in 20 years",²⁵ only one session of more than 800 presentations had stillbirth as a topic.²⁵ Stillbirths have not been recognised in the Global Burden of Disease or counted as missed lives in disability-adjusted life-years.²¹ The International Classification of Diseases does not fully identify the stillborn baby as an individual death.⁹ In 90 countries worldwide, stillbirths are not counted in country data.^{3-5,7} Because stillbirths have not been counted, and no goals set for prevention, global commitments to preventive efforts are missing. In September, 2010, the UN summarised the commitments to improve maternal and child health by seven UN agencies, 36 countries, and more than 75 non-governmental organisations and professional organisations; stillbirth is not mentioned in any of these commitments.²⁶

Opportunities to provide evidence-based guidelines for stillbirth prevention have been missed, since stillbirth is frequently excluded as an outcome from research to reduce maternal and neonatal deaths.^{13,22} A systematic review²⁷ of 254 Cochrane reviews of interventions relevant to stillbirth prevention noted that 41% of these reviews did not report stillbirths, 36% had stillbirth data but only reported perinatal deaths, and only 23% reported the effectiveness of interventions for stillbirth prevention. Studies of the causes of stillbirths have mainly taken place in the lowest burden settings;^{28,29} however, this finding does not imply that stillbirth research has been prioritised in such countries. For example, for every 54 published articles on sudden and unexplained infant death in PubMed, there is one on unexplained stillbirths,³⁰ despite stillbirths being ten times more common³¹ (search strategy available from the authors).

Inadequate post-mortem investigation protocols and classifications have left most stillbirths as unexplained in many settings²⁸—potentially contributing to professional fatalism towards stillbirth.³² Although one in 20–30 pregnancies ends in stillbirth in many low-income countries, community perception is often that nothing can be done to improve birth outcomes.^{33–35} Fatalism affects high-income countries too: if managed expectantly, about one in 400 post-term pregnancies will end in stillbirth, mostly within 1 week after entering the post-term period.^{36,37} In obstetrics, this risk of one in 400 full-term babies dying in a week is often described as extremely small.³⁶ Yet, one death per week in 400 children would not, by comparison, be a risk described by parents as extremely small in most other settings. In fact, pregnant women would certainly prefer not to be exposed to this risk³⁸—an unnecessary one since two-thirds of these deaths are preventable.^{13,22,36}

Perceptions of stillbirth

In many settings, safe and effective health care is consistently provided for pregnant women and their babies. If a stillbirth occurs, a mother will receive respect and support from health-care providers. But, although pregnant mothers in western societies are generally "encouraged to think of an unborn baby as a precious person, a valued subject",^{17,39} society often diminishes the value of the baby once the baby is dead, and, implicitly, diminishes the dignity of the grieving mother. Faced with bereaved parents, health professionals can further diminish the existence of the baby by referring to the baby who died as the fetus, even after birth. A disparity exists in the legitimisation of grief responses after stillbirth versus the death of a liveborn child, and the stillbirth is generally minimised or treated as a non-event.^{39–41} This attitude towards stillbirth might exacerbate a woman's disenfranchisement from the social groups to which she belonged before the baby's death, intensifying and complicating grief.⁴⁰ For women who do not already have children this disenfranchisement includes the loss of motherhood.⁴² Results from studies have also shown that the experience of stillbirth might affect subsequent parenting and marital dissolution.^{19,43,44} In many low-income settings, in which women have the least power, childbirth can be seen as solely the woman's responsibility, and her needs around childbirth might go unmet.^{33,45,46}

	Always or often	Rarely or never
Perceptions regarding the stillborn baby		
The stillborn baby is given a name by the mother*	12%	80%
The stillborn baby is perceived as a taboo object	24%	48%
There is a funeral service for the stillborn baby*	25%	59%
The mother will see her stillborn baby	39%	30%
The mother will hold and dress her stillborn baby*	14%	73%
The father and other family members will see the stillborn baby	47%	24%
Perceptions regarding the mother		
She receives undivided support for her loss	49%	17%
She has failed as a mother*	20%	46%
Having a stillbirth is her own fault	21%	45%
She has failed as a spouse for her husband and family	20%	48%
She is impure or taboo*	13%	63%
She should grieve for her loss publicly*	23%	47%
She should try to forget and have another child	83%	3%
Perceptions regarding causes of and contributors to stillbirth		
Medical causes	59%	10%
Mother's sins or fault*	29%	34%
Mother's lifestyle and diet	36%	19%
The baby was never supposed to live*	29%	42%
Witchcraft or evil spirits*	25%	43%
Bad luck—such things happen	36%	30%
Data weighted by global proportion of stillbirths. See panel for methods. *The global distribution of these perceptions is presented in figures 1–3.		
Table 1: Responses regarding perceptions of the stillborn baby and the mother, and regarding causes, from the web-based survey of health-care professionals		

