

# Future directions for Victoria's public maternity services: is this “what women want”?

Stephanie J Brown and Fiona Bruinsma

## Abstract

**Background:** Several state governments are once again reviewing policies for the provision of maternity care. This paper presents findings from a state-wide Victorian survey of recent mothers conducted in 2000 regarding women's experiences of antenatal care. We also offer some reflections on the way in which results from this and earlier Victorian surveys have been used, somewhat selectively, to support the State Government's new framework for maternity services, while other issues highlighted in the survey results have been overlooked.

**Design:** Population-based postal survey mailed to Victorian women who gave birth in a 2-week period in September 1999, 5–6 months after childbirth.

**Results:** 42% of women attending a public hospital clinic described their antenatal care as “very good” compared with 73% of women attending a birth centre, 59% attending private practitioners for antenatal care but receiving public intrapartum care (combined care), 56% attending a midwives clinic, 53% receiving shared care and 84% of women receiving private maternity care. The social characteristics of women enrolling in different models of care do not explain these differences. Immigrant women were much less likely to be happy with their care in pregnancy than Australian-born women, with no improvement in ratings of care over more than a decade.

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## What is known about the topic?

Current policy directions in maternity care are being shaped by medical and midwifery workforce shortages and the incentives for cost-shifting inherent in federal–state funding arrangements. Over the past decade, the proportion of women attending public hospital antenatal clinics has declined, while the range of public sector options involving collaborative arrangements between community-based practitioners and public hospitals has increased dramatically.

## What does this paper add?

Feedback from women regarding public antenatal clinic care continues to indicate low satisfaction with this model of care. Increasing the range of public sector options by expanding the availability of shared care and midwives clinics has not resulted in the marked improvement in women's experiences of maternity care that many assumed would flow from introducing these options.

## What are the implications?

It should not be assumed that expanding the range of public sector options for antenatal care — even when midwives and community-based practitioners are involved and efforts are made to promote continuity of care and/or caregiver — will necessarily lead to more individualised care in pregnancy. It will be important for evaluation of new “primary maternity care” options to address women's experiences of care as well as maternal and perinatal outcomes. The lower satisfaction with antenatal care expressed by immigrant women should receive greater policy attention. ♦

IN JUNE 2004, the Victorian Department of Human Services released a new policy framework for Victorian maternity services. The policy was launched by the Minister for Health at Sunshine Hospital and is outlined in an 18-page booklet entitled *Future directions for Victoria's maternity services*.<sup>1</sup> The “Future Directions” document endorses the expansion of public models of maternity care offering “continuity of carer”, and promotes the concept of “primary maternity services” in which midwives and general practitioners

are the main care providers for women with “uncomplicated pregnancies”. Neither of these concepts is particularly new, which was one of the reasons for some apparent confusion in the media at the time of the launch. It was not clear to the media, or to the representatives of various professional colleges asked for comment, whether the Minister was announcing a major reorganisation of maternity services in Victoria, or merely a shift in emphasis encouraging hospitals to expand and extend the availability of current options.

About 60 000 Victorian women give birth each year, around two thirds of whom are admitted to public hospitals as public patients.<sup>2</sup> In Victoria and New South Wales, more than 15% of births are to women who were born overseas in countries where English is not the first language.<sup>2,3</sup> The location of the Ministerial launch at Sunshine Hospital in Melbourne’s western suburbs, and the ethnic diversity of women whose photos are included in the Future Directions booklet, demonstrate the state government’s recognition that women who use public maternity services are more likely to be from socially disadvantaged and/or immigrant backgrounds. In announcing the new policy framework, the Minister emphasised the efforts the state government was making to “build a system that is more responsive to the individual needs of women” and to focus services on “what women want”.<sup>1</sup>

Victoria is unique among Australian states in having access to population-based data on women’s views and experiences of maternity services collected via postal surveys conducted in 1989,<sup>4,5</sup> 1994<sup>6,7</sup> and 2000.<sup>8,9</sup> The surveys have not been used to compare or benchmark hospitals. Rather the focus has been on providing evidence regarding women’s experiences of different models of care, the experiences of sub-groups (immigrant women, rural women, young women) and identifying major concerns of women to inform policy and service development and evaluate the impact of policy changes. The Victorian Department of Human Services commissioned and funded the 2000 survey. The Future Directions policy<sup>1</sup> cites the results of Victorian state-wide surveys of recent mothers<sup>10</sup> as informing

current policy directions. This paper reports findings from the 2000 survey regarding Victorian women’s views and experiences of antenatal care. We also offer some reflections on the way in which results from this and earlier Victorian surveys have been used somewhat selectively to support the new framework for maternity services, while other issues highlighted in the survey results have been overlooked.

