



NATIONAL RURAL
HEALTH
ALLIANCE LTD



29th June 2018

Select Committee on Stillbirth Research and Education
PO Box 6100
Parliament House
Canberra ACT 2600
Phone: +61 2 6277 3540
Fax: +61 2 6277 5719
stillbirth.sen@aph.gov.au

Letter of Transmittal

Dear Select Committee on Stillbirth Research and Education Members,

Please accept this submission in response to the inquiry into 'The future of stillbirth research and education in Australia' from the National Rural Health Alliance.

The Alliance has eight recommendations for the Select committee to consider:

1. An inquiry examining why there is inequity in rates of stillbirth in rural and remote Australia.
2. Improved data collection quality, consistency and dissemination. The data should be used to improve rural and remote maternal health outcomes and reduce perinatal deaths, improve quality and safety of care, facilitate lessons learned, translate research to practice and share knowledge.
3. Research funding is provided to take advantage of, and build on, established national and international collaborations and translate research to practice decreasing stillbirth rates in rural and remote Australia.
4. Any new technologies to address stillbirth are supported by a comprehensive education program and integrated as a tool (not the answer to stillbirth) to support a model of care. New technologies must not be implemented at the expense of funding face to face midwifery care and maternity units in rural and remote Australia.
5. That the Commonwealth, through the Council of Australian Governments, allocate funds to drive policy and reform in maternity services, that results in the implementation of research into practice, to improve health outcomes and increase quality of care to women in rural and remote Australia.
6. Obesity prevention and management should be a research, education and training priority.
7. Targeted communication strategies raising awareness and promoting strategies from preconception, pregnancy, birth and post birth aimed at the rural and remote health professional workforce and their communities. Any communication strategy should be one component of a suite of interventions, and not standalone.
8. Economic analysis should therefore examine what the economic (direct and indirect costs) are for rural and remote people suffering the effects of stillbirth.

We will gladly answer any questions you have regarding this submission.

Best regards,

Mark Diamond
Chief Executive Officer



NATIONAL RURAL
HEALTH
ALLIANCE LTD



The future of stillbirth research and education in Australia

*Select Committee on Stillbirth Research and
Education*

June 2018

National Rural Health Alliance
PO Box 280
DEAKIN WEST ACT 2600

Introduction

The National Rural Health Alliance (the Alliance) is comprised of 35 national member organisations. It is committed to improving the health and wellbeing of the almost 7 million people living in rural, regional and remote Australia.

Our members include consumer groups (such as the Country Women's Association of Australia and Isolated Children's Parents' Association), representation from the Aboriginal and Torres Strait Islander health sector, health professional organisations (representing doctors, nurses and midwives, allied health professionals, dentists, pharmacists, optometrists, paramedics, health students, chiropractors and health service managers) and service providers (such as the Royal Flying Doctor Service and the Council of Ambulance Authorities). For a full list of our members see Attachment A.

The Alliance welcomes the opportunity to provide this submission for consideration by the Select Committee on Stillbirth Research and Education Members into the future of stillbirth research and education in Australia.

Promoting maternal health and wellbeing is important to the Alliance, particularly when the statistics show that the rate of stillbirth increases the further away women are from an Australian major city. Stillbirth can have long term and economic consequences and adds to the inequitable health and social burden that people in rural and remote Australia already experience.

The Alliance outlines in this submission the differences between the rates of stillbirth between those in major cities and those living in rural and remote Australia, Aboriginal and Torres Strait Islander women and non- Aboriginal and Torres Strait Islander women, and the rates of risk factors for stillbirth in rural and remote areas.

As many of the major causes of stillbirth can be addressed by providing quality accessible evidence-based care, the Alliance is calling for:

1. An inquiry examining why there is inequity in rates of stillbirth in rural and remote Australia.
2. Improved data collection quality, consistency and dissemination. The data should be used to improve rural and remote maternal health outcomes and reduce perinatal deaths, improve quality and safety of care, facilitate lessons learned, translate research to practice and share knowledge.
3. Research funding is provided to take advantage of, and build on, established national and international collaborations and translate research to practice decreasing stillbirth rates in rural and remote Australia.
4. Any new technologies to address stillbirth are supported by a comprehensive education program and integrated as a tool to support a model of care. New technologies must not be implemented at the expense of funding face to face midwifery care and maternity units in rural and remote Australia.