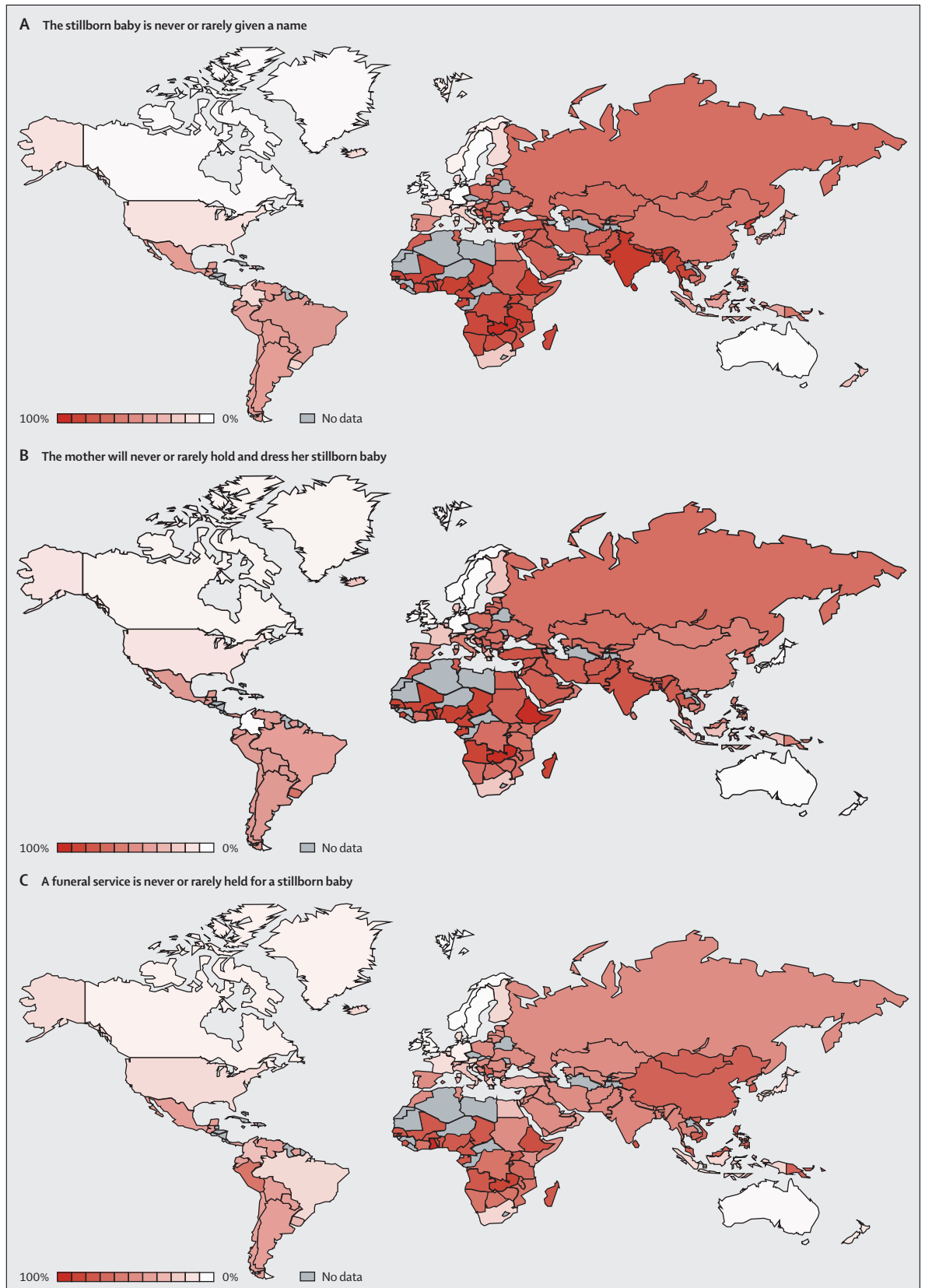


Figure 1: Customs surrounding the stillborn baby from the survey of health-care professionals
 Colours represent the percentage of participants whose response corresponds to the statement indicated in the figure. The full questions and global average are reported in table 1. The average response is provided for each WHO region for countries with ten responders or less, and individually by country for countries with more than ten responders.

From a western perspective, many beliefs and customs regarding the stillborn baby and the mother in high-burden societies seem to add to the family's burden. Health professionals in our survey report that four of five stillborn babies are disposed of without being given a name by the mother and mostly without recognition through rituals such as a funeral (table 1, figure 1). Three-quarters will not be held or dressed, and one in four will not be seen by the mother or by any other family member. In high-income settings, these avoidance practices have become exceedingly rare (figure 1). Observational studies show such practices to be associated with complicated maternal grief,^{40,41,47,48} but there continues to be a paucity of firm evidence for their introduction for therapeutic purposes.^{19,41,48,49} Yet, avoidance of them seems to reinforce the devaluation of stillborn babies in contexts in which pregnancies are not disclosed for as long as possible—whether to protect the baby from the attention of evil forces, or out of shame.^{45,50–55} However, devaluation of the baby and of stillbirth is often only the effect, not the intention. For example, in west Africa, the traditional view is that the spirits of a dead infant will seek a vulnerable new pregnancy,^{52,56} and therefore the tradition in western Ghana to not have a burial of the stillborn baby is seen as a preventive measure to discourage the stillborn baby from coming back to the same mother.⁵¹

Although respondents reported on the observed traditions and perceptions in their lay community, not their own views, a limitation of our survey is that we recruited mainly trained health professionals with internet access (our target audience) associated with a national or international professional association (our method of recruitment). Such health professionals are invariably concentrated in urban and periurban areas, particularly in low-income countries, and the traditional views in low-resource rural settings might be under-reported.