## Methods

### Sample

Questionnaires were mailed to all women who gave birth in Victoria in a 2-week period in September 1999, excluding those who had a stillbirth, or whose baby was known to have died. All public and private maternity hospitals, and home birth practitioners in Victoria were asked to facilitate the study by distributing questionnaires to women who gave birth in the study period. All hospitals with births in the study period (83 hospitals) agreed to participate. Questionnaires together with a covering letter inviting women to take part, a brief explanation of the study in four community languages, and a reply paid envelope for returning the questionnaire were mailed to women at 5 to 6 months postpartum. Two reminders were sent at 2-week intervals. By taking a defined study period we were able to compare participants with the state’s Perinatal Data Collection Unit records for births in the study period. Ethical approval was obtained from the Department of Human Services Ethics Committee and the La Trobe University Human Research Ethics Committee. Further details regarding the study methods are available elsewhere.<sup>8</sup>

### Questionnaire

The questionnaire covered women’s views of care in pregnancy, labour and birth, and the postnatal period. Data on past reproductive history, maternal socio-demographic characteristics and events in the current pregnancy were also collected. The questionnaire was developed drawing on those

used in both the 1989 and 1994 Victorian Survey of Recent Mothers in order to facilitate comparison with previous surveys.<sup>9</sup> A reference group including hospital managers, obstetricians, midwives, GP obstetricians, and representatives of the Department of Human Services provided advice on content, and assistance with piloting.<sup>8</sup>

An overall rating of antenatal care was obtained from a question that asked: "On balance, how would you describe your pregnancy care?" Five categories of response were given: "very good", "good", "mixed", "poor", and "very poor". In addition to this global rating, individual items asked about the sensitivity and level of understanding shown by care providers, the extent to which women's concerns about the pregnancy or their own health were taken seriously, whether midwives and doctors were rushed during appointments, waiting times for check-ups, how happy women were with the quality of medical care, and the extent to which women felt that caregivers remembered them between visits. Questions asking about specific aspects of care were asked in a Likert-style format with the following categories of response: "yes, always", "yes, mostly", "some of the time", "rarely", "never", "not sure".

### Statistical analysis

Quantitative data were analysed using EpiInfo 6.0 (Centers for Disease Control and Prevention, Atlanta, USA, 2000) and SPSS for Windows, Version 11 (SPSS Inc., Chicago, USA, 2001), and involved chi-square comparisons, odds ratios, stratification and univariable and multivariable logistic regression. Multivariable analyses compared the views and experiences of women in different models of care taking women attending public clinics as the reference category. An a priori decision was taken to consider all ratings of care other than the most positive as indicating that some aspect of care could have been better. Hence, responses to the question which asked for an overall rating of antenatal care have been dichotomised into "very good" and "less than very good". Analyses using logistic regression were developed to investigate the relationship between

model of care and overall rating of antenatal care, adjusting for socio-demographic and obstetric characteristics. Model of care was the exposure of main interest and was therefore retained in every fitted model. Other variables included in the initial model were those that were significantly ( $P < 0.05$ ) associated with the outcome variable (overall rating of antenatal care) at the univariable level in either the 1994 survey or 2000 survey. In order to obtain a more precise estimate of effects, variables that did not have significant odds ratios when adjusted for other factors were subtracted individually from the model. If deletion of the variable did not lead to a significant change in the chi-square statistic for the model ( $P < 0.05$ ), the variable was excluded. This procedure was used until a final minimum set model was obtained.

