The Australian Population Research Institute,
Research Report, October 2024

The rise and decline of Victorian Rural Obstetrics: What we can learn.

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Acknowledgments: to Bob Birrell and Katharine Betts for advice and assistance with preparation of text.

In rural Victoria, based on the local hospital, a system of obstetrics grew up in the 1920s. It was initially fostered by the Victorian Bush Nursing Association (VBNA) and met the need for safe accessible maternity services until it began to disassemble and finally foreclose from the 1980s on. The safety record of these obstetric services documented in reports from the Bush Nursing Association and from several studies in the 1980s, was extraordinary and possibly unparalleled. Victorians found a way to provide a competent birthing service for women geographically isolated from metro health services. The steady decline of Victorian Rural Victorian Obstetrics is due to a number of factors, which have included a bureaucratic obsession with centralisation of services predicated on the use of ambulance services.

'Rural' Victoria is customarily taken to be everything outside the metropolis of Melbourne. However, in this study 'Rural' is taken to mean locations not large enough to provide comprehensive specialist care in the hospital, ie 'small rural'. This has defined their need for their hospitals to have, in addition to midwives, General Practitioners able to supplement the service with obstetric and anaesthetic capability. Prior to 1980 it was the norm for all hospital towns to provide such services. A list of 99 towns that have lost such labour ward services since then is appended (see p. 7).

Victorian Rural Hospitals began appearing in the 1850s, around 6 per decade, and the network steadily grew over the next 100 years, accelerating after the first world war. Such hospitals replaced ad hoc services by nurses and doctors in homes, hotels and sometimes a tent. Community pressure would mount, committees formed, and monies donated. Historical accounts including Barrett (1932),[1] and Priestly (1985)[2] demonstrate the impetus provided by the VBNA. From 1908 the wife of the Governor-General on tour had recognized a dearth of nurses in rural areas. In 1910 the Victorian, and in 1911 the NSW, Bush Nursing Associations were formed and Nellie Melba gave a concert to fund them. The move was resolutely opposed by both medical and nursing professions.

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[1] Outline history of the VBNA. Sir James Barrett 1932. Available on TROVE. https://nla.gov.au/nla.obj-523875112/view?partId=nla.obj-523875173 . Sir James, ophthalmologist, an extraordinary character, was an energetic and effective promoter of the Bush Nursing system. With high ranking in the army and some experience in politics, he was eventually Chancellor of the University of Melbourne (Priestley, 'Bush Nursing in Victoria 1910-1985').

[2] Priestley, Susan 'Bush Nursing in Victoria 1910-1985'. Lothian Publishing. Available in the State Library of Victoria.

The VBNA evolved as a facilitatory organisation. The object was to provide nurses and for the community to erect housing for them (designed so as to provide future extension into hospital accommodation). By 1920 there were 28 such centres but no hospitals as yet. By 1923 there were 47 centres and one hospital at Kooweerup. Use of the service was obtained by subscription and there was a traveling nursing superintendent. Governance was by local committee, on which the local doctor was expected to sit. There was no government assistance and State funding was provided only in due course for work in schools by the nurses. A number of charitable trusts began to provide finance, particularly the Argus trust, which also started funding ambulances for the network.

Prior to 1924 there were no maternity wards in rural Victoria. This was from fear of cross infection. Births were therefore all at home. From then on, such wards became a standard feature, so that from 1922 to 1928 only 60% of Bush Nursing confinements were at home (53% with nurse alone). There were attempts by the Hospitals and Charity Board to incorporate the hospitals into the Public Hospital system, (at public expense) which were successfully resisted by Barrett.[3] After WW2 the State Government instituted a program of Public Hospital Building to which Bush Nursing Hospitals (BNHs) could apply. [4]

Nurses with midwife qualifications were proving hard to find. In 1923 the Argus Trust undertook to finance training (at the Women's and the Queen Victoria hospitals) in return for contracted employment, which also provided accident and sickness insurance. In due course training in infant welfare also became standard. By 1932, of 63 centres there were 29 hospitals, 14 built by the association, and 15 private hospitals that had joined up. At this point analysis by Prof. Marshall Allan revealed that the VBNA system had already established an extraordinary record of safety.[5] For the whole period 1922 to 1932, the maternal death rate of 1.96 per thousand in rural births was 40% of the State level of 4.96 per thousand. The rural stillbirth rate of 17.1 per one thousand births was 59% of the State average of 29.7 per thousand , and the neonatal death rate pf 14.9 per thousand was 50% of the State average of 30.1 per thousand.[6] As a consequence, by 1932 the VBNA had gained the full support of the medical and nursing professions.