In many languages, the word stillborn suggests a meaningless venture. For example, the widely distributed Encarta dictionary embedded in Microsoft Word provides users with a dual definition of stillborn: “1. born dead: dead at birth. 2. ineffectual: useless or ineffectual from the start.”, and the everyday use of the word stillborn speaks of our common sense of abnormality.³⁷ Similarly, the burden of stillbirths might be diminished by beliefs that stillbirths result from immaturity or are not viable. The reality that congenital anomalies only represent a small fraction of stillbirths (less than 5%),^{7,13} and that the risk of stillbirth increases with maturity throughout the third trimester—three-times greater at 40 weeks than at earlier gestational ages^{30,58}—is largely unrecognised. In our survey we showed that, globally, medical disorders are listed among the believed causes of stillbirth in 59% of cases (table 1), whereas in 29%, stillbirth is believed to be a “natural selection of a baby who was never supposed to live” (figure 2). Unknown causes might underlie superstition and speculation. In sub-Saharan Africa, for example, responders to our survey

reported that stillbirth is as frequently attributed to the mother's own sins and fault, bad luck, or witchcraft as to medical disorders. Globally, respondents reported that one in three stillbirths is attributed to such non-medical causes. Our survey might underestimate these rates since published studies on reproductive traditions in low-resource rural regions report higher rates of non-medical explanations for health outcomes, although mostly anecdotally, in several African,^{45,51–56} Asian,^{53,59,60} and Latin American^{50,53,61} regions.

More than half of the births worldwide are unattended by a skilled provider,^{62,63} and a smaller, but important, minority give birth alone,⁶⁴ and thus have a stillbirth without any professional support. Under the most extreme conditions, in which a family cannot meet basic needs for food and shelter, the time and resources to grieve might not be available. Poverty can also contribute to highly complex situations for women having a stillbirth in a setting of domestic violence, unwanted pregnancy, and induced abortions.^{65,66} But stigma seems to be a much more prevalent barrier to grief than poverty. According to our survey respondents, one of every two mothers' grief is not accepted in public, and she does not receive undivided support for her loss. In many settings, reproduction is central to women's perceived purpose in society,⁵³ and our survey finds that one in five women who had a stillbirth is marginalised as a failure, both as a mother and as a spouse. One in seven is considered impure or taboo. Four of five women live in a community with people who expect her to forget and have another child (table 1, figure 3). To avoid stigmatisation and shame, women can hide the event completely.^{33,45}

Some might assume that stillbirth is a non-significant event in settings in which mothers apparently do not openly mourn after stillbirth.⁵⁸ In settings with both high fertility and mortality rates, the death of a baby might be expected, attachment to newborn babies and young children, in general, might be compromised, and there might be more siblings—all factors that could mitigate grieving rituals.⁶⁷ It might be an error, however, to equate high-risk status with insignificant emotional losses. Mothers of low socioeconomic status invest scarce personal resources and put themselves at risk to give birth. Additionally, prevention of a stillbirth in this setting might relieve the mother from harsh stigma and marginalisation, and reduce the number of high-risk pregnancies.^{68,69} Indeed, survey responses indicate that more accurate societal knowledge of the medical causes of stillbirth is associated with increased understanding and support (figures 1–3).

There are opportunities for improvement in all societies, and it should be noted that general recognition by caregivers of the emotional and psychological pain of stillbirth is a fairly recent, and far from universal, development.⁷⁰ In comparison of the responses of health professionals with those of affected parents from Australia, Italy, Norway, the UK, and the USA, the