## Results

### Overall response

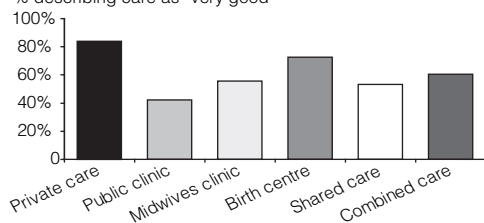
The adjusted response fraction (excluding questionnaires returned unknown at the mailing address, duplicate responses and women who gave birth outside the study dates) was 67% (1616/2412). Participants were largely representative in terms of parity, method of birth, infant birthweight and place of residence (metropolitan/rural) when compared with records for births in the study period held by the Victorian Perinatal Data Collection Unit. In common with other postal surveys, women of non-English-speaking background (NESB) born overseas, younger women (under 25 years), and single women were under-represented. A more detailed description of the study sample is available elsewhere.<sup>8</sup>

We have previously reported the proportion of women enrolled in different models of care.<sup>8</sup> Slightly over a third of women (588/1616; 36.4%) received private maternity care from an obstetrician or general practitioner. The majority of women (985/1616; 61.0%) were enrolled in one of five main models of public maternity care:

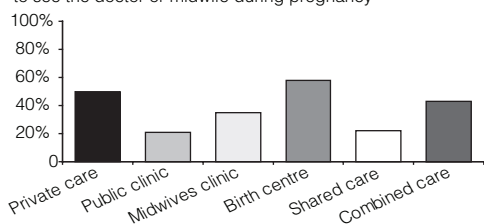
- *combined maternity care* involving visits to a community care provider throughout pregnancy (partially reimbursed through Medicare) with intrapartum care provided at a public

## I Women's views and experiences of antenatal care

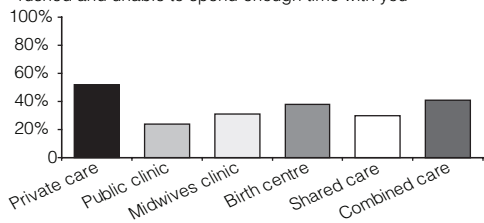
**A:** Overall rating of antenatal care by model of care: % describing care as "very good"



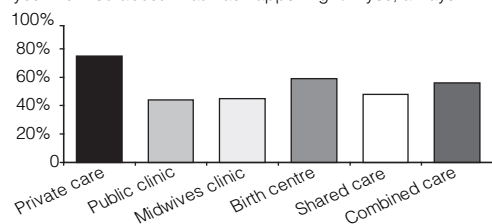
**B:** Never or rarely waited longer than half an hour to see the doctor or midwife during pregnancy



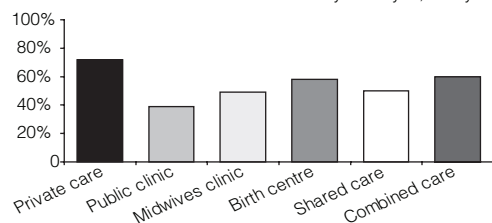
**C:** During check-ups in pregnancy, doctors were never rushed and unable to spend enough time with you\*



**D:** During pregnancy, did the doctors and midwives keep you informed about what was happening: % "yes, always"



**E:** During pregnancy, did you feel that your worries, anxieties or concerns were taken seriously? % "yes, always"



\* Women who did not see a doctor were excluded (n=5).

hospital by rostered doctors and midwives (46.9% of all public care; 472/1007);

- *shared maternity care* where the majority of pregnancy care is provided by a local practitioner with the exception of visits to a public hospital clinic at the beginning and towards the latter part of pregnancy, with intrapartum care provided by rostered staff at the same public hospital (25.3% of all public care; 255/1007);
- *public clinic care* for women at higher and lower risk of complications in pregnancy, with all antenatal care and intrapartum care provided by rostered hospital staff (13.9% of all public care; 140/1007);
- *team midwifery care in a hospital birth centre* where a small team of midwives provide antenatal, intrapartum and postpartum care unless complications arise requiring transfer to consultant-led care (6.4% of public care; 64/1007); and
- *midwives clinic care* where a small group of midwives provide the majority of antenatal care, with one or more visits to a consultant or registrar in pregnancy, and intrapartum care provided by rostered doctors and midwives at the same hospital (5.4%; 54/1007).

Twenty-two women were enrolled in public models of care that were unusual in 1999, for example caseload midwifery, team midwifery in the standard public clinic and labour ward setting, and shared care involving general practitioner and midwife visits in pregnancy. This was too few to include in comparative analyses.