How had this been achieved? In 1927-28, 90% of the mothers received antenatal care and advice, a cardinal underpinning of the success. 40% of the confinements were at home, with or without the doctor. (There were naturally disagreements between nurses and doctors, detailed by Priestley, but they did not unduly affect the overall outcome, and the association between solo doctors and midwives appears to have worked out well). The Cesarean section

[3] Ibid Priestley.

[4] The Bush Nursing Association involved at one time or other 156 centres. By 1941 there were 63. After WW2 the State Government fostered building of Public Hospitals, for which 18 BNHs applied, not all successfully, so that in 1960 there were 46 BNHs (ibid Priestley).

[5] Professor Robert Marshall Allan, Royal Women's Hospital and University of Melbourne, Director of the Obstetrical Research Committee (1925), reporting on maternal morbidity and mortality and the state of obstetric practice in 1926 and 1928. As well as many other appointments we was a councillor and enthusiastic supporter of the VBNA. Forster F. Australian Dictionary of Biography, Volume 7 1979.

[6] Outline history of the VBNA. Sir James Barrett 1932. Available on TROVE. https://nla.gov.au/nla.obj-523875112/view?partId=nla.obj-523875173. Appended reports by Marshall Allen.

rate was not mentioned but would have been less than 5%.[7] It might be presumed that the now standard (lower segment) method of section introduced in the 1920s also came into rural practice. Networking between doctors in neighbouring towns would have ensured anaesthesia, an essential skill common in rural doctors for emergency airway management and visiting surgical lists.

However this author's interest is in the capacity of the mothers to have normal childbirth. The literature indicates that where mothers have control of their birthing processes they progress better and need much less intervention. Essential to this is familiarity with the birthing process, the personnel to be involved in the birth, and place of confinement. All these would have been satisfactory in the bush nursing context. Are rural women also fitter? This could be the case not just by self-selection but by the daily work required in those days, their robust childhoods, and sporting activities during adolescence.

This record of safety was still discernible from VBNA annual reports[8] towards the end of the century. Professor Roger Pepperell, commenting on the 'extraordinarily high standards……equal to the best institutions in the world' of Bush Nursing Hospitals (BNHs), opined in 1983 that he could not see the perinatal mortality rate (still 25% of the State average in 1998), bettered by teaching hospitals.[9] Professor Michael Quinn in 1991 described the obstetric data as 'unparalleled…. and should be noted by Government'.[10] It can be assumed that such safety had continued though the baby boom years when rural family size greatly increased, peaking in 1961 and still evident in the 1980s.

How much was this just a facet of the BNH system? By the 1980s the model probably had extended to the whole of 'small rural' Victoria. Whereas in 1983 NSW was closing rural units with less than 80 confinements annually, the then Victorian Health Commission carried out a State Inquiry into the safety of such units. Units with under 50 deliveries a year of any size , even if they delivered less than 25, were found to be extremely safe.[11] [12] Lumley found similar safety profiles in her 1988 study ,[13] and in her 1990 review of Victorian Birthing Services noted that "unlike other places, Victoria has no established policy of closing small units in rural areas…….the closure of such units is not warranted on safety grounds." [14]

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[7] A 1970-1980 review of Obstetrics at Cohuna found that none of 730 confinements were referred away, with a Cesarean section rate of 2.3%. Graham P W, Strasser R. Obstetrics at Cohuna 1970 to 1980. Australian Family Physician 1982; 11.11 pp 884-892 .

[8] Annual reports are available in the State Library.

[9] Victorian Bush Nursing Association annual report 1983. Maternity section. Professor Roger Pepperell, University of Melbourne.

[10] Victorian Bush Nursing Association annual report 1991. Maternity section - comments on the work of the year. Associate Professor Michael Quinn, University of Melbourne.

[11] Providers of the operation of obstetric services in small rural hospitals. Report to the Health Commission of Victoria. Health Advisory Council July 1983.

[12] Ibid Priestley p 217.

[13] Lumley J. The safety of small maternal hospitals in Victoria 1982-4. Community health studies 1988 XXII 4 386-393.