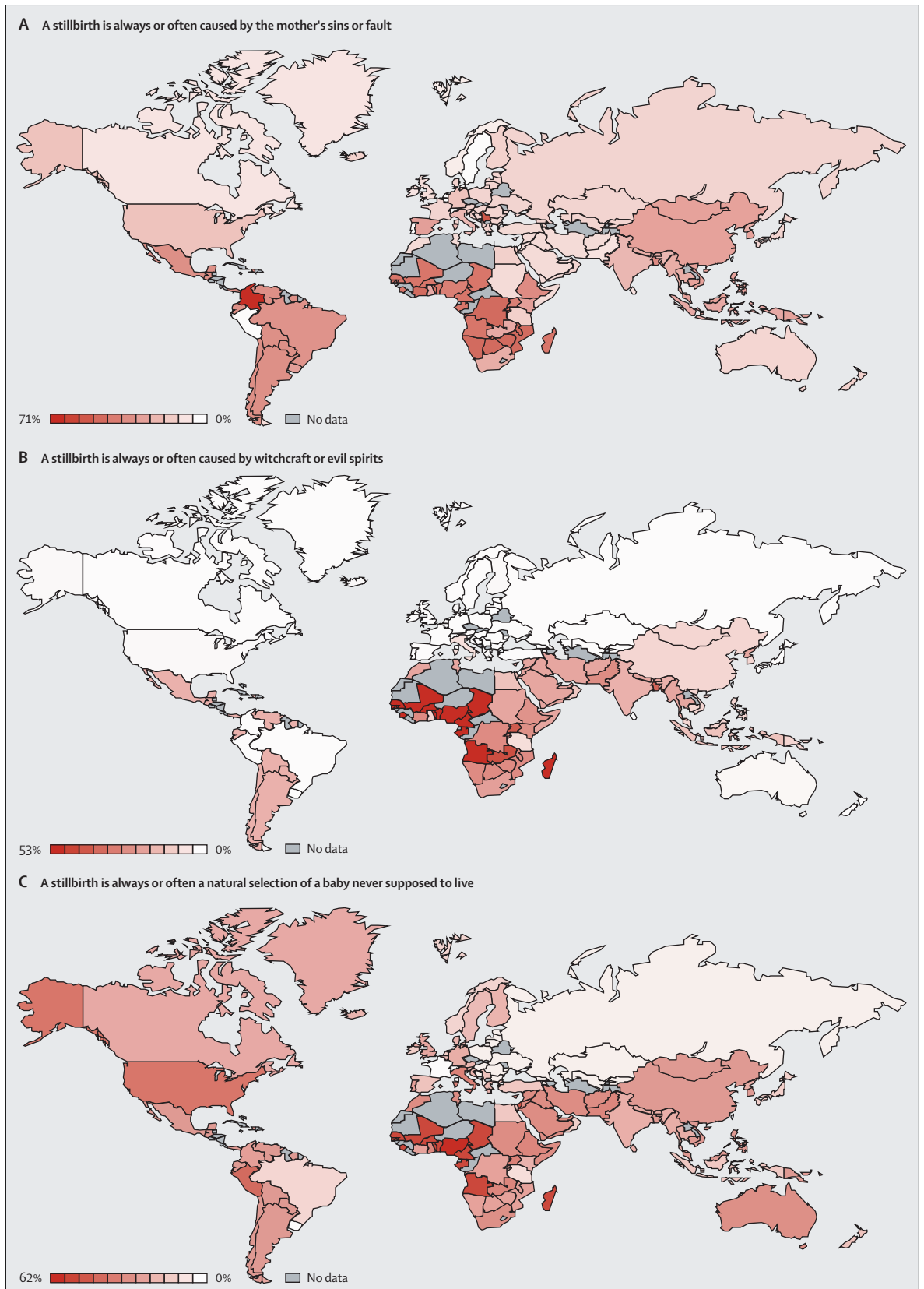


Figure 2: Perceptions about causes of stillbirth from the survey of health-care professionals
 Colours represent the percentage of participants whose response corresponds to the statement indicated in the figure. The full questions and global average are reported in table 1. The average response is provided for each WHO region for countries with ten responders or less, and individually by country for countries with more than ten responders.

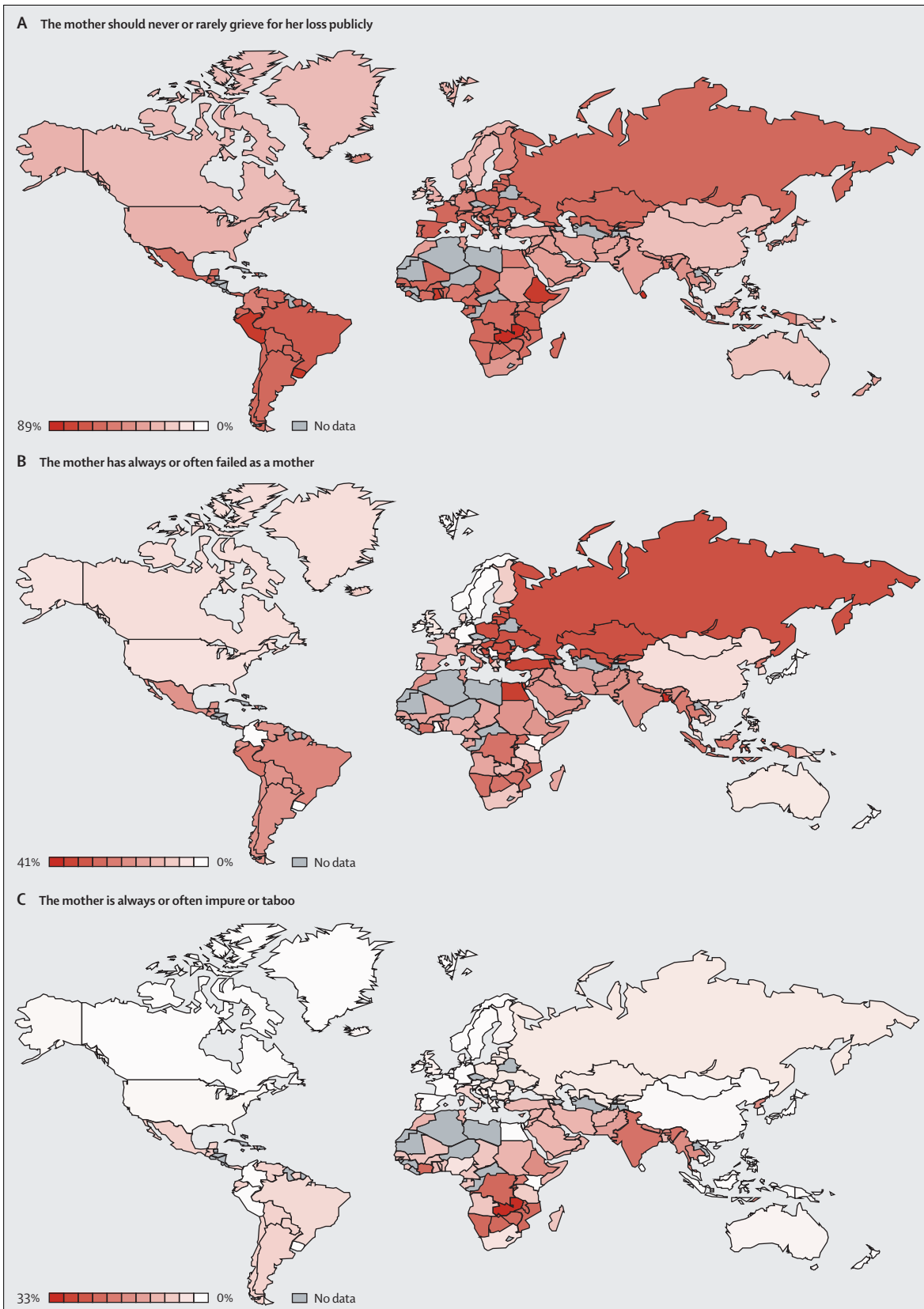


Figure 3: Perceptions about the mother from the survey of health-care professionals
 Colours represent the percentage of participants whose response corresponds to the statement indicated in the figure. The full questions and global average are reported in table 1. The average response is provided for each WHO region for countries with ten responders or less, and individually by country for countries with more than ten responders.

perceptions and customs related to stillbirths are generally described similarly. However, affected mothers have less favourable views than do health-care professionals about how their stillborn baby and they themselves were perceived by their community (table 2). Parents consistently report more often than do health professionals that their baby was perceived in their community as a taboo object and unequal to a deceased child. In terms of community support, parents perceive less support than do health professionals. High-income countries are not homogeneous either, and although 60% of Norwegian parents report that a stillborn baby often or always is perceived equally as a deceased child, and 76% report that mothers receive undivided support, only 11% and 16%, respectively, of Italian parents surveyed perceive similar recognition and support.

