CHAPTER THREE

SANATORIA IN THREE STATES, 1890 – 1930: Prevention, Isolation and Education in State Institutions

Integral to the operation of notification was the availability of institutions in which sufferers could be isolated and treated away from the rest of the population, the tuberculosis sanatorium. The sanatorium has been the most enduring symbol of tuberculosis treatment in the twentieth century. Even after an effective drug regime became widely used in the early 1950s the sanatorium held its place for two more decades, but under the scrutiny of social historians the sanatorium has often been found wanting. Michael Worboys argued that British sanatoria were under-utilised, especially by the working class, unsuccessful as curative institutions and might not have retained their place in tuberculosis control but for the sanatorium allowance, which was introduced under the British National Insurance scheme in 1912.[1]

This chapter discusses the sanatorium system in South Australia, Victoria and New South Wales from the late nineteenth century to 1930. Many studies of the tuberculosis sanatorium have revealed the patient experience by detailing the lifestyle and treatments in the institutions. Rather than focus on the patient experience I first examine the introduction of sanatoria into Australia and the social tensions surrounding the location of government sanatoria. This narrative demonstrates the predominant pattern in Australia of state over private institutions, the persistence of climate therapy as a treatment and the presence of tuberclophobia[2] from the early decades of the twentieth century. I then analyse how

[1] Michael Worboys, 'The Sanatorium Treatment for Consumption in Britain, 1890-1914', in John V. Pickstone, (ed.), *Medical Innovations in Historical Perspective*, Macmillan, 1992, pp. 47-71.

[2] Macdonald Critchle, (Editor-in-chief), *Butterworths Medical Dictionary*, Second Edition, Butterworths, London, 1978, p. 1762.

effective sanatoria were as curative institutions and instruments for isolation and why the sanatorium retained its place in the face of disappointing results.

Sanatorium treatment began in Germany in 1859 as a treatment for more affluent sufferers. Following their European and North American counterparts, Australian doctors promoted the establishment of sanatoria as curative institutions where doctors could supervise patient behaviour.[3] One of the cornerstones of ideas about sanatorium treatment was for patients to expose themselves as much as possible to the open air. Treatment consisted of designated rest periods, preferably in the open air on verandahs or simply outside, a nourishing diet, exercise or work, and instruction on preventive and hygienic behaviour.[4] At the beginning of the twentieth century, only a small number of private sanatoria had been established in Australia. By this time, as we have seen, the contagiousness of tuberculosis had assumed central importance. Sanatoria were an important plank in the platform of the nascent anti-tuberculosis movement as physicians focussed on the need to isolate and educate the infective poor for the protection of the public's health. Public health reformers in the anti-tuberculosis movement also called on the state to take responsibility for protecting the community by building public sanatoria.

[3] James Jamieson, M.D., 'Tuberculosis and Its Prevention', *Intercolonial Medical Journal of Australasia (IMJ),*Vol. III, no. 11, November, 1898, p. 642.

[4] Preventive instruction included, sleeping separately from other family members, keeping separate household utensils for the consumptive's use and disposal of sputum. At Greenvale in Victoria sputum was placed into an incinerator. Rest periods were taken at specific times of the day and exercise taken according to medical instruction. [Victoria, Department of Public Health, 'Appendix III, Greenvale Sanatorium,' *Report of the Board of Public Health for the years 1905-6-7*, p. 80, Govt Printer, Melbourne, Butlin Collection, J.L.S.] Michael Roe, *Life Over Death: Tasmanians and Tuberculosis*, Tasmanian Historical Research Association, Hobart, 1999, p.55. A.J. Proust, 'Evolution of Treatment', in A.J. Proust, (ed.), *History of Tuberculosis in Australia New Zealand and Papua New Guinea*, Brolga Press, Canberra, 1991, p. 151.

Around the turn of the twentieth century pressure from the medical profession and health reformers combined with community fear of contagion to induce states and charities (with increasing state subsidies) to try to isolate the tubercular in sanatoria for treatment, education or death. Sanatorium beds, however, did not meet the levels necessary to provide a place for all tuberculosis patients, nor was the treatment regime as successful as proponents of sanatoria treatment had hoped. Nevertheless the sanatorium continued to be in the forefront of tuberculosis management. This can be attributed, in part, to Australia's adoption of the sanatorium model in accordance with an international trend but the Australian sanatorium retained its place for two main reasons. Rather than question the underlying principles of the sanatorium regime physicians blamed deficiencies in the Australian sanatorium system and patient behaviour for the sanatoria system's lack of success. Advanced or incurable patients dominated the institutions and patients in early stages of the disease, who physicians argued could be helped by the sanatorium regime, refused to remain as long as doctors dictated or stayed away altogether. Blaming patient behaviour, sometimes critically, sometimes sympathetically, was consistent with the belief that sufferers were responsible for their own cure.

Despite observations by doctors that patients too often avoided the sanatorium, quantitative evidence presented later in this chapter suggests that while many tuberculosis sufferers avoided hospitalisation or left earlier than advised, Australians used sanatoria at much the same rate as they used other health institutions, and the length of residence in sanatoria gradually increased over time.

The medical profession promoted isolation and the sanatorium regime as an efficacious treatment for tuberculosis and the broader hospital and public health context in which sanatoria emerged strengthened the case for special institutions for tuberculosis. Sufferers from other contagious diseases were being segregated into special institutions. Overcrowded hospitals and asylums wanted to rid themselves of large numbers of contagious consumptives and the social acceptance of hospital treatment was rising at the turn of the twentieth century.