[14] Having a baby in Victoria. Final report of the Ministerial Review of Birthing Services in Victoria. Health Department of Victoria 22.3.90.

The Community had, in the case of the Bush Nursing Hospital system, been able to evolve safe locally supported maternity services. The Victorian Health Commission, derived from the Hospitals and Charities Board in 1973 had an essentially benign approach to small rural Hospitals. However, following the establishment of the Health Department in 1985, there were immediate steps to commence closures. Unsurprisingly, efforts to close hospitals near Horsham were met with much publicised public resistance and while the outcome was the creation of the Dunmunkle Health Service, south east of Horsham, obstetrics did close. However it was soon realised that Health Services in Victoria were 'independent Crown entities', requiring more indirect pressure to obtain Departmental objectives. This included Ministerial approval for board members. Exclusion of doctors from public hospital boards, useful for the operation small rural hospitals and still supported by their Boards,[15] occurred in 2002 (in line with rules for Melbourne hospital networks), from which the Department derived greater influence, not always to the benefit of services provided.

The demography of small rural areas was in any case changing. The population of these towns comprised the farming sector, agricultural service industries and small manufacturing concerns. With mechanisation such population had been diminishing. Housing was being taken up by a wave of welfare dependents. Total fertility was no doubt decreasing along with the general drop nationwide, from to the high of 2.5 per woman in 1960 to 2.0 in 1980 and towards the 1.6 at the present time. In the case of Bush Nursing Hospitals private health insurance was becoming less affordable, The Kennett administration for a few years provided a rather stingy 24 hour bed subsidy for them. The Howard Government 1997 tax rebate for premiums came too late to make a difference. On top of these factors the supply of GPs with obstetric capability as well as midwives was dwindling.[16] These circumstances pushed remaining rural hospitals towards aged residential care.[17]

The nature of Obstetrics was also changing, with a major trend towards Cesarean Section as a preferred modality. There has long been robust friction between the midwives' desire to achieve natural childbirth and Obstetricians' impulse to intervene. This rate had been stable around 5% until the 1970s. It reached 23% nationally in 2004 and 38% in 2021. Recent data suggests 41% in 2024. In the private sector (which manages 25% of births), the Cesarean rate was 43%, and for Public Hospitals 29%.[18] While this is some way below Turkey's 58% it is still an astonishing figure. Only 42% of all women gave birth unassisted.[19] 44% of first time mothers received induction. Induction of labour is a part of the art of midwifery and requires certain parameters and actions to be successful. 'Failed induction' is a common reason for Cesarean section, especially, it is sometimes said, on Friday afternoons, and the Cesarean rate in first time mothers in 2021 was 33%. While a proportion of these go on to

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[15] Small Hospital Boards were surveyed by the Rural Doctors Association of Victoria. As mentioned, such service had been required by Bush Nursing Hospitals from the outset.

[16] A 2009 survey by the author revealed the average age of Victorian GP proceduralists ('rural generalists'), to be 50 with few under 40. Only 25% of the hugely increased output Australian domestic medical graduates are entering General Practice, especially rural practice and relatively few obtain procedural training.

[17] With the already burgeoning over 65 population, aged residential care became a uniform feature. The author's hospital at Nyah West built at a cost of $1.2m, half raised locally, and was then subsumed into the Swan Hill network.

[18] AIHW National Core Maternity Indicators updated 13.7.23.

[19] AIHW Labour and Birth indicators updated 13.7.23.

have a vaginal birth the second time round, calling into question their first section, it is still restrictive of larger families.

The Obstetricians appear to have the upper hand at present. In New Zealand, where affirmative support for midwives was already evident in the 1930s, the 2022 Cesar rate was somewhat lower at 32%.[20] No-fault compensation for medicolegal purposes might also be playing a part there. Full-time equivalent (FTE) supply of obstetricians could also be a factor. That of males has decreased slightly, while that of females has increased by 90% since 2013. In public hospitals the levels of gender increase were 3% and 178% respectively.[21]

Although genuine medical reasons are not enough to justify the high rates of Cesarean Section, there are other such reasons for the rise. The age of new mothers has steadily risen, with the proportion aged over 30 reaching 37% in 2001 and 51% in 2019.[22] Assisted reproduction is now over 5% in this group, 10% in those over 35 years.[23] Each baby is too precious to take any risk, which tends to over-ride the probably quite major psychological benefit of natural birth.[24] At the same time maternal obesity (BMI greater than 30) rates have been growing, rising steadily from at least 1990 to 20% in 2012 to 23% in 2021, conferring considerable risk and compromise to the birth process.[25]