5. That the Commonwealth, through the Council of Australian Governments, allocate funds to drive policy and reform in maternity services, that results in the implementation of research into practice, to improve health outcomes and increase quality of care to women in rural and remote Australia.
6. Obesity prevention and management should be a research, education and training priority.
7. Cultural safety and cultural competence also needs to be prioritised for research and education.
8. Targeted communication strategies raising awareness and promoting strategies from preconception, pregnancy, birth and post birth aimed at the rural and remote health professional workforce and their communities. Any communication strategy should be one component of a suite of interventions, and not standalone.
9. Economic analysis should therefore examine what the economic (direct and indirect costs) are for rural and remote people suffering the effects of stillbirth.

Stillbirth in rural and remote Australia

The Australian Bureau of Statistics (ABS) and the Australian Institute of Health Welfare (AIHW) use the same classification of stillbirth:

'A fetal/ death prior to the complete expulsion or extraction from its mother of a product of conception of 20 or more completed weeks of gestation or of 400 grams or more birthweight. The death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.' (AIHW 2015).

The Australian Institute of Health and Welfare (AIHW) estimate that in 2013-2014, there were 4,419 stillbirths reported which equates to a rate of 7.1 deaths per 1,000 births in Australia (AIHW 2018). Approximately 33% of stillbirths (1481 stillbirths) are to women from rural and remote areas of Australia. The AIHW data also shows that the further away women are from a major city the higher the rate of stillbirth, see Table 1.

Table 1 Stillbirth deaths by maternal remoteness of residence (ARIA+), Australia, 2013–2014

Remoteness of usual residence (ARIA+)	Total births ^(a)	Live births	Stillbirths	
			n	Rate ^(b)
Major cities	444,729	441,737	2,938	6.6
Inner regional	101,768	100,993	744	7.3
Outer regional	53,716	53,266	446	8.3
Remote	9,368	9,274	93	10.0
Very remote	6,204	6,141	64	10.2
Not stated	6,253	6,189	55	8.8
Total	622,037	617,600	4,419^(c)	7.1

(a) Total births comprise live births and stillbirths collected by the National Perinatal Data Collection. The sum of stillbirths and live births may not add up to total births. See Appendix C for further detail.

(b) The rate is the number of deaths per 1,000 births. Stillbirth and perinatal death rates were calculated using total births (live births and stillbirths). Neonatal rates were calculated using live births.

Source: AIHW 2018 - analysis of National Perinatal Mortality Data Collection and the National Perinatal Data Collection, Table A22: Perinatal deaths by maternal remoteness of residence (ARIA+), Australia, 2013–2014