The politics of stillbirth

Not surprisingly, we identified that stillbirth rates inversely correlate with the wealth and development of nations (figure 4). However, even when those factors are considered, stillbirth rates are inversely associated with indices of sex equality such as secondary education and reproductive control, such as the use of contraceptives (figure 4). In many poor rural areas, the low priority for interventions to prevent stillbirth might relate to women's lack of power and voice.⁷¹ Women's rights issues affect the perception of stillbirth in many ways and can contribute to the absence of a unified voice and terminology. The WHO definitions of stillbirth (panel)⁹ were developed for programmatic health care and prevention purposes, and chosen according to empirical post-natal viability and data quality in different settings. The definitions are not designed to provide benchmarks of value for human life or to indicate that a pregnancy at less than 22 weeks has less value. The interpretation of stillbirth cutoffs as defining life of value is common. Although some have been tempted to hold stillbirth definitions as proof of moral value or the significance of

a loss, the reverse understanding that those not defined as stillbirths have lesser value or are lesser losses than those so defined inhibit action. This problem has contributed to the reluctance to adjust to international definitions and to the exclusion of stillbirth in vital statistics. When the positions on induced abortions and reproductive rights are in conflict, stillbirth might be affected. The word abortion is used interchangeably with both miscarriage and termination of pregnancy. Stillbirth is the colloquial antonym of abortion: once a stillbirth, then no longer an abortion. Stillbirth prevention thus becomes entangled in questions such as when does a life become worth saving? Can a life not worth protecting legally be worth saving?

Such questions have no more relevance to stillbirth prevention than to the prevention of neonatal deaths. The underlying question of whether prevention of stillbirths is as ethically valuable as saving newborn babies' lives assumes that stillbirth prevention aims to keep fetuses alive during a period of debatable value. But the goal of stillbirth prevention is not a live fetus, but a viable infant. It only differs from saving newborn babies' lives in mode and timing of action to provide a continuity of care. Most prevention strategies begin before conception and finish only after pregnancy has ended with a safe birth.^{8,13,22}

The priorities of health professionals

Although variations in preventability by gestational age and cause exist, stillbirths can be prevented in both high-income and low-income settings.^{8,13,22} Bringing the mortality of the highest burden settings (stillbirth rate ≥ 25 per 1000 births)⁷ down to the global average (19 per 1000 births)^{3,7} would eliminate a quarter of the world's stillbirths. In terms of stillbirth rates, low-income countries are now where high-income countries were 50–100 years ago,⁷² and bringing global stillbirth rates down to the average of low-burden settings (stillbirth rate < 5 per 1000 births)⁷ would represent a prevention of

	Australia		Italy		Norway		UK		USA	
	Parents	Professionals	Parents	Professionals	Parents	Professionals	Parents	Professionals	Parents	Professionals
Number of respondents	97	816	390	40	30	24	38	69	228	134
Always or often the stillborn baby is perceived as a taboo object	62 (66%)	166 (21%)	301 (78%)	21 (54%)	8 (27%)	0 (0%)	27 (71%)	12 (18%)	120 (54%)	30 (23%)
Always or often the stillborn baby is perceived equally as a deceased child	29 (31%)	546 (67%)	42 (11%)	13 (33%)	18 (60%)	19 (83%)	4 (11%)	44 (64%)	37 (16%)	61 (46%)
Always or often stillbirth is a natural selection of a baby never meant to live	60 (63%)	237 (30%)	241 (63%)	13 (34%)	6 (21%)	2 (10%)	20 (53%)	14 (22%)	111 (49%)	52 (39%)
Always or often the mother receives undivided support for her loss	35 (37%)	568 (70%)	64 (16%)	15 (38%)	22 (76%)	23 (96%)	14 (37%)	51 (74%)	57 (26%)	57 (44%)
Always or often the mother should try to forget and have another baby	53 (55%)	135 (17%)	215 (56%)	35 (88%)	9 (30%)	2 (9%)	20 (53%)	11 (17%)	114 (51%)	49 (38%)

See panel for methods.

Table 2: Comparative responses from the web-based surveys of parents affected by stillbirth and of health-care professionals