Tuberculosis patients required isolation for many months requiring extra beds that turned over at lower rate than most others. Other common contagious diseases ran an acute and shorter course requiring much shorter periods of isolation. Enteric fever (typhoid) for instance generally lasted for some 28 days from the onset of symptoms, diphtheria victims could begin to recover (or die) within a few days but could also require weeks of convalescence, scarlet fever recovery could occur within a few days and erysipelas generally lasted up to ten days.[5] The preference for locating sanatoria away from urban areas made ongoing family contact difficult and this deterred patients from entering an institution for such a long period, or they did not stay as long as doctors recommended.

Governments were persuaded to establish public sanatoria but they encountered opposition to the erection of such institutions in central or heavily populated areas. By the early 1900s the public had become more aware of the contagiousness of tuberculosis and consequently feared contact with sufferers. As a result local

[5] William A.R. Thomson, M.D., *Black's Medical Dictionary*, Adam & Charles Black, London, 1984, pp. 265-266, 317-319, 788-789. T. Geo. Ellery, 'The Administration of the Health Act, 1898, in Adelaide, *Australasian Medical Congress*, 1905, Adelaide, 1907, pp. 432-433.

communities were strongly opposed the erection of sanatoria in their areas.[6] Both New South Wales and Victoria established government sanatoria some distance from their capital cities, Sydney and Melbourne.[7] In South Australia, however, after a vigorous public debate, the state institution for the tubercular poor was established in the middle of Adelaide, its capital city, adjacent to and as part of, its public hospital. The Adelaide debate is described in some detail as an example of the tensions surrounding the erection of sanatoria.

SOUTH AUSTRALIA

In 1901, a British Congress on tuberculosis determined that 'the provision of sanatoria [was] an indispensable part of the measures necessary for the diminution of tuberculosis.'[8] Drawing on the findings of the British Congress, William Ramsay Smith, Chair of the South Australian Central Board of Health,[9] urged South Australians to establish tuberculosis hospitals and sanatoria.[10] Joseph Verco, a leading South Australian physician, called for isolation of the poor in free institutions to which they could be persuaded to attend, or, if necessary, forced to attend.[11]

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[6] In New South Wales, local government opposition thwarted plans for a temporary arrangement for advanced cases. 'The Care of the Consumptive Poor', *Australasian Medical Gazette (AMG)*, 20 February 1904, p. 75.

[7] Greenvale in Victoria was 21 kilometres north of Melbourne. [Victoria, Public Health Department, *Report 1905-06-07*, p. 78.] In New South Wales the government sanatorium was built at Waterfall 38 kilometres south of central Sydney.

[8] 'British Congress on Tuberculosis for the Prevention of Consumption', *AMG*, 21 Oct 1901, p. 457.

[9] Dr William Ramsay Smith was appointed Chair of the South Australian Central Board of Health, City Coroner and Vaccination Officer in August 1899. [SRSA GRG 8/19, Central Board of Health Minute, 29 August, 1899, Central Board of Health Minute Books.

[10] W. Ramsay Smith, B.Sc., M.B., C.M. (Edin.), *Consumption: its scientific and practical aspects*, Lecture delivered before the Adelaide Democratic Club 8 Sept 1901, p. 11, SLSA.

[11] Dr. Jos. C. Verco, M.R.C.S., 'Address', *Inaugural Meeting of the South Australian Branch of the National Association for the Prevention of Consumption*, 24 October, 1903, Office of the Association, Adelaide, p. 9, SLSA.

In 1895 Kalyra Sanatorium financed by the private James Brown Trust, opened at Belair in the Mount Lofty Ranges 20 kilometres from the city centre. Intended for early cases, Kalyra's original capacity was 16 patients but by 1902 had increased to 28 with plans for a further 22 beds.[12] The original intention to house early cases with a view to recovery was not fulfilled and patients at all stages of illness were admitted, many remaining in the sanatorium to die because alternative accommodation or housing was unavailable. The only other tuberculosis institution was a private sanatorium, Nunyara, also in the Mount Lofty Ranges, which opened in 1902 and remained in operation until the early 1920s.[13]

These two institutions did little towards isolating Adelaide's advanced cases. Even though Kalyra admitted some patients in late stages of disease its management preferred to take only early cases. The presence of advanced cases, Kalyra officials argued, inhibited the progress of patients in earlier stages who might otherwise respond well to the sanatorium regime. Most advanced stage patients went to general wards of the Adelaide Hospital where there was little room for isolation[14]

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[12] Philip Woodruff, MD., FRACP., FRACMA, *Two Million South Australians*, Peacock Publications, Kent Town, S.A., 1984, p. 54. Australia, Department of Trade and Customs, Committee Concerning Causes of Death and Invalidity in the Commonwealth, *Preliminary Report*, (J. Mathews, M.P., Chairman), Parliamentary Paper, 39, 17 May, 1916, Vol 5, pp. 29, 54. Leahy, John, P.D., M.B., D.P.H., 'The Fight against Tuberculosis in the Australian Colonies and New Zealand', Read before the Hawke's Bay Philosophical Institute, 19 May, 1902, in Sir James Hector, K.C.M.G., M.D., F.R.S., Director (ed), *Transactions and Proceedings of the New Zealand Institute*, 1902, Vol. 35 (18th of New Series), July 1903, Wellington, pp. 220-225. Kalyra was financed by Trust funds, patient fees and a government subsidy. Royal Commission on Health 1925, *Minutes of Evidence*, question, 16439. The South Australian Government had access to a limited number of beds. [NAA: A1928, 1105/30, Tuberculosis Report on Control of Tuberculosis in Australia, 1929-1937; M.J. Holmes, D.S.O., MB.,BS., D.P.H., *Report on the Control of Tuberculosis in Australia*, H.J. Green, Government Printer, Canberra, u.d. (1929), p. 11. See this report also in Federal Health Council of Australia, *Report of the Federal Health Council*, 3rd session 1929, Appendix number I, M.J. Holmes, Report on the Control of Tuberculosis in Australia, 1929.]