Overall, two thirds of women (67%) described their antenatal care as "very good", 24% rated their care as "good", 8% rated their antenatal care as "mixed", and less than 1% described their care as "poor". Box 1A shows the proportion of women in private and public models of care that rated their antenatal care as "very good". Women in all public models of maternity care were significantly more likely to be critical of aspects of their antenatal care than women receiving private maternity care, with the exception of women receiving team midwifery care in a birth centre (odds ratios not shown). Women who received all their pregnancy care from a public hospital clinic

## 2 Unadjusted and adjusted associations of model of care, parity, risk status and socio-demographic factors with rating antenatal care less than “very good” (n = 1567)\*

	Unadjusted odds ratio (95% CI)	P value	Model 1 (main effects)		Model 2 (best fit)	
			Adjusted odds ratio (95% CI)	P value	Adjusted odds ratio (95% CI)	P value
<b>Model of care</b>						
Private care	0.14 (0.1–0.2)	< 0.001	0.18 (0.1–0.3)	< 0.001	0.15 (0.1–0.2)	< 0.001
Public clinic	1.00 (reference)		1.00 (reference)		1.00 (reference)	
Midwives clinic	0.59 (0.3–1.1)		0.66 (0.3–1.3)		0.69 (0.4–1.3)	
Birth centre care	0.28 (0.1–0.5)		0.31 (0.2–0.6)		0.30 (0.2–0.6)	
Shared care	0.65 (0.4–1.0)		0.68 (0.4–1.1)		0.68 (0.4–1.1)	
Combined care	0.52 (0.4–0.8)		0.60 (0.4–0.9)		0.59 (0.4–0.9)	
<b>Parity</b>						
Primiparous	1.00 (reference)	0.09	1.00 (reference)	0.02	1.00 (reference)	0.03
Multiparous	0.82 (0.7–1.0)		0.73 (0.5–0.9)		0.75 (0.6–0.9)	
Missing	0.56 (0.4–16.0)		2.82 (0.4–19.2)		2.42 (0.4–16.1)	
<b>Risk status</b>						
Low risk	1.00 (reference)	0.02	1.00 (reference)	0.05	1.00 (reference)	0.03
Higher risk	1.41 (1.1–1.8)		1.37 (1.1–1.8)		1.40 (1.1–1.8)	
Missing	1.31 (0.3–5.5)		1.44 (0.3–6.7)		1.17 (0.3–5.4)	
<b>Maternal age</b>						
15–24 years	1.41 (1.0–2.0)	0.005	0.73 (0.5–1.1)	0.1	Not entered	
25–34 years	1.00 (reference)		1.00 (reference)			
35+ years	0.72 (0.5–1.0)		0.81 (0.6–1.1)			
Missing	0.51 (0.2–1.6)		1.08 (0.1–14.7)			
<b>Marital status</b>						
Married	1.00 (reference)	< 0.001	1.00 (reference)	0.04	Not entered	
De facto	1.73 (1.3–2.3)		1.24 (0.9–1.7)			
Single /divorced/ widowed	3.12 (2.0–4.9)		2.02 (1.2–3.3)			
Missing	0.65 (0.1–3.1)		1.08 (0.1–14.7)			
<b>Secondary education</b>						
Completed year 12	1.00 (reference)	0.1	1.00 (reference)	0.9	Not entered	
Less than year 12	1.26 (1.0–1.6)		1.03 (0.8–1.3)			
Missing	1.07 (0.3–3.6)		0.99 (0.2–5.9)			
<b>Total family income</b>						
More than \$70 000 pa	1.00 (reference)	< 0.001	1.00 (reference)	0.3	Not entered	
\$30 001–\$70 000 pa	1.80 (1.3–2.4)		1.18 (0.8–1.6)			
\$30 000 or less pa	3.06 (2.2–4.3)		1.41 (0.9–2.1)			
Missing	2.39 (1.5–3.8)		1.49 (0.9–2.5)			
<b>Country of birth</b>						
Australia	1.00 (reference)	< 0.001	1.00 (reference)	0.001	1.00 (reference)	0.001
Overseas – ESB	1.31 (0.9–1.9)		1.37 (0.9–2.1)		1.33 (0.9–2.0)	
Overseas – NESB	2.32 (1.7–3.3)		2.07 (1.4–3.0)		1.98 (1.4–2.9)	
Missing	0.92 (0.3–2.6)		0.76 (0.2–3.1)		1.20 (0.2–1.7)	

\*Odds ratios have been calculated for the odds of rating antenatal care as less than “very good”. pa = per annum. ESB = English-speaking background. NESB = non-English-speaking background.

were the least likely to describe their care as “very good”.