Aboriginal and Torres Strait Islander women and stillbirth

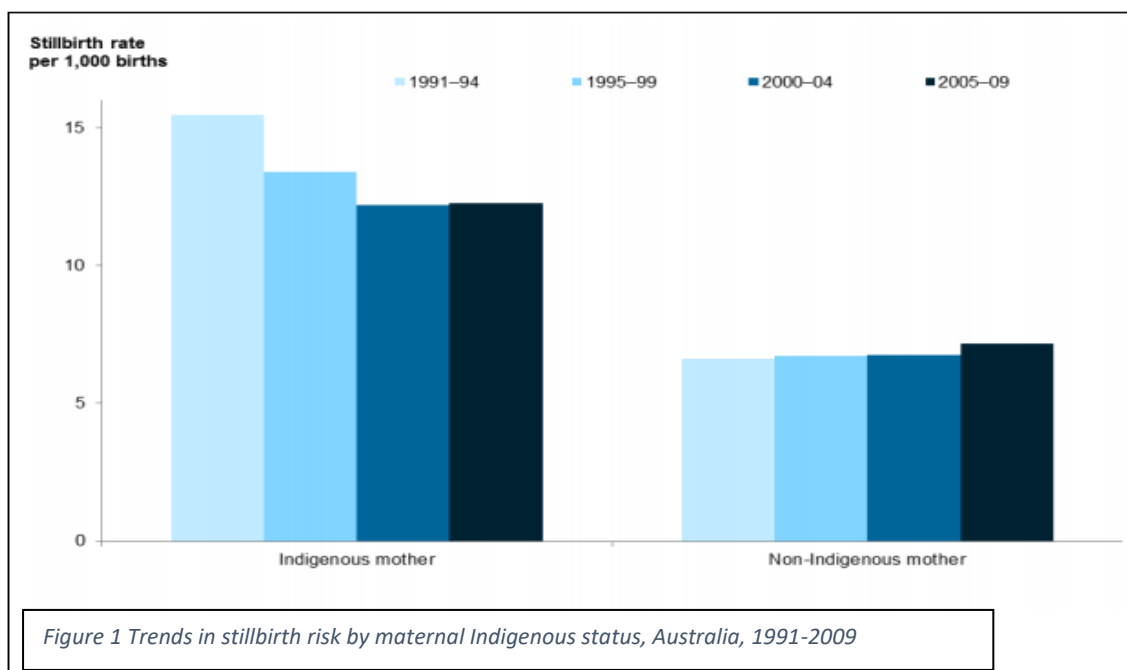
Sixty-five per cent Aboriginal and Torres Strait Islander people live outside major cities, typically in regional, rural and remote communities. Aboriginal and Torres Strait Islander people make up only 1% of the major cities population, but they constitute around 5% of the regional/rural population, 16% of the remote population and 45% of the very remote population.

Some of the major city/rural inequity and inequality we see in health and social statistics reflects the greater prevalence of Aboriginal and Torres Strait Islander people who on average have substantially worse health than non-Indigenous people. This is also the case for the rates of stillbirth.

A significant proportion (around 40%) of the expression of health inequalities for Aboriginal and Torres Strait Islander people is a consequence of the social determinants of health. Determinants of Aboriginal and Torres Strait Islander people's health include: Access to

health care and education, opportunity for a career and employment, income, housing, physical and social development, cultural identity, social and emotional support during the first years of life, and the impact of colonisation and racism.

In relation stillbirth, since 1991 there has been a decline in the number of stillbirths for Aboriginal and Torres Strait Islander mothers (see Figure 1).



Source: Australian Institute of Health and Welfare and University of New South Wales 2014 Stillbirths in Australia 1991–2009, Perinatal statistics series No. 29. Australian Institute of Health and Welfare Canberra, Cat. no. PER 63.

However, Aboriginal and Torres Strait Islander mothers are still more likely to lose a baby to stillbirth compared to non-Aboriginal and Torres Strait Islander women (Table 2). Aboriginal women have stillbirth rate of 8.6 deaths per 1000, Torres Strait Islander women 7.6 per 1000 and non-Indigenous women 5.4 deaths per 1,000 (AIHW 2018).

Table 2 Table A10: Aboriginal and Torres Strait Islander perinatal mortality rates by Indigenous status of the baby, Australia, 2013–2014¹

Indigenous status of baby	Total births ^(a)	Live births	Stillbirths	
			n	Rate ^(b)
Indigenous				
Aboriginal	28,841	28,588	247	8.6
Torres Strait Islander	1,719	1,705	13	7.6
Aboriginal and Torres Strait Islander	2,161	2,145	16	7.4
<i>Total Indigenous</i>	<i>32,721</i>	<i>32,438</i>	<i>276</i>	<i>8.4</i>
Non-Indigenous	587,275	584,013	3,178	5.4
Unknown Indigenous status	2,041	1,149	886	434.1
Total	622,037	617,600	4,419^(c)	7.1

Source: AIHW 2018 - analysis of National Perinatal Mortality Data Collection and the National Perinatal Data Collection, Table A22: Perinatal deaths by maternal remoteness of residence (ARIA+), Australia, 2013–2014