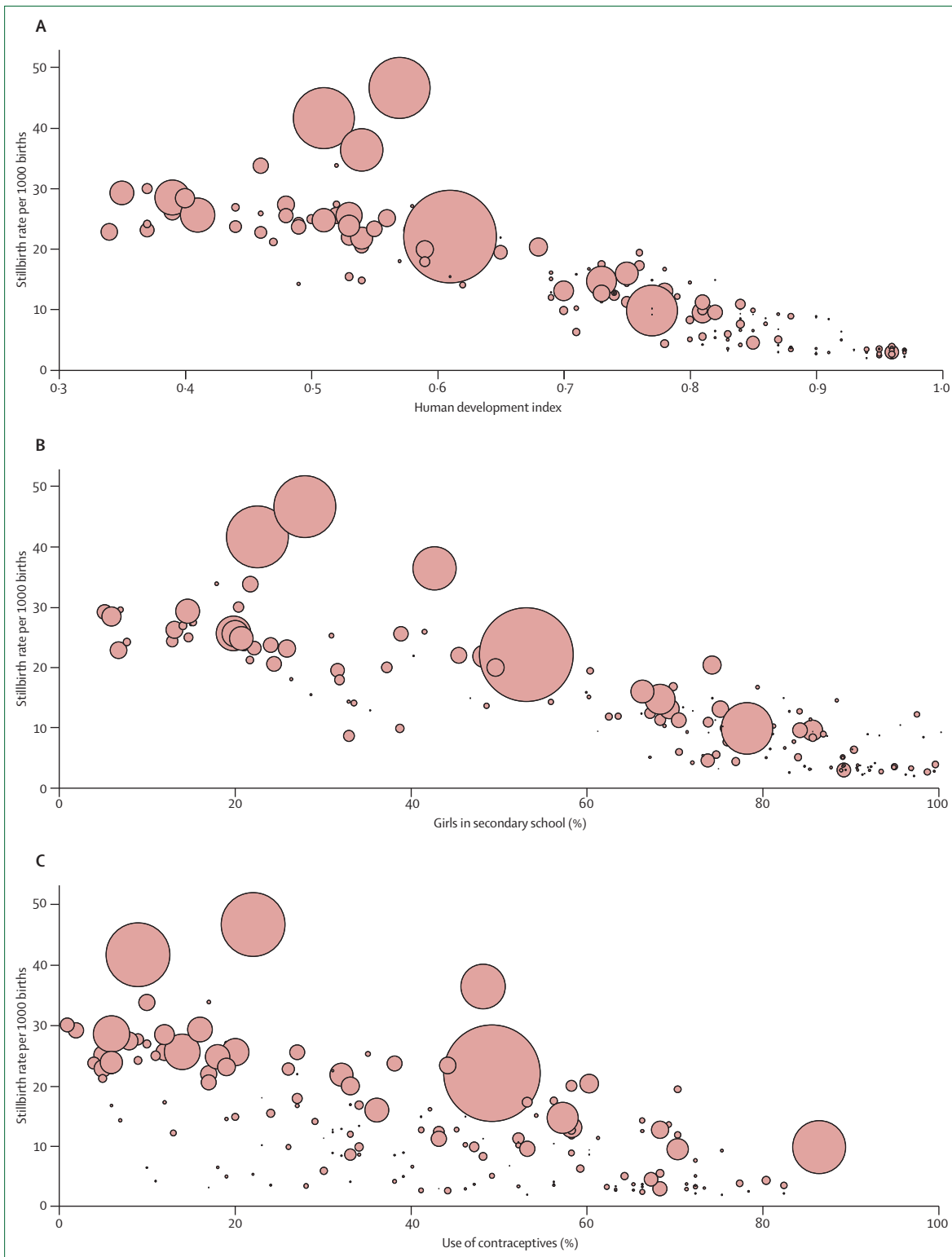


Figure 4: Stillbirth rates plotted against indicators of disparity in income and sex equality

Stillbirth rates in individual countries plotted against (A) the 2007 Human Development Index, (B) percentage of girls in secondary education, and (C) percentage of married or in-union women aged 15–49 years who are currently using, or whose sexual partner is using, at least one modern method of contraception. The size of each circle represents the number of stillbirths in individual countries. Stillbirth rates are taken from Cousens and colleagues³ and UN statistics are taken from the UN Development Program¹¹ and UN Statistics Division.¹²

	Fully or partly agree	Disagree completely or partly
A significant public figure is active as champion for the stillbirth cause in our media and public arenas*	8%	83%
A national or international institution is clearly guiding our community efforts in stillbirth prevention*	27%	61%
Individuals and organisations mobilising for stillbirth prevention have promoted feasible solutions clearly	15%	65%
There is a clear understanding in our community of what stillbirths are	26%	62%
Stillbirths are a public concern in our media and public arenas	16%	71%
There is a strong parental advocacy group promoting stillbirth awareness and prevention in my community*	14%	72%

Data weighted by global proportion of stillbirths. See panel for methods. *The global distribution of these perceptions is presented in figure 5.

Table 3: Responses regarding advocacy and understanding from the web-based survey of health-care professionals

four in five stillbirths. In our survey of health professionals, we asked respondents to rate the statement “Stillbirth prevention should be prioritised as highly as the prevention of maternal and infant deaths” (see panel for methods). Because of the method of recruitment, including opportunistic recruitment between countries, and because responders were a self-selected sample, our results might not be representative for health professionals worldwide. It is likely that responders have stronger views regarding stillbirth. We therefore do not present any global estimates of self-reported priorities among health professionals, and results are in the interest of comparisons between responders to highlight variation.

In the highest burden settings, 70% fully agree on the need to prioritise stillbirth prevention, compared with 63% in the lowest burden settings. Yet, a key to the understanding of the lack of efforts in prevention might lie in the perceived scarce opportunity—not only in resources, but also in feasible solutions. Although counting the numbers and causes of stillbirth is the cornerstone in any targeted approach to prevention,¹⁴ few high-burden societies have such data.⁷ Insufficient knowledge of causes is associated with low expectations of preventability, and low expectations are associated with low priority: 77% of responders who consider that less than a quarter of stillbirths have a medical cause estimate that less than a quarter are preventable, and only a further 60% fully agree that stillbirth prevention should be prioritised (89% fully or partly agree). Conversely, 58% of those who consider that more than 75% have a medical cause also estimate that more than 75% are preventable in their setting, and 86% of them fully agree to prioritise stillbirth (94% fully or partly agree). This expectation is seen independently of their country’s burden and resources. But despite the empirical potential for prevention of most stillbirths, care providers in the highest burden settings do not see such opportunities in their community: 39% reported that they cannot estimate a preventable proportion—among those who do, only 30% and 47% estimate that most antepartum and intrapartum deaths are preventable, respectively. Less than one in six stillbirths occurs in a setting in which health professionals reported that

guiding institutions have clearly presented feasible solutions (table 3).