[13] Ian Lawrence, Forbes, *From Colonial Surgeon to Health Commission. The Government Provision of Health Services in South Australia 1836-1995*, Adelaide, 1996, p. 148.

[14] Board of Management of the Adelaide Hospital, *Twenty-ninth Annual Report*, 1898, p. 9; *Thirtieth Annual Report*, 1899, pp.7-8, Royal Adelaide Hospital Heritage Office.

and by 1904 this hospital was limiting the number of consumptives admitted to general wards leaving Adelaide almost devoid of hospital space for advanced cases. Local Boards of Health, seeking to meet their obligations under the Public Health Act, appealed to the government to rectify the problem.[15] Rather than erect a new institution the government decided to convert an existing building. It chose the empty lunatic asylum located between the Adelaide Hospital and the city's botanic gardens on North Terrace in the centre of the city.[16] No-one objected to a public institution for consumptives but a proposal to locate it in the centre of Adelaide raised objections based on concerns that were largely outside the interests of the sick.

Converting an existing building was a practical and economical option for the Government and supported by much of Adelaide's medical profession.[17] The Medical Board assured the Government that a consumptive home on that site posed no danger to residents or visitors to the nearby botanic gardens.[18] Most Local Boards of Health, grateful for government assistance, also responded positively, although nearby St Peters Council strongly opposed the decision.[19] In late March 1904 a state-wide committee of local boards was brought together to consider the problem and decided to endorse the Government's decision.[20] The short-lived local Association for the Prevention of Consumption also approved the plan but only if

[15] 'South Australia', *AMG*, 20 June, 1904, p. 308.
[16] *AMG*, 20 June 1904, p. 85.
[17] Although the British Medical Association was to lend official support, medical opinion was pliable. In February 1904 the *AMG's* South Australian correspondent found the decision 'to be regretted', but in March a further report in the *AMG* supported the decision. [*AMG* 20 February, 1904, p. 85. *AMG*, 21 April, 1904, p.124.]
[18] 'The Proposed Consumptive Home', *The Register*, 15 April 1904, p. 5.
[19] SRSA GRG8/1903/135, Correspondence, Town Clerk, St Peters to Central Board of Health, 31 August 1903. *Quiz*, 22 April, 1904, p. 8.
[20] The committee met in late March 1904. By 1909, however, local boards were calling for incurable wards to be re-located outside city and suburbs. [Conference on Consumption, *A Digest*

the North Terrace site was a temporary expedient.[21] Prominent citizens and city residents, however, objected. Early in 1904 the Mayor of Adelaide led a deputation to the Government protesting against the plan on behalf of property owners, residents of nearby suburbs and potential patients. Tenants, he said, had already left the area at the prospect of a consumptive institution being established in the city centre. At this stage, Premier John Greeley Jenkins rejected their position accusing them of causing unnecessary alarm.[22] Local newspapers also opposed the plan. *The Register* attacked the medical profession for giving its imprimatur to 'one of the worst sites which could be found if the metropolis were searched from end to end'[23] and berated the Government for selecting a totally unsuitable building simply to limit expense. The old asylum building, according to *The Register,* was dusty, stuffy in summer and 'notorious for chilling, depressing fog' in winter.[24] Responding to the criticism, Premier Jenkins invited interested members of parliament, mayors of councils and representatives of the medical profession to inspect the renovated North Terrace building.[25] The inspection resolved some doubts with most of the representatives giving their approval.[26]

Opponents of the North Terrace site had consistently argued for the consumptive home to be established in premises formerly used as a home for inebriates at Belair

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of the Proceedings of the Conference of Representatives of Local Boards of Health in the Metropolitan Area of Adelaide, 1909, p. 21, SLSA.

[21] 'Public Health'*AMG*, 20 April, 1904, p.191.

[22] 'The Housing of Consumptives in Adelaide, *AMG,* 21 March, 1904, p. 124.

[23] 'Pure Air or Fog and Dust for Consumptives?' *The Register*, 14 April, 1904, p. 124.

[24] ibid.

[25] Local Councils had an agreement with the Government to pay the cost of treatment of curable cases at Kalyra. ['Public Health', *AMG*, 20 April, 1904, p. 191.]

[26] 'The Home for Consumptives, Inspection by Municipal Representatives', *The Register*, 19 April, 1904, p. 7.

near Kalyra. In late April 1904 John Howard Angas,[27] the owner of these premises, offered to the Government the building and its surrounding 80 acres of land for a consumptive home, provided the North Terrace plan was abandoned. This offer boosted the opponents' case but did not resolve the question, protagonists now debating the relative merits of each site.[28] The Adelaide City Council, within whose boundaries the North Terrace site fell, divided on the issue. Because many ratepayers opposed the use of North Terrace some councillors saw the Belair site as an escape from a difficult situation. The Government sought advice from the British Medical Association on Angas' offer then accepted the offer before the BMA responded.