Boxes 1B–1E show responses to a series of questions about waiting times, interactions with caregivers and access to information. Women who attended a public clinic, midwives clinic or shared care program were more likely to experience long waiting times for appointments, to say that doctors seemed rushed, or that they were not always kept well informed about what was happening during their pregnancy. Seventy-five percent of women receiving private maternity care said they were “always” kept informed compared with less than half of women attending a public clinic, midwives clinic or shared care program. Women enrolled in public clinic care, midwives clinic or shared care were also the least likely to say their worries or concerns about the pregnancy were always taken seriously by caregivers during check-ups. Women in combined care were less likely to say that doctors were never rushed, that they were kept informed, and that their anxieties were taken seriously than those in private care.

In order to assess the extent to which differences in the overall rating of antenatal care might be explained by social and obstetric factors we undertook multivariable analyses using logistic regression, with descriptions of antenatal care as less than very good as the outcome variable (Box 2). Eight variables were entered into the initial main effects model. Parity and risk status in pregnancy were entered for a priori reasons related to their physiological significance, and social significance for the mother. Model of care was entered as the “exposure” variable of main interest with public clinic care as the reference category. The other five variables entered into the model (income, education, marital status, maternal age, country of birth) were all significantly associated with the outcome variable (care rated as less than “very good”) in univariable analyses of the 1994 or 2000 surveys. Health insurance status was not included in the model because it was highly correlated with model of care. Preference was given to including the variable for model of care as it provides more precise information from a planning perspective, and because

assessing women’s views of public models of care was one of the main objectives of the study. Forty-nine women were excluded from the analysis because they had missing values for either the model of care or the outcome variable. Women who had missing values for other variables were retained in the model in order to maintain representativeness in terms of model of care. This left 1567 women in the model for analysis. These women were not more or less likely to rate their antenatal care as less than “very good” than women excluded from the analysis ( $\chi^2 = 0.47$ ;  $df = 1$ ;  $P = 0.5$ ).

The model that best fitted the data retained model of care, parity, risk status and country of birth. Women receiving private care, attending a birth centre or participating in combined care were significantly less likely to give critical feedback about antenatal care than women attending public clinics. Women born overseas of non-English-speaking background had significantly raised odds of being dissatisfied with their care irrespective of their model of care and other factors included in the model. Multiparous women were less likely to be critical of their antenatal care, and women at higher risk of complications in pregnancy were more likely to be critical of aspects of their care. We repeated this analysis using ordinal logistic regression to account for the full range of categorical responses on overall rating of antenatal care, in order to assess whether our conclusions would have been different if, for example, “good” rather than “very good” had been used as the response standard for analysis. This analysis (data not shown) confirmed the findings reported in Box 2.

## Discussion

The strengths of the design for the 2000 survey are that it is population-based, and that the sample is large enough to enable statistical comparisons between sub-groups, including all major models of maternity care and women from differing social backgrounds. Limitations include the low response from younger women, single women and women of non-English-speaking

background, which weakens the generalisability of the findings for these groups. Repeating the survey at regular intervals has the additional advantage of providing a mechanism for assessing the impact of policy and program changes over time.<sup>11</sup> National surveys of women's experiences of maternity care are currently being planned by Health Canada and the NHS Patient Survey program in the United Kingdom.<sup>12,13</sup>

In all three Victorian surveys of recent mothers, women who attended a public hospital antenatal clinic have been the least likely to be happy with their antenatal care.<sup>4,6</sup> In the 2000 survey, only 42% of women attending a public hospital clinic described their antenatal care as "very good", compared with 59% attending community-care providers (GPs and obstetricians) for combined care, which is now the most widely used model of public maternity care. Shared care involving visits to both community-based practitioners and a public hospital clinic rates only marginally better than public clinic care.

The multivariable analysis shows that social characteristics of women enrolling in individual models of care do not explain these differences. Rather, the significant associations between women's overall rating of antenatal care and social factors apparent at a univariable level are explained by the choices available to women from more socially disadvantaged backgrounds. Increasing the range of choices by expanding the availability of shared care and midwives clinics has not resulted in the marked improvement in women's experiences of public sector models of care that many assumed would flow from introducing these options.<sup>14</sup> This highlights the importance of concurrent evaluation of new organisational arrangements and models of care.