¹ Source AIHW 2018 AIHW analysis of National Perinatal Mortality Data Collection and the National Perinatal Data Collection. - Table A10: Aboriginal and Torres Strait Islander perinatal mortality rates by Indigenous status of the baby, Australia, 2013–2014

Causes and Major Risk Factors for Stillbirth

The main causes of stillbirth deaths for non-Aboriginal and Torres Strait Islanders are congenital anomalies (27%), unexplained antepartum death (20%) and maternal conditions (10.8%). In contrast, the main causes identified for Aboriginal and Torres Strait Islander stillbirths were unexplained antepartum death (22%), congenital anomaly (14%), spontaneous preterm birth (12%), antepartum haemorrhage (10%) and maternal conditions (9%) as outlined in Table 3 (AIHW 2018, p. 45).

Table 3 PSANZ-PDC cause of stillbirth comparing percentages of non -Aboriginal and Torres Strait Islanders and Aboriginal and Torres Strait Islanders 2013-2014 (AIHW 2018)²

Reported causes of stillbirth 2013-2014	non-Aboriginal and Torres Strait Islanders	Aboriginal and Torres Strait Islanders
congenital anomalies	27%	13.9%
unexplained antepartum death	20%	22%
spontaneous preterm birth	7.1%	12%
maternal conditions	10.8%	8.8%
specific perinatal conditions	8.6%	4%
antepartum haemorrhage	6.5%	10%
perinatal infection	6%	8%
fetal growth restriction	5.7%	8%
hypoxic peripartum death	3%	2%
maternal hypertension	2.5%	5%
no obstetric antecedent	0%	0%
Not stated	4.4%	6%
Total	100%	100%

The major maternal risk factors for stillbirth in high income countries have been identified as maternal overweight and obesity (Body Mass Index of >25kg/m²), advanced maternal age (>35 years), maternal smoking and primiparity. Preexisting diabetes and hypertension are also important contributors to stillbirth as are small for gestational age and placental abruption (Flenady et al 2011). Inadequate antenatal care was also found to be a factor in increasing the odds of stillbirth (Getahun et al 2007).

We know that the prevalence of obesity is already higher than in major cities. The rate increases with remoteness and rural and remote people are 30% more likely to be obese than those in major cities (PHIDU2018).

We also know that 45% of Aboriginal and Torres Strait islander mothers smoke during pregnancy and are more likely to have preexisting diabetes or hypertension (AIHW 2017).

In addition to the increased risk profile of the rural and remote population (particularly Aboriginal and Torres Strait Islander people) the decisions to close small maternity units in rural and remote communities have had negative impacts on maternal health and wellbeing. The closures were justified on narrow definitions of what constitutes clinical risk. However, what has been overlooked in the calculation is the need to include cultural, emotional and financial risks to rural families and communities associated with travelling to receive maternity care (Barclay et al 2016). As such ‘...a comprehensive analysis of maternity

² Source- AIHW 2018 Supplementary tables for Perinatal deaths 2013-2014 Tables A24 and A35.

service risk must also consider the avoidable clinical risks that arise from the closure of services' (Barclay et al 2016 p.9).

Barclay et al (2016) also identified that to avoid the family distress women in rural and remote areas women do not report pregnancy, avoid antenatal care so they will not be recognised by the system and then present late for care, consequently risks to maternal and fetal health can be missed. There are also increased numbers of unplanned out of hospital births.

Many of the stillbirth causes and risks outlined above can be prevented by:

- Promoting healthy communities that includes providing the building blocks for health and wellbeing that include education, income, employment, housing, access to health care and social inclusion (WHO 2018).
- Raising awareness with women about the risks of becoming pregnant over the age 35 (Flenady et al 2011).
- Providing culturally appropriate antenatal care to Aboriginal and Torres Strait Islander women such as the Birthing on Country model and other Midwifery Group Practice models (Kildea et al 2010).
- Provide policies, community and health professional interventions that prevent obesity and chronic illness i.e. Systems and services that prevent the uptake of smoking and reduce harm from consumption of alcohol when pregnant and prevent obesity.