A dilemma in reproductive health?

Although knowledge of burden, causes, and prevention feasibility might be key to health professionals’ priorities for stillbirth, precedence for health initiatives is not formed exclusively by perceived opportunity.^{73,74} Priority indicates comparison, and initiatives in global maternal and child health might be weighed against stillbirth prevention initiatives. Yet it is well established that both maternal and child health would benefit substantially from stillbirth prevention initiatives.^{8,23} The focus of stillbirth prevention initiatives during prenatal and intrapartum care is the area in which progress towards the Millennium Development Goals to prevent infant deaths lags most substantially.⁷⁵ Conversely, training on the preparedness to register vital signs and resuscitate might save the apparently lifeless newborn baby from being abandoned as a stillborn baby.^{76–78}

Across all levels of stillbirth burden, one in 25 health professionals disagreed, completely or partly, that stillbirth prevention should be prioritised as highly as the prevention of maternal and infant deaths. One in four further disagreed that stillbirths should be prioritised if the cost per saved life was equal. In the highest burden settings, 8% did not fully or partly agree to prioritise stillbirths and balance prioritisation of health-care resources within the context of challenges to reduce maternal and infant deaths: 60% of them agree (fully or partly) that stillbirths should not be prioritised as long as maternal and infant deaths are unacceptably high, and 89% that it should be prioritised only if adding benefit for maternal and infant mortality. These motivations declined with burden, and in the lowest burden settings (stillbirth rate <5 per 1000 births) only 29% and 55% report similar motivations, respectively. Globally, among those who did not fully or partly agree to prioritise stillbirths, and who present no maternal or infant mortality issues as motivation, 76% estimate that less than 25% of stillbirths can be prevented—one in 20 believed that most are preventable.

In terms of reproductive rights, health professionals in our survey largely differentiate stillbirth prevention

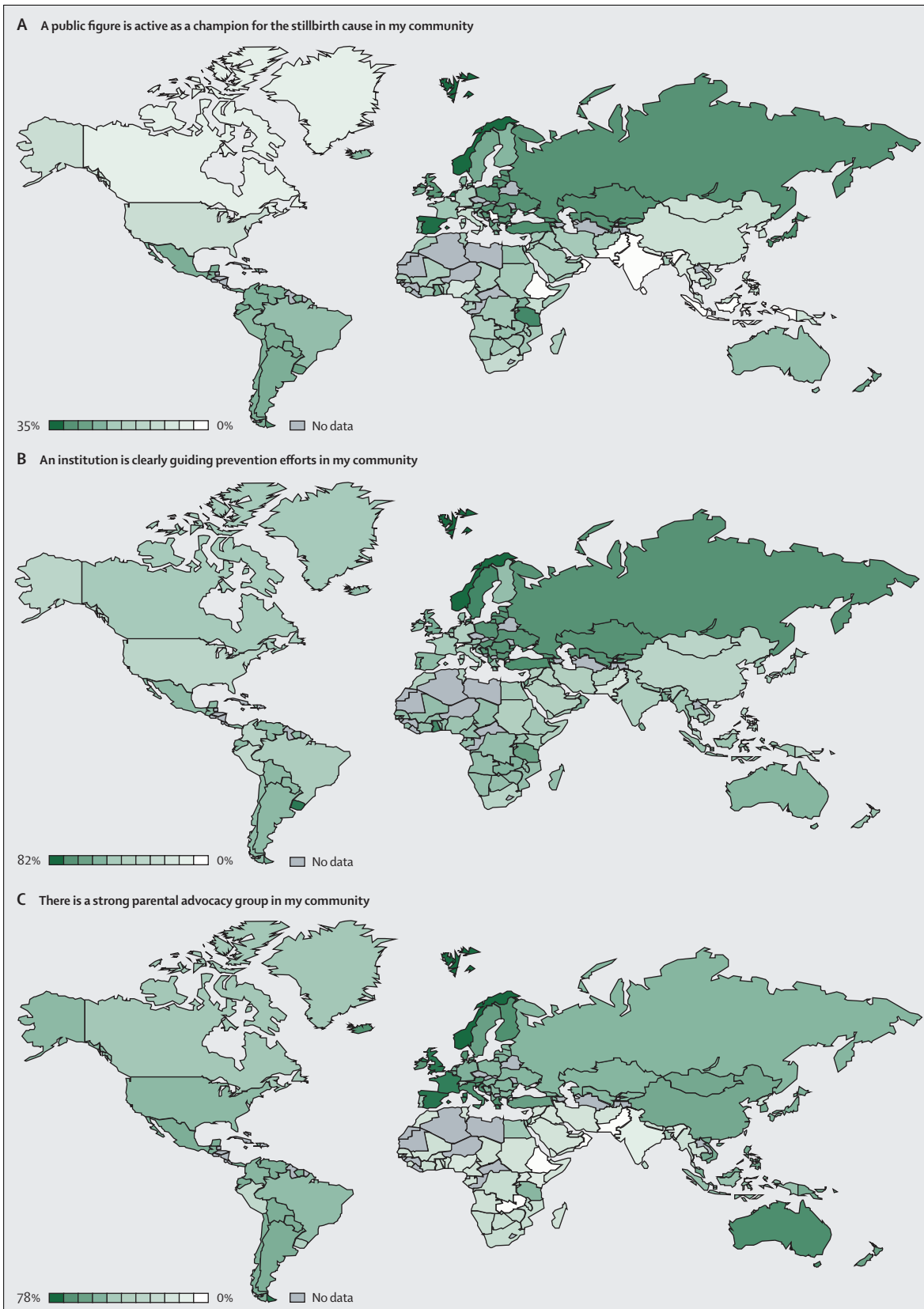


Figure 5: Perceptions on advocacy for stillbirth from the survey of health-care professionals
 Colours represent the percentage of participants whose response shows the statement indicated in the figure. The average response is provided for each WHO region for countries with ten responders or less, and individually by country for countries with more than ten responders.