An examination of birth data in the author's town of Swan Hill suggested that more than 50% of the accessible maternal population now go to major centres 2 hours distant for confinement. This is despite there being a locum specialist obstetrician available, at great cost, at all times (there are now no GP obstetricians in Swan Hill).[26] Returning to the theme of maternal control of their birthing processes and the probable advantage of local community run birthing units, any necessity to travel away to distant birthing units detracts from the capacity of the mother to have that inner control so helpful in normal childbirth. It has long been a commonplace that delays in childbirth management can lead to adverse outcomes. The greater the distance, the greater the consequences. There have been no

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[20] Outline history of the VBNA. Sir James Barrett 1932. Available on TROVE. This includes a report by Professor Marshall Allan on his 1931visit to New Zealand. "The trend of departmental opinion in New Zealand is to limit the doctor to antenatal care and abnormal deliveries…"

[21] DOH HWD datatool. Declared weekly working hours for male and female had narrowed to around 45 hours for each.

[22] Australian Institute of Family Studies. Births in Australia 2022.

[23] UNSW National Perinatal Epidemiology and Statistics Unit, ANZARD.

[24] Humenick S S. The Life-changing Significance of Normal Birth. J. Perinatal Education 15 (4) 2006

[25] AIHW Maternal Body Mass Index, updated 30.7.24. Measured in a regional town such obesity rates were high but this may be less the case in small rural. 'A profile of body mass index in a large rural Victorian obstetric cohort'. Chris E Cunningham and Glyn R Teale. Med J Aust 2013; 198 (1): 39-42. || doi: 10.5694/mja12.11033.

[26] With medical scool output greatly increased in the 1970s, rural GP supply went into oversupply in 1974 (Priestley), but with growth in specialty training was already dwindling by the turn of the century, Australian-trained medical graduates with GP fellowship are now only 54% of total and supply of GPs with long term commitment to rural life are in scarce supply.

studies of this matter in Australia. Norwegian,[27] Swedish[28] and Canadian[29] studies have indicated it to be the case, though there has been reluctance to draw firm conclusions. The rates of normal birth, Cesarean section and instrumental delivery would be useful to compare in such cases. In-transit delivery is quite common and Ambulance Officers receive training for it. It is also not uncommon in Melbourne itself.[30] Survival from these is generally good.[31] The last two deliveries at the author's BNH before 1999 were in transit.[32]

Increasing maternal age, with reduced fertility and an overall fertility rate below the population replacement level together with loss of capacity for normal childbirth, are all worrying for the future of the human race. With population declining already in some western countries, Australia is countering this trend with mass immigration.[33] The problem has to be faced up to eventually. It is likely that political pressures are not likely to generate the necessary action, and an impetus towards younger and less medicalised birthing may have to develop spontaneously within the community.[34] Nevertheless, aside from the bunching of births that explains the high fertility rates of the 50s and 60s, the fervour for expanding Australia's population may have been a contributing factor at the time.

For the optimal function of mothers during childbirth, their travel time to the birthing unit should probably not exceed 30 minutes. Antenatal care is best delivered in a midwife-led antenatal clinic with obstetrician overview.[35] Less competition between obstetricians and midwives would be highly desirable. Obstetricians should be immediately available at the time of childbirth and their training should include neonatal resuscitation, (a simple matter when properly applied), which is not always the case. In the rural setting it is not possible to have a paediatrician also available at Cesarean delivery, as is the trend in teaching hospitals with the growing surfeit of paediatricians. The Health Bureaucracy is probably not the best locus for determining Obstetric policy but competing interests, the burgeoning numbers of specialist obstetricians in the private sector, with increasing medicalisation of obstetrics, and obtrusion of political interference all make good policy difficult to implement. There are also wider policy necessities such as exercise in the adolescent school age, inducements to better

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[27] The relationship of travel distance to delivery institutions and accompaniment for women giving birth: a systematic review – revised. Ames et Al. Norwegian Institute for Public Health. 26.04.22

[28] Association between travel time to delivery unit and unplanned out-of-hospital birth, infant morbidity and mortality: A population-based cohort study. Ortqvist et al. Acta Obstet Gynecol Scand August 2021.