In summary, many of the building blocks for health, such as access to education, transport and employment, are outside the purview of the health sector. But they play such a large part in determining people's health that they cannot be ignored as a player in promoting maternal health. This means that intersectoral and community partnerships and joint action is essential if robust foundations for health and wellbeing are to be put into place in rural and remote Australia.

Many of the interventions listed here form part of a midwife and general practitioner's scope of practice. However, disseminating health promoting messages that prevent illness and promote wellness for families and communities are also within the scope of practice of registered nurses allied health professionals. It might be that offering weight loss advice for example during pregnancy might be 'too little too late' (Dodd & Briley, 2017) and women should really be supported prior to conception. The rural and remote health workforce need to have the skills and resources to work with their communities to prevent illness and promote wellness and appropriate training to support them to provide prevention care in their scope of practice.

Inquiry Terms of Reference

Please find responses to the Inquiry's 'The future of stillbirth research and education in Australia' terms of reference from the Alliance below.

Consistency and timeliness of data available to researchers across states, territories and federal jurisdictions

In Australia, perinatal data is collected and reported at jurisdictional and national levels. However, there are differences in what data is collected, how it is collected and analysed, reported and shared to inform policy and service delivery decisions.

For example, the Australian Bureau of Statistics and the Australian Institute of Health Welfare both classify still birth as collects data from the National Perinatal Mortality Data Collection. Although both the ABS and the AIHW use the same definition of stillbirth the data collection sources differ, and results show wide variation in the estimated number of stillbirths. With the ABS data significantly lower than the AIHW.

In addition to this, information that could be very useful in identifying causes of stillbirth and used to inform research, education and quality of care are not routinely collected. For example, Body Mass Index, Aboriginal status (of mother, father and baby), maternal antenatal care visits and timing and location of stillbirth. The AIHW also note that there are gaps in data for birthweight (missing or not stated in 256 perinatal deaths) and gestational age (missing or not stated in 165 perinatal deaths) (AIHW 2018).

When data is collected and reported, it needs to be disseminated beyond those who are members of a discrete Perinatal Mortality Committees and integrated into a process that enables the data to be critically reviewed, strategies identified and implemented. Strategies should then directly improve care on the ground, improve quality and safety, and to facilitate lessons learned, research and knowledge sharing.

Recommendation

Improve data collection quality, consistency and dissemination. The data should be used to improve rural and remote maternal health outcomes and reduce perinatal deaths, improve quality and safety of care, facilitate lessons learned, translate research to practice and share knowledge.

Coordination between Australian and international researchers

A number of processes for coordinating and collaborating on stillbirth research nationally and internationally already exists within Australia.

For example, the NHMRC have funded the Centre for Research Excellence in Stillbirth Research (CRE) to undertake research projects with a large number of Australian and international researchers.

Research exists but it is slow to translate to practice on the ground.

The Alliance would like to see some of this research collaboration aimed at reducing stillbirth in rural and remote Australia and translating research into policy and practice.

Recommendation

That funding is provided to take advantage of, and build on, established national and international collaborations and translate research to practice to decrease stillbirth rates in rural and remote Australia.

Partnerships with the corporate sector, including use of innovative new technology

Digital health, smartphones and wearable telemonitoring devices are evolving technologies some of which have been tested in Australia. These new technologies may provide valuable data that can be used to improve maternal health. Any introduction of new technologies for maternal health care must be ethically researched and any potential benefits and harms identified prior to implementation in the field. New models of care must also be accompanied by a comprehensive education program and integrated as a tool to enhance a model of care.

A limitation of using new technologies is the fact that there is a digital technology divide between major cities and rural and remote Australia, with patchy quality and access to internet services and electricity. Without addressing this inequality first, these types of services may add to risks rather than mitigate them.

With the closure of maternity units across Australia timely access to a skilled workforce that can read, interpret and act on information provided by the new technologies is also an issue in rural and remote Australia (Kildea et al 2015, Barclay et al 2016).

Simply put there is no point in having a wearable technology if you have no one to read the automated results by a person who is providing care; coupled with a technology system dependent on good internet connections and energy to power it.