Continuity of care is promoted as a policy goal of the Future Directions framework quoting the results of the three state-wide Victorian surveys in support of this focus.<sup>1</sup> The findings of the 2000 survey in relation to the contribution of continuity of caregiver to women's overall ratings of antenatal and intrapartum care are summarised in a report distributed to all Victorian maternity hospitals in 2001,<sup>15</sup> and subsequently in papers

published in refereed journals.<sup>16,17</sup> While women who see the same caregiver/s throughout pregnancy are significantly more likely to be happy with their antenatal care, the findings also show unequivocally that seeing the same caregiver at every antenatal appointment is less important to women than caregivers making an effort to get to know them, not being rushed, having their worries and concerns taken seriously and having enough time in consultations to discuss issues and choices arising in their pregnancy. These findings are consistent with other published literature examining women's experiences of continuity of caregiver during pregnancy and childbirth,<sup>18,19</sup> and provide avenues for improvement of services across all models of care.

In both the 1994 and 2000 surveys, the public model of care which women were most likely to rate highly was birth centre care. As defined for the purpose of the survey, this model involves midwives providing antenatal, intrapartum and postnatal care unless complications arise requiring transfer to specialist obstetric care. Women enrolling in birth centre care and transferring to consultant-led care after 20 weeks' gestation, including those transferred during labour and birth, were retained in their original category for all analyses. While women attending birth centres do differ in important respects from women using other public models of care (eg, they are less likely to be on a low income, more likely to have completed year 12, and less likely to be under 25 years of age), the multivariable analysis shows that social and obstetric factors do not explain the consistently more positive experiences reported by women using this model of care.

The major organisational characteristic that distinguishes birth centre care (as defined in the survey) from other public models of primary maternity care is the responsibility that teams of midwives take for providing care across the entire spectrum of antenatal, intrapartum and early postnatal care. Team midwifery care and caseload midwifery care are other models that span the entire spectrum of care from early pregnancy to early postpartum. Both of these models of care are promoted in the Future Directions policy.<sup>1</sup> It

remains to be seen how many women will have access to these models under the new policy framework. Curiously, given the more favourable experiences of women in birth centre care in repeated state-wide surveys, birth centre care is not mentioned in the policy. In the past 18 months, one major metropolitan teaching hospital in Victoria has made major changes to the way that birth centre, services are organised and has reduced access to this option. Another major teaching hospital has announced that the family birth centre it has operated for more than 25 years will not be retained when the hospital is relocated in 2008. In both cases workforce issues and cost considerations appear to have played a role. There is also an emerging view that there is no longer a need for birth centres, as mainstream services are adapting to offer greater continuity and more women-centred care. It is debateable as to whether hospitals will be able to fulfil this ideal.

In all of the other more common public models of care (combined care, shared care, public clinic and midwives clinic care) different sets of caregivers take responsibility for each of the three major stages of care (ie, pregnancy care, labour and birth, postnatal care). This is unlikely to change while the incentives for cost-shifting between jurisdictions inherent in current Commonwealth–state funding arrangements remain in place. The 2000 survey findings show that expanding the range of public sector options for antenatal care — even when midwives and community-based practitioners are involved and efforts are made to promote continuity of care and/or caregiver — does not necessarily lead to more individualised care in pregnancy. While trials evaluating team midwifery care have consistently found that women give more favourable ratings of antenatal care in this model of care compared with other public maternity care options,<sup>20,21</sup> there is not yet evidence that public hospitals can apply this model across a whole hospital and achieve the same results. It will be important for evaluation of the new primary maternity care options to address women's experiences of care as well as maternal and perinatal outcomes.

Finally, it is disappointing to see the State Government release a new framework for maternity care in Victoria that contains no mention of the challenges public hospitals and community-based care providers face in responding to the needs of immigrant women. The 2000 survey, like the previous two surveys, shows that immigrant women are much less likely to be happy with their care in pregnancy than Australian-born women, with no improvement in over a decade.<sup>22</sup> It is time this issue was placed more firmly on the policy agenda.

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## Competing interests

The authors declare that they have no competing interests.

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