[29] Travel Time to Delivery, Antenatal Care, and Birth Outcomes: A Population-Based Cohort of Uncomplicated Pregnancies in British Columbia, 2012–2019. Luke et al. Journal of obstetrics and Gynaecology Volume 4 Issue 8 August 2022.

[30] 'Epidemiology of unplanned out-of-hospital births attended by paramedics'. McLelland et al. BMC Pregnancy and Childbirth 2018. 75% of 324 such births over 12 months were in Melbourne.

[31] In the 1930s a woman delivered twins off a horse and cart on her way to the bush nursing hospital in the Author's district. In the confusion that followed one twin got left behind. A recovery expedition was hastily mounted and the twin, unharmed, grew up with his brother.

[32] An ambulance called in with a mother about to give birth. The cord was twice round the neck, requiring prompt action to prevent asphyxia. A mother drove up to the front of the hospital in a utility vehicle determined to give birth where she herself was born. The head was on view, with no time to bring her in. The delivery trolley was hastily brought and the delivery completed on the front bench seat.

[33] With present net migration levels, Australia will reach peak population in 2096, the last of the major economies to do so, when around 30% will be aged 65 or more. Populationpyramid.net.

[34] A compulsory period of midwifery during specialist obstetric training might be a useful exercise.

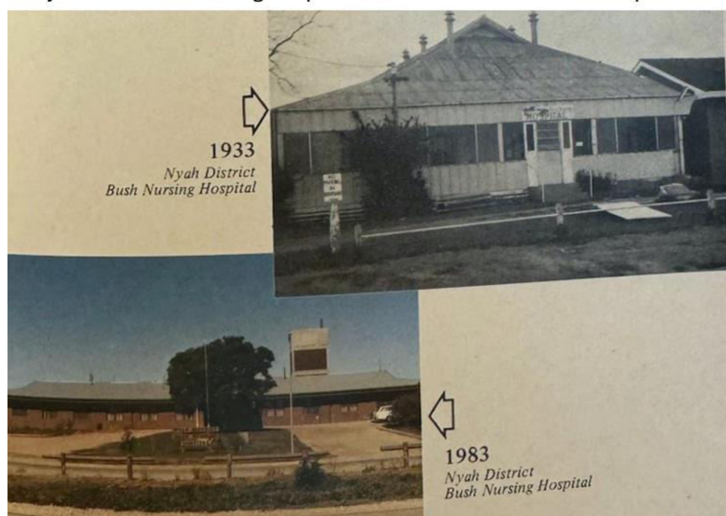
[35] The history of birthing at Kilmore merits review.

balance career and motherhood, and the availability of housing. All these are necessary if birthing experiences are to be improved.

Active Victorian rural Maternity Units closed since 1983:
Alexander, Apollo Bay, Avoca, Ballan, Beechworth, Beulah, Beeac, Birchip. Birregurra, Bright. Boort, Casterton, Charlton, Clunes, Cobram, Cohuna, Coleraine, Corryong, Cowes, Creswick, Daylesford, Dimboola, Donald, Dunolly, Eildon, Edenhope, Elmore, Euroa, Gisborne Heyfield, Healesvile, Heywood, Hopetoun, Inglewood, Jeparit, Kaniva, Kerang, Kooweerup, Koroit, Korrumburra, Kyabram, Kyneton, Lancefield, Lismore, Lorne, MacCarthur, Maffra, Maldon, Manangatang, Myrtleford, Minyip, Mirboo North, Moe, Mortlake, Mt Beauty, Murchison, Murrayville, Murtoa, Nagmbie, Nathalia, Natimuk, Neerim South, Nhill, Numurkah, Nyah West, Omeo, Orbost, Ouyen, Penshurst, Port Fairy, Pyramid Hill, Rainbow, Redcliffes, Robinvale, Rochester, Rupanyip, Sea Lake, Seymour, Skipton, Stawell, St Arnaud, Sunbury, Talangatta, Tatura, Terang, Timboon, Tongala, Trentham, Walwa, Warley, Warracknabeal, Wycheproof, Wedderburn, Willaura, Yackandanda, Yarra junction, Yarrawonga, Yarram, Yea.

Total 99, 100 if Camperdown remains closed. List compiled by by the Author over the years.

Nyah West Bush Nursing Hospital from the VBNA 1983 annual report.



Author
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