priorities from legislation and attitudes towards induced abortions. The exception was settings in which stillbirth definitions include deaths before viability (mostly at 20 weeks). In these settings, 59% of those who report that induced abortions for non-lethal fetal conditions are legal fully agree to prioritise stillbirths, compared with 75% among responders from settings in which this is illegal—differences that remain after adjustment for their burden, resources, development, and preventive opportunities. Furthermore, the proportion who fully or partly agree to prioritise stillbirths is unaffected by the definitions and legislation for induced abortions in their setting. In all settings in which stillbirth was defined according to the WHO definition at 500 g or 22 weeks' gestation,⁹ or at any later gestation, these issues were not statistically associated with the prioritisation level.

The void of ownership

Many individuals, organisations, institutions, and governments have the power to prioritise stillbirth, but have not done so. The present status of stillbirth is not dissimilar to that of neonatal mortality only a decade ago, when it also lacked global visibility and before a dedicated group assumed leadership and brought the topic onto the global health agenda.⁷⁴ The case of newborn survival indicates that the rapid emergence of global priority for such neglected issues is indeed possible if a cohesive global policy community with shared concerns, evidence, and workable solutions emerges and coalesces. In the case of stillbirth, the International Stillbirth Alliance has united the powerful human face of stillbirth in parental organisations with the scientific credibility of professional organisations in conferences and a joint mission, and the Global Alliance to Prevent Prematurity and Stillbirth, funded by the Bill & Melinda Gates Foundation, has created partnerships with powerful voices in global health. There is momentum, but not yet a shift in global health policy by any UN agency.

Maternal and neonatal health is to many their professional *raison d'être*. Among the obstetricians and midwives surveyed, 59% report that their main professional interest is maternal health and only 5% neonatal health. This deeply affected their priorities: among those with maternal health as their main interest, 62% fully agree (89% fully or partly agree) to prioritise stillbirths compared with those who report neonatal health as their main interest (83% and 98%, respectively). If stillbirth prevention initiatives fail to clearly define how the interventions benefit maternal and infant health, as is highlighted in the fourth paper of this Series by Pattinson and colleagues,⁸ they might fail to gain support from their most important partners—particularly among maternal health advocates.

Sociopolitical leaders, and others with power to create stillbirth prevention awareness, have been reluctant to be identified with this cause, with its fallacious relation to abortion. In our survey, only one in 13 stillbirths occurs

in a society in which a public stillbirth advocate is known in the health professional's community, and one in six occurs in a society in which stillbirth is a concern in the media and public domain (table 3, figure 5). The poignant message that parental groups convey is powerful, but they must have a unified voice with professional organisations which will emphasise the health consequences and preventability of stillbirth. In high-income settings, parental stillbirth organisations have been instrumental in increasing awareness in societies and providing support to individuals, but fewer than one in seven stillbirths occurs in settings in which such organisations are active (table 3). According to the responders to our survey, two of three stillbirths occur in a setting in which there is no clear public understanding of what a stillbirth is, and where no national or international institution is clearly guiding stillbirth prevention efforts (table 3, figure 5).

Making stillbirth a priority

The dissimilar customs across cultures indicate the facets of the universal burden of stillbirth, not only the loss that every stillbirth represents, but also the additional burden through stigma and marginalisation. Stillbirth prevention initiatives will be most effective if aligned with efforts to provide better support and understanding for affected women. The research gap in understanding and improvement of conditions for women affected by stillbirth leads to the continued harm of women around the globe.

Stillbirths cannot continue to be invisible. Health professionals in our survey reported knowledge of burden, causes, and feasible solutions as the three pillars on which global priority and action for stillbirth prevention must stand. In this Series, we aim to provide some of the basic framework for this prevention strategy. In the second paper by Lawn and colleagues,⁷ the global picture of stillbirth epidemiology is presented. The third paper by Bhutta and colleagues²² systematically reviews the evidence for interventions that prevent stillbirths and reports the cost of stillbirth prevention. The fourth paper by Pattinson and colleagues⁸ brings preventability from its evidence base to implementation in continuity with prevention of maternal and infant death through basic improvements to the delivery systems for maternity health care. The fifth paper by Flenady and colleagues¹³ revisits stillbirth prevention seen from high-resource and low-burden settings, and presents future avenues for research and prevention in the field. The last paper of this Series, by Goldenberg and colleagues,²³ issues a call to action identifying what needs to be done worldwide by 2020, and what our goals should be.

This Stillbirths Series published in *The Lancet* is a missive for the global unburdening of stillbirth. The time has come for stillbirth to be recognised and counted as a global burden. Action must now follow in communities, countries, and international organisations alike.

Contributors

JFF drafted the report and the surveys. All authors commented and contributed to the content of the report, and read and approved the final version. JFF had full access to all the data in the study and had final responsibility for the decision to submit for publication.

The Lancet's Stillbirths Series steering committee

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Conflicts of interest

We declare that we have no conflicts of interest.

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