The Alliance acknowledges that new technologies may provide possible solutions. However, the Alliance does have concerns that new technologies may be seen as a solution to stillbirth, resulting in a reliance on technology at the expense of face to face midwifery services and further impact on the remaining maternity units.

Recommendation

Any new technologies to address stillbirth are supported by a comprehensive education program and integrated as a tool to support a model of care.

New technologies must not be implemented at the expense of funding face to face midwifery care and maternity units in rural and remote Australia.

Sustainability and propriety of current research funding into stillbirth, and future funding options, including government, philanthropic and corporate support

Given that stillbirth rates have not declined and the inequities in rates between major cities and rural and remote areas persist, the Alliance recommends that the Australian Government establish funding opportunities for research into stillbirth, and maternity care focusing specifically on rural and remote Australia.

Recommendation

That the Commonwealth, through the Council of Australian Governments, allocate funds to drive policy and reform in maternity services, that results in the implementation of research into practice, to improve health outcomes and increase quality of care to women in rural and remote Australia.

Research and education priorities and coordination, including the role that innovation and the private sector can play in stillbirth research and education

The obesity epidemic is an issue for the general population, but it is known to be an independent risk factor for stillbirth. Research focusing on interventions to prevent obesity before women conceive needs to be a priority.

In line with this, health promotion and prevention of risk factors should be incorporated into the training and education curricula undergraduate and post graduate health professional training.

Ongoing training and support to teach health professional brief interventions for alcohol harm minimisation and smoking cessation also need to be appropriately resourced and integrated as part of core business.

Research and education also needs to focus on how to improve culturally safe health care.

Health professionals experience significant distress when caring for women and their families experiencing stillbirth (Nuzum, Meaney & O'donoghue, 2014) Education and ongoing support should also focus on strategies that provide support and build resilience.

A lot of research does already exist, and research tools that inform good decision making for example whether a maternity service should exist or not (see the work of Sue Kildea and colleagues). For example, there are several Cochrane reviews that support Midwifery care model such as community of care (Sandall et al 2016).

What is missing is how the research is implemented on the ground. Education and training needs to focus on how to translate research to practice.

What is also missing is how these best practice models can be implemented and appropriately resourced in rural and remote settings.

Recommendation

Obesity prevention and management should be a research, education and training priority.

Cultural safety and cultural competence also needs to be prioritised for research and education.

As previously recommended, funding needs to be allocated to translate best practice models in rural and remote settings.

Communication of stillbirth research for Australian families, including culturally and linguistically appropriate advice for Indigenous and multicultural families, before and during a pregnancy

Communication strategies need to be tailored to the target audience and developed in partnership with agencies and organisation that already have good engagement strategies in the Australian community. For example, the Stillbirth Centre for Research Excellence, Stillbirth Foundation Australia, Sands, Still Aware, Bears of Hope, and Red Nose.

Risk factors for stillbirth include a lack of awareness that stillbirth is an issue particularly for those over 35, or that in many cases can be prevented by early detection and management of maternal and fetal issues. These issues should form part of an information campaign.

Obesity prevention and smoking cessation also needs to be incorporated into the stillbirth communication campaigns.

It has been suggested that future stillbirth campaigns may benefit from drawing on mass media campaign principles (Flenady, Gordon & Bauman, 2017). This includes the following steps (as per Grunseit et al 2016).

1. Campaigns should be part of an integrated, system-wide approach to stillbirth prevention.
2. Main messages should be consistent.
3. Underpinning theory/logic planning models need to be applied.
4. Clear, measurable campaign goals and objectives should be specified.
5. Linkages to broader strategies (beyond communications) should be developed.
6. Campaign duration and investment should reach a predefined impact threshold.
7. A campaign planning and evaluation protocol contributes to better practice.
8. Campaign evaluations should be made publicly available.
9. Sustained campaign efforts over several years are required to achieve population impact.

Recommendation

Targeted communication strategies raising awareness and promoting strategies from preconception, pregnancy, birth and post birth aimed at the rural and remote health professional workforce and their communities. Any communication strategy should be one component of a suite of interventions and not stand alone.