Despite the government's decision the BMA pursued the matter and after inspecting the Belair property released a report recommending that the North Terrace site still be used. Belair's distance from the centre of population, the BMA argued, would disadvantage the incurable poor, the very group for whom the home was intended. Some would be too ill to travel, while others would choose to remain at home near friends and family rather than risk isolation at a site where travelling time and expense were likely to curtail family visits. The BMA also considered that a central location was necessary for the constant medical supervision often required for advanced cases. Belair offered the fresh air and space so beneficial to early cases but was of little value to advanced cases with no prospect of recovery and too

[27] 'Home for Consumptives', *The Observer*, 30 April, 1904, p.32 (photograph p. 26). Sally, O'Neill, 'Angas, John Howard (1823–1904)', *Australian Dictionary of Biography (ADB)*, National Centre of Biography, Australian National University, http://adb.anu.edu.au/biography/angas-john-howard-2890/text4141, accessed 14 July 2012.

[28] C.E. Todd, Hon Secretary of the Medical Board, Letter to the editor, *The Register*, 15 April, 1904, p. 5. 'The Consumptive Home', Letters to the Editor, *The Register*, 22 April, 1904, p. 7. Mr. Gooch, 'The Consumptive Home', Letter to the Editor, *The Register*, 23 April, 1904, p. 9. London, F, Slaney Poole, 'Proposed Home for Consumptives at Belair', Letters to the Editor, *The*

ill to move about. The city site, on the other hand, was easily accessed by patients, visitors and medical staff of the Adelaide Hospital, needed no further expenditure, was sufficiently isolated from surrounding buildings, and, far from being low-lying and foggy, was more elevated than either of the other central hospitals, the Adelaide and the Children's. The BMA concluded that community protection would suffer if Belair were chosen because it would not attract the intended class of patient. North Terrace, on the other hand, would shield the broader community because more infectious patients would be willing to be admitted, a much safer scenario than remaining in the community spreading their infection.[29] The BMA was accused of favouring the central site for its own convenience, a charge predictably denied by the BMA..[30] While North Terrace would have been more convenient for practitioners and this probably affected their opinion, many in the profession were dismayed by the public fear of tuberculosis that had been generated in recent years by the knowledge of the contagiousness of tuberculosis and were anxious to assure the community that isolation and control of the infectious person was the greatest prophylactic against tuberculosis. The behavioural argument also shielded the profession from responsibility, as the onus of prevention fell on the tubercular and the state.

Unfortunately for the proponents of the Belair option, Angas died and in August the trustees of his estate decided not to comply with his offer to the Government.[31] In November 1904 the old lunatic asylum in the centre of Adelaide re-opened as the Adelaide Cancer and Consumptive Home. It had always been intended to place

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Register, 25 April, 1904, p. 6. Cr Baker, "Sorrowful", 'The Consumptives Home', Letters to the Editor, *The Register*, 28 April, 1904, p. 5.

[29] 'The Proposed Hospital for Consumptives in Adelaide', *AMG*, 20 June, 1904, pp. 310-311.

[30] ibid., p. 311.

some cancer patients in the home but the majority of beds were allocated for tuberculosis. The Home had its own board and honorary resident medical office but operated essentially as an annex to the Adelaide Hospital. As early as 1905, more beds were required.[32]

Despite ongoing criticism, the Cancer and Consumptive Home operated as the main government facility for chronic tuberculosis patients until November 1931.[33] The only additional accommodation in South Australia before then was, in common with other states, a sanatorium for returned soldiers.[34] Located twelve kilometres south of the City, Bedford Park Sanatorium opened in June 1917[35] and in 1926 began admitting civilian male patients.[36] In addition to this facility for returned soldiers, the Tubercular Soldiers Aid Society built a small sanatorium at Angorichina in the Flinders Ranges but it suffered financial and administrative problems.[37] Plans for a new hospital at Northfield ten kilometres north east of the city to allow for the closure of the North Terrace Home commenced in 1925, but did not reach fruition until 1931.[38] By 1928 South Australia had 188 public beds

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[31] 'South Australia', *AMG*, 20 August 1904, p. 431.

[32] Board of Management of the Adelaide Hospital, *Thirty-Sixth Annual Report*, 1905, Government Printer, Adelaide, 1906, p. 9, RAH Heritage Office.

[33] SRSA, GRG 24/163/13, Notes Relating to Bedford Park Sanatorium and Northfield Consumptive Home, 1932. Forbes, *From Colonial Surgeon,* 1996, p. 157.

[34] In 1916 the Principal Medical Officer of the Australian Military Forces, along with the Council of the local BMA and the Chairman of the South Australian Central Board of Health, approved a site at Bedford Park, some miles from the City, as suitable location for a sanatorium for returned soldiers. [SRSA, GRG 24/163/13, Notes Relating to Bedford Park Sanatorium and Northfield Consumptive Home, 1932.] Bedford Park was built by the state government but funded by the Commonwealth. [Forbes, *From Colonial Surgeon,* 1996, p. 151.]

[35] Forbes, *From Colonial Surgeon,* 1966, p. 151

[36] NAA: A1928, 1105/30, M.J. Holmes, *Report on the Control of Tuberculosis in Australia,* p. 11. Forbes, *From Colonial Surgeon,*1996, p. 155.

[37] NAA: A1928, 1105/30, M.J. Holmes, *Report on the Control of Tuberculosis in Australia,* p. 11. Angorichina opened for patients on 18 June 1927. [Tubercular soldiers Aid Society (Incorporated), *Annual Report for Year Ended 30th June, 1939*, p. 7., SLSA]

[38] Forbes, *From Colonial Surgeon to Health Commission* 1996, p. 157. SRSA, GRG 24/163/13, Notes Relating to Bedford Park Sanatorium and Northfield Consumptive Home, 1932, pp. 1-4.

for tuberculosis. Table 3.1 lists institutions, number of beds and classification of patients.

Table 3.1

Sanatoria and Hospital Accommodation in SA at 1928

Institution	Number of Beds			Classification of Patient
	Male	Female	Total	
Bedford Park Sanatorium (SA Government)	59		59	All stages admitted.
Kalyra Sanatorium			50	Early cases. Male and female. Government subsidy of 50%
Consumptive Home, Adelaide Hospital	34	30	64	Advanced cases. Some early female cases.
Adelaide Hospital			15	No special allotment. In general wards or verandah.

Source: NAA: A1928/1, 1105/30, M.J. Holmes, D.S.O., M.B.,B.S., D.P.H., *Report of the Control of Tuberculosis in Australia*, Commonwealth Department of Health, Commonwealth of Australia, Government Printer, Canberra, u.d. circa 1929, p. 27.

VICTORIA

In Victoria, the Board of Health issued detailed and continuous advice on how to prevent tuberculosis to municipal councils and the general public. The Board stressed the impoverished circumstances of most consumptives and therefore the great need not only for sanitary improvement but also sanatoria for treatment and education.[39]

[39] Victoria, Department of Public Health, *Report of the Board of Public Health 1898-1904,* Victoria, Govt Printer, Melbourne, p. 16, Butlin Collection, J.L.S.

As in South Australia, Victoria's first sanatorium, the Victorian Sanatorium for Consumptives, was a private charitable institution set up in 1883 by a British doctor and his wife who had come to Australia as therapeutic migrants.[40] It had two branches, one 200 kilometres north of Melbourne at Echuca for winter, the other 60 kilometres north of Melbourne at Macedon for summer.[41] The sanatorium opened with room for only six patients but demand was high[42] and the Victorian Government soon granted £200 towards a new building. Patients paid fees but the main revenue came from charitable donations.[43] A further 47 beds were available at Amherst, Stawell, Kilmore and Austin Hospitals as well as special accommodation at the Nepean Quarantine Station which the government opened in 1904.[44] The Austin Hospital, a home for incurables built as a result of a private endowment in the early 1880s,[45] was unable to meet demand as early as 1887.[46] A waiting list of serious tuberculosis cases was common.[47] In 1904 the Austin Hospital used a large private donation to build the Kronheimer wing for tuberculosis giving the Austin

[40] Mrs Serjeant, 'The Consumptive Sanatorium at Echuca', *Proceedings of the Second Australasian Conference on Charity*, 1891, 72, ML. Jacqueline Burridge, 'Tuberculosis in the Australian Colonies: An Old Disease in a New Society', Honours thesis, The Australian National University, 1978, pp. 44, 45. Bryn Thomas and Bryan Gandevia used the term therapeutic emigration to describe the migration of British consumptives to Australia in search of a climatic cure. Robin Haines also adopted the term for her analysis of consumptive migration to Australia in the nineteenth century. [Bryn Thomas and Bryan Gandevia, 'Dr Francis Workman, Emigrant, and the History of Taking the Cure for Consumption in the Australian Colonies', *Medical Journal of Australia (MJA)*, Vol. 2, No. 1, 4 July 1959, p. 5. Robin F Haines, 'Therapeutic Emigration: Australia – The Last Resort,' Honours thesis, Flinders University of South Australia, 1987, p. 1.

[41] Leahy, John, P.D., M.B., D.P.H., 'The Fight against Tuberculosis in the Australian Colonies and New Zealand', Read before the Hawke's Bay Philosophical Institute, 19 May, 1902, in Sir James Hector, K.C.M.G., M.D., F.R.S., Director (ed), *Transactions and Proceedings of the New Zealand Institute*, 1902, Vol. 35 (18th of New Series), July 1903, Wellington, pp. 220-225.

[42] *AMJ* 15 October, 1890, p. 483

[43] Burridge, 'Tuberculosis in the Australian Colonies', (1978), pp.44, 45.

[44] Amherst Hospital had 20-25 beds for incipient cases, Stawell and Kilmore six each, all financed by the Government and the estate of Edward Wilson. The Nepean Quarantine Station provided for 12 to 16 advanced cases. [Victoria, Department of Public Health, *Report of the Board of Public Health for the years 1905-6-7*, Govt Printer, Melbourne, p. 13, Butlin Collection, JLS.]

[45] *AMJ*, 15 February, 1881, p. 77

[46] *AMJ* 15 March, 1887, p. 127.

[47] *AMG*, 20 February, 1904, p. 88

Hospital 102 tuberculosis beds.[48] The Kronheimer wing was built in the face of opposition from local residents, local councils, some doctors, the Minister of Health, and almost 100 of the hospitals own subscribers.[49] In parliament the government was urged to withhold grant assistance to the Austin Hospital to stop plans to build a consumptive wing in Heidelberg, an area 'fast becoming one of the most populous and most fashionable suburbs'.[50] Despite the opposition the Austin fulfilled the donor's request and built a tuberculosis ward.

These beds did not meet patient demand, nor, in the main, did they provide the open-air treatment required of a sanatorium. The Victorian Government therefore agreed to establish a public sanatorium and in May 1905 opened Greenvale sanatorium designed to cater for poorer patients in early stages of disease. Twenty one kilometres north of Melbourne,[51] Greenvale opened with 35 beds but increased to 67 by the end of the following year bringing the number of specialist beds for tuberculosis in Victoria to 188.[52] This still fell short of expectations and far short of the ideal of sanatorium treatment for early cases and isolation of advanced cases. In 1907, in Melbourne and its suburbs, 841 cases were notified to the Board of Health, a figure acknowledged as being far below the actual number of Victoria's consumptives.[53] An average stay of three months would allow for 740 patients, 100 below notifications and therefore far below the real numbers. In 1908 an additional

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[48] Victoria, Department of Public Health, *Report* 1905-6-7, p. 13. *IMJ*, 20 December, 1904, p. 610.