Quantifying the impact of stillbirths on the Australian economy

There is a paucity of economic analysis on the impact of stillbirth. Studies that do exist focus on direct financial costs. Costs go beyond financial and include indirect costs of a funeral, reduced earnings from employment or inability to return to work, continuing costs and time for counselling support, and even when returning to work productivity is below normal (Heazell et al 2016). In addition, the burden of psychosocial effects is also long lasting and 'intangible' costs need to be taken into account (Heazell et al 2016).

One of the major difficulties has been the closure of rural and remote health services, it has meant that antenatal care and identification with potential problems in pregnancy is less common as antenatal care may be hundreds of kilometres away and expensive to get to.

Given the closure of maternity units in rural and remote Australia rural and remote people face additional burdens. Economic analysis should therefore examine what the economic (direct and indirect costs) are for rural and remote people suffering the effects of stillbirth.

Economic modelling must account for the cost of education and research, as well as the impact of maternity unit closure in rural and remote Australia, individuals and family's costs of travel, accommodation, time away from home and another out of pocket expenses.

Recommendation

Economic analysis should therefore examine what the economic (direct and indirect costs) are for rural and remote people suffering the effects of stillbirth.

Conclusion

The Alliance is very concerned about the inequity in stillbirth rates between those in major cities and people in rural and remote areas.

Adding to this, the Alliance is also concerned that the closure of maternity units has had detrimental impact on maternal and fetal outcomes.

The slow implementation of known evidence-based models and education and training to support their implementation also remains a significant gap in rural and remote places.

The Alliance calls for:

1. An inquiry examining why there is inequity in rates of stillbirth in rural and remote Australia.
2. Improved data collection quality, consistency and dissemination. The data should be used to improve rural and remote maternal health outcomes and reduce perinatal deaths, improve quality and safety of care, facilitate lessons learned, translate research to practice and share knowledge.
3. Research funding is provided to take advantage of, and build on, established national and international collaborations and translate research to practice decreasing stillbirth rates in rural and remote Australia.
4. Any new technologies to address stillbirth are supported by a comprehensive education program and integrated as a tool (not the answer to stillbirth) to support a model of care. New technologies must not be implemented at the expense of funding face to face midwifery care and maternity units in rural and remote Australia.
5. That the Commonwealth, through the Council of Australian Governments, allocate funds to drive policy and reform in maternity services, that results in the implementation of research into practice, to improve health outcomes and increase quality of care to women in rural and remote Australia.
6. Obesity prevention and management should be a research, education and training priority.

7. Targeted communication strategies raising awareness and promoting strategies from preconception, pregnancy, birth and post birth aimed at the rural and remote health professional workforce and their communities. Any communication strategy should be one component of a suite of interventions, and not standalone.
8. Economic analysis should therefore examine what the economic (direct and indirect costs) are for rural and remote people suffering the effects of stillbirth.

We appreciate the opportunity to participate in this consultation process and provide our feedback on behalf of our membership. Should you require further information on this matter, please contact Mark Diamond, Chief Executive Officer, on 02 6285 4660.