[49] Victoria, *Parliamentary Debates*, Legislative Assembly, 17 December, 1903, Vol. 106, pp. 2053 – 2055, 2057, (M.J.S. Gair, Member for Bourke East, D.V. Hennessy, Member for Carlton South, George Martin, Member for Geelong). Victoria, Department of Public Health, *Report of the Board of Public Health 1898-1904*, p. 8.

[50] Victoria, *Parliamentary* Debates, Legislative Assembly, 17 December, 1903, p. 2054, (Mackay John Scobie Gair, Member for Bourke East)

[51] Greenvale, 500 feet above sea level, was built on 300 acres. Beds at Stawell, Kilmore and Amherst hospitals gradually closed. [Victoria, Department of Public Health, *Report of the Board of Public Health 1905-6-7,* pp. 13, 78.]

[52] Victoria, Department of Public Health, *Report of the Board of Public Health 1905-6-7* pp. 78, 81.

44 state sponsored beds for women were opened at Amherst and Daylesford hospitals in regional Victoria.[54]

Under the Victorian Public Health Act of 1890 local councils were responsible for providing hospitals for tuberculosis but were slow to act. The Board of Public Health became frustrated with local government tardiness. In 1907 it reported to the government,

> We brought this matter specially under the notice of Councils in 1905, but notwithstanding that half the expense would be borne by the Consolidated Revenue, that suffering would be relieved, and that the community would be better protected, no Council has as yet made any provision in this direction for dealing with tuberculosis.[55]

In Melbourne, for example, the City Council and northern metropolitan municipalities resisted plans to establish a hospital for advanced consumptives at Royal Park, a large area of parkland some four kilometres from the centre of Melbourne. They considered the proposal to be a 'grave public danger'.[56]

Councils finally contributed to a tuberculosis hospital in 1913. The Victorian Government built Heatherton Sanatorium a 100 bed institution for advanced cases and local councils in the metropolitan area paid half the maintenance costs.[57] In 1916 Victoria had 372 places, 162 for early cases and 210 for advanced cases.[58] As in South Australia, small private sanatoria and hospitals provided some additional

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[53] ibid., p. 13.
[54] Victoria, Department of Public Health, *Report of the Board of Public Health 1909-08-10,* pp. 24-27.
[55] Victoria, Department of Public Health, *Report of the Board of Public Health 1905-6-7*, p. 12.
[56] 'The Proposed Hospital for Chronic Consumptives at Royal Park, Melbourne', *AMG*, 21 November, 1904, p. 577.
[57] Royal Commission on Health 1925, *Minutes of Evidence*, Govt Printer, Melbourne, 1925, questions 12797, 12798, 12802, p. 691. Australia, Department of Trade and Customs, Committee Concerning Causes of Death and Invalidity in the Commonwealth, *Report on Tuberculosis*, p. 28. . NAA: A1928, 1105/30, M.J. Holmes, *Report on the Control of Tuberculosis in Australia*, p. 10. Heatherton opened 27 May 1913.

beds. Throughout the 1920s the Victorian Commission of Public Health pressed the government for more tuberculosis accommodation. By the late 1920s sanatorium beds had increased to 518 with a further 144 pending.[59] An additional 34 places had been provided at Heatherton with early cases now admitted. Amherst was converted from a female only to a male only institution and added 13 places while the Austin Hospital's tuberculosis beds rose by 47, and the government took control of a Red Cross Institution at Janefield originally established for returned soldiers.[60] In addition, a new sanatorium at Mont Park with up to 200 beds and 40 more at Heatherton were planned.[61] Table 3.2 summarises Victorian public sanatoria at 1928.

NEW SOUTH WALES

New South Wales was the site of Australia's first sanatorium in 1877 but like South Australia and Victoria, sanatorium treatment was minimal before the turn of the century. In 1877 Colonel Goodlet, businessman and philanthropist, built the first sanatorium in New South Wales at Thirlmere in the Southern Highlands 92 kilometres south west of Sydney. Thirlmere had 40 beds for incurable patients. Goodlet financed Thirlmere himself for 17 years before a public board assumed control in 1893. The sanatorium survived entirely on public subscriptions until

[58] Australia, Department of Trade and Customs, Committee Concerning Causes of Death and Invalidity in the Commonwealth, *Report on Tuberculosis*, 1916, p. 28.
[59] Royal Commission on Health 1925, *Minutes of Evidence*, 1925, question 12806, p. 692, questions. 12797, 12798, 12802, p. 691. NAA: A1928, 1105/30, M.J. Holmes, *Report on the Control of Tuberculosis in Australia*, p. 10.
[60] Australia, Department of Trade and Customs, Committee Concerning Causes of Death and Invalidity in the Commonwealth, *Report on Tuberculosis*, 1916, p. 28.
[61] NAA: A1928, 1105/30, M.J. Holmes, *Report on the Control of Tuberculosis in Australia*, p. 10.