References

- AIHW 2015. National Health Data Dictionary: version 16.2. National health data dictionary no. 18. Cat. no. HWI 131. Canberra: AIHW.
- AIHW 2017 Australia's mothers and babies 2015 —in brief. Perinatal statistics series no. 33. Cat no. PER 91. Canberra: AIHW
- AIHW 2018. Perinatal deaths in Australia: 2013-2014. Cat. no. PER 94. Canberra: AIHW
- Barclay et al (2016) Reconceptualising risk: Perceptions of risk in rural and remote Maternity service planning, *Midwifery*, 38 pp63-70.
- Dodd, J Briley, A (2017) Managing obesity in pregnancy-An obstetric perspective, *Midwifery*, 49. p 4-12
- Flenady,V Gordon,A Bauman, A (2017) Stillbirth prevention: the challenges of public campaigns, *BJOG* <https://doi.org/10.1111/1471-0528.14964>
- Flenady V, Koopmans L, Middleton P, Frøen JF, Smith GC, Gibbons K, Coory M, Gordon A, Ellwood D, McIntyre HD, Fretts R, Ezzati M (2011) Major risk factors for stillbirth in high-income countries: a systematic review and meta-analysis. *The Lancet*. Apr 16;377(9774):1331-40. doi: 10.1016/S0140-6736(10)62233-7.
- Grunseit A, Bellew B, Goldbaum E, Gale J, Bauman A. (2016) Mass media campaigns addressing physical activity, nutrition and obesity in Australia: An updated narrative review. Sydney; The Australian Prevention Partnership Centre.
- Heazell AEP, Siassakos D, Blencowe H, Burden C, Bhutta ZA, Cacciatore J, et al, for the Lancet Ending Preventable Stillbirths series study group. Stillbirths: economic and psychosocial consequences. *The Lancet*. 2016; 387(10018):604-16.
- Kildea, S McGhie, A Gao,Y Rumbold, A Rolfe, M (2015) Babies born before arrival to hospital and maternity unit closures in Queensland and Australia, *Women and Birth*, vol 28 (3) pp236-245.
- Kildea S, Kruske S, Barclay L, Tracy S (2010) 'Closing the Gap': how maternity services can contribute to reducing poor maternal infant health outcomes for Aboriginal and Torres Strait Islander women. *Rural Remote Health* 10 , 1383.
- Nuzum, D., Meaney, S., & O'donoghue, K. (2014). The impact of stillbirth on consultant obstetrician gynaecologists: a qualitative study. *BJOG: An International Journal of Obstetrics & Gynaecology*, 121(8), 1020-1028
- PHIDU 2018 Social Health Atlas remoteness area data accessed June 25th 2018 from: <http://phidu.torrens.edu.au/social-health-atlases/data#social-health-atlas-of-australia-remoteness-areas>
- Sandall, J., Soltan, i H., Gates, S., Shennan, A. and Devane, D. (2016). Midwife-led continuity models versus other models of care for childbearing women. *Cochrane Database of Systematic Reviews*, 4, Art. No.: CD004667. DOI: 10.1002/14651858.CD004667.pub5.
- WHO 2018 Social determinants of health, retrieved 13th May 2018 from: http://www.who.int/social_determinants/en/



NATIONAL RURAL
HEALTH
ALLIANCE LTD

Attachment A

National Rural Health Alliance - Member Body Organisations
Australasian College for Emergency Medicine (Rural, Regional and Remote Committee)
Australasian College of Health Service Management (rural members)
Australian College of Midwives (Rural and Remote Advisory Committee)
Australian College of Nursing - Rural Nursing and Midwifery Community of Interest
Australian College of Rural and Remote Medicine
Australian Healthcare and Hospitals Association
Allied Health Professions Australia Rural and Remote
Australian Indigenous Doctors' Association
Australian Nursing and Midwifery Federation (rural nursing and midwifery members)
Australian Physiotherapy Association (Rural Members Network)
Australian Paediatric Society
Australian Psychological Society (Rural and Remote Psychology Interest Group)
Australian Rural Health Education Network
Council of Ambulance Authorities (Rural and Remote Group)
CRANApus
Country Women's Association of Australia
Exercise and Sports Science Australia (Rural and Remote Interest Group)
Federation of Rural Australian Medical Educators
Isolated Children's Parents' Association
National Aboriginal Community Controlled Health Organisation
National Rural Health Student Network
Paramedics Australasia (Rural and Remote Special Interest Group)
Rural Special Interest Group of Pharmaceutical Society of Australia
RACGP Rural: The Royal Australian College of General Practitioners
Rural Doctors Association of Australia
Rural Dentists' Network of the Australian Dental Association
Royal Far West
Royal Australasian College of Surgeons
Royal Flying Doctor Service
Rural Health Workforce Australia
Rural and Indigenous Health-interest Group of the Chiropractors' Association of Australia
Rural Optometry Group of Optometry Australia
Rural Pharmacists Australia
Services for Australian Rural and Remote Allied Health
Speech Pathology Australia (Rural and Remote Member Community)