Table 3.2

Sanatoria and Hospital Accommodation for Tubercular Patients in Victoria 1928

Institution	Number of Beds			Classification of Patient
	Male	Female	Total	
Heatherton Sanatorium	87	37	124 **40	Early and advanced cases.
Amherst Sanatorium	75	-	75	Early
Greenvale Sanatorium	-	90	90	Early
Janefield Sanatorium	-	56	56	Advanced
Austin Hospital	110	57	167	Advanced
Mont Park (under construction)			**144 - 200	
Melbourne Hospital			6	Accommodation & observation of cases from the tuberculosis dispensary.
Repatriation	125		125	

Source: NAA A1928/1, 1105/30, M.J. Holmes, D.S.O., M.B.,B.S., D.P.H., Report of the Control of Tuberculosis in Australia, Commonwealth Department of Health, Commonwealth of Australia, Government Printer, Canberra, u.d. circa 1929, pp. 10, 20. Commonwealth of Australia, Royal Commission on Health 1925, *Minutes of Evidence*, Government Printer, Melbourne, 1926, Questions 12797; 12798; 12802.] Victoria, Department of Public Health, *Third Report of the Commission of Public Health, 1924-25*, Government Printer, Melbourne, 1925. Holmes presents two different totals in different parts of his report, but they are an insignificant difference of 13 beds.
**Intended beds.

1899 when it received an assistance grant of £500 from the New South Wales Government.[62] The Catholic Church also provided special accommodation for tuberculosis patients from the 1880s. St Vincent's Hospital, which had opened in 1857, treated consumptives and continued to do so into the twentieth century. In 1886 the Sisters of Charity opened the St Joseph's Consumptive Home at Parramatta but this was to prove too small and a further 50 bed consumptive

[62] 'The Fight Against Tuberculosis in Australia', *AMG*, 20 November, 1901, p. 488. Brian Dickey, 'Charity in New South Wales 1850-1914: A Study in Public, Private and State Provisions for the Poor', Vol. I, PhD Thesis, Australian National University, 1966, pp. 201-202. Burridge, 'Tuberculosis in the Australian Colonies', (1978), pp 44-45. A.J. Proust, 'Evolution of Treatment', in A.J. Proust, (ed.), *History of Tuberculosis in Australia New Zealand and Papua New Guinea*, Brolga Press, Canberra, 1991, p. 149.

hospital was erected next door in 1889. The Sisters of Charity also opened a hospice at Darlinghurst that year to which consumptives were admitted.[63] In 1897 the Queen Victoria Homes for Consumptives Fund, a philanthropic project for Queen Victoria's Jubilee, was established. In 1901 this fund assumed control of Thirlmere, which by this time admitted only early cases most of whom could not afford fees.[64] The Queen Victoria Fund opened a further 44 bed sanatorium (Kings Tableland Sanatorium) in 1903 at Wentworth Falls also in the Southern Highlands.[65] Male and female patients were segregated, women at Thirlmere and men at Kings Tableland. In addition to this accommodation for poorer patients, a small private sanatorium in the same region accepted paying patients.[66]

A government sanatorium in New South Wales was delayed until 1909, in part because proposed sites met with local resistance. Premier Joseph Carruthers who led a Liberal-Reform government[67] favoured assisting charitable institutions rather than establishing a separate government institution arguing that the government had little money for such a project.[68] The opposition Political Labor League, on the other hand, by 1908 had drafted a comprehensive health policy requiring a greater role for government, including building sanatoria for tuberculosis.[69] The Carruthers

[63] Proust, 'Evolution of Treatment, 1991, pp. 148, 149.
[64] 'The Fight Against Tuberculosis in Australia', *AMG*, November 20, 1901, p. 486, 488. Burridge, 'Tuberculosis in the Australian Colonies, pp. 44-45. Proust, 'Evolution of Treatment', 1991, p. 149. Robin Walker, 'The Struggle Against Pulmonary Tuberculosis in Australia, 1788-1950', *Historical Studies*, 20:80, April 1983, pp. 448-449.
[65] Proust, 'Evolution of Treatment', 1991, p. 149. Arthur H. Gault, M.D., Lond., 'The present Position of the Sanatorium Treatment in Australasia' *Transactions of the Australasian Medical Congress*, 1905, p. 34.
[66] ibid.
[67] Colin A. Hughes and B.D. Graham, *A Handbook of Australian Government and Politics, 1890-1964*, Australian National University Press, Canberra, 1968, p. 62.
[68] 'Our Overcrowded Asylums', *Evening News*, 2 July 1906, Newspaper Cuttings on Tuberculosis Vol. 13, 1901-17, ML.
[69] *The Worker*, 16 February, 1911, p. 13. Brian Dickey, 'The Labor Government and Medical Services in NSW, 1910-14', in Jill Roe (ed), *Social Policy in Australia Some Perspectives 1901-1975*, Cassell Australia, 1976, p. 60.

Government ultimately agreed to building public sanatorium and opened Waterfall sanatorium in 1909 shortly before losing an election to the Political Labor League.

Medical and lay reformers called on governments to provide sanatoria for Australia's fight against tuberculosis.[70] Initially, reformers pressed for the establishment of sanatoria in which indigent consumptives could be isolated from the rest of the community. In New South Wales, medical staff from Sydney's major metropolitan hospitals, with lay support, called upon the Government to provide accommodation for poor consumptives in advanced stages of disease. Although sympathy for the plight of the sick poor appeared in the rhetoric, the principal object was isolation of the contagious poor for the benefit of the wider community. Options for poor consumptives at this time were limited to remaining at home or entering asylums for the destitute. In both instances consumptives were a danger to public health, passing their disease either to family or fellow asylum inmates. The state had a duty, said the Mayor of Sydney, to provide special accommodation because poor consumptives were 'a source of danger to themselves and all around them'.[71] As control of contagious disease was the state's responsibility, the government was obliged to introduce preventive measures, and 'a special hospital for advanced cases … was indispensable' to prevention.[72]

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[70] 'A Hospital for Consumption in Sydney', *AMG*, November 20, 1901, p. 486. 'The Fight Against Tuberculosis in Australasia: New South Wales', *AMG*, November 20, 1901, pp. 488-489. 'The Consumptive Sanatorium. To the Editor of the Argus', *The Argus*, 25 November, 1902, p. 6. 'The Care of the Consumptive Poor', *AMG*, February 20, 1904. 'South Australia. The Home for Consumptives', *AMG*, 20 April, 1904, p. 191. 'The Home for Consumptives, Inspection by Municipal Representatives', *The Register*, p. 19. *IMJ* May 20, 1904, p. 261. 'To Prevent Consumption. 10,000 Circulars for Distribution', *Evening News*, 30 October, 1905, ML. 'Care of Consumptives: A Suburban Movement', *Sydney Morning Herald (SMH)*, 24 May 1906, p. 4. 'The Crusade Against Consumption', *SMH*, 23 May 1906, p. 8. Michael Roe, *Life Over Death: Tasmanians and Tuberculosis*, Tasmanian Historical Research Association, Hobart, 1999, pp. 38-41.

[71] *Daily Telegraph, (DT)*, 1 October, 1901. 'A Hospital for Consumption in Sydney', *AMG*, November 20, 1901, p. 486.

The institutions for early cases did not address the most pressing public health issue in the minds of doctors, that of advanced indigent consumptives. Institutional options for these cases in New South Wales were largely limited to government asylums for the aged poor and indigent. Sydney's hospital physicians and public health reformers had been calling on the government to provide institutional accommodation for poor consumptives since 1901. Following representations to the Chief Secretary in 1901, the government promised, as a temporary measure, to erect a timber sanatorium at Long Bay some 12 kilometres from the city but local opposition forced the government to abandon the idea.[73] Public health authorities, reformers and leaders of the medical profession continued to press the government on the issue. In 1904 the New South Wales Branch of the BMA recommended the immediate erection of hospitals for advanced cases.[74] Local government health authorities also looked to the state to provide accommodation for incurable consumptives. In 1906 a conference of suburban municipalities in Sydney convened to discuss the tuberculosis problem and sought more local power to supervise tubercular residents but asked the state to provide accommodation for incurable patients.[75] Anti-tuberculosis campaigners often complained of public apathy to the disease, but the Government still came under increasing community pressure to act. In 1906, *The Sydney Morning Herald* regularly published articles and letters to the editor about the tuberculosis problem and the great need of better accommodation and isolation for the poor. One tuberculosis sufferer wrote,

> It is about time that all intelligent Australians woke up to the fact that day after day, and night after night, consumptive sufferers are walking the streets (destitute

[72] Dr Sydney Jones, *DT*, 1 October 1901.
[73] *AMG*, November 20, 1901, p. 486. Leahy, 'The Fight against Tuberculosis in the Australian Colonies and New Zealand', 1902, pp. 220-225. *AMG*, February 20, 1904, p. 75.
[74] 'British Medical Association News', *AMG*, 21/11/04, p. 586.
[75] *DT*, 5 May, 1906. 'Crusade Against Consumption', *SMH*, 7 May, 1906.. 'The Crusade Against Consumption', *SMH*, 23 May 1906, p. 8. 'Care of Consumptives', *SMH*, 24 May, 1906, p. 4.

> and otherwise), distributing expectoration containing tuberculosis on the footpaths, the streets, and the parks, thus endangering the lives of the present race and generations to come. Why is this state of affairs allowed to exist in a rising new country …?[76]

Indigent tubercular patients occupied beds in asylums producing community alarm about contagion and adding to pressure on the New South Wales Government to address the problem. In 1904 the Liverpool Municipal Council asked the Minister for Public Works to remove tuberculosis and cancer patients from the asylum located in the centre of its town but the Government refused pleading a lack of money.[77] Condemnation of the Liverpool Asylum and the presence of consumptives within its walls continued. One contributor to the *Sydney Morning Herald's* letters to the editor wrote, 'the environment of the Liverpool Asylum is, from a scientific stand-point, a disgrace to Christian common sense, as well as a perpetual menace to the general health of the community'.[78] The executive committee of the Queen Victoria Homes for Consumptives was also an influential critic[79] and the Liverpool Council continued to press for alternative accommodation. The Mayor of Liverpool urged the Government to build a sanatorium instead of a proposed new library. 'Is it to be said', he wrote to the *Sydney Morning Herald*, 'that a Reform Government in this State is to provide money for the erection of palatial buildings for the accommodation of books and have no money for an urgently needed hospital or sanatorium … for suffering humanity'?[80] In 1906 the NSW Government finally agreed to build a state sanatorium.[81]

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[76] 'The Proposed New Home for Incurable Consumptives', *SMH,* 14 September 1906, p. 4.
[77] *AMG,* 20 October, 1904, p. 547.
[78] 'Pathologist', *SMH,* 25 July, 1905, p.10.
[79] Brian Dickey, 'Charity in New South Wales 1850-1914', 1966, pp. 422-424.
[80] *SMH,* 5 April, 1905, p. 12.
[81] 'Our Overcrowded Asylums', *Evening News,* 2 July 1906. Brian Dickey, 'Charity in New South Wales', 1966, p. 424.

Waterfall State Sanatorium was 39 kilometres[82] south of Sydney and according to newspaper reports was an excellent site for the poorer tubercular citizen because it provided the right physical and moral environment. The Waterfall site, *The Evening News* declared, was isolated, elevated and spacious. It had a water supply, a suitable climate and, to the satisfaction of social reformers, was some distance from local hotels making it difficult for patients to drink in excess or to spread their infection amongst the local population. *The Evening News* wrote,

> One feature that commended itself was that while inmates could have a range of several miles of country for exercise, there were no public houses within four or five miles. The proximity of public-houses to existing asylums is a source of worry and anxiety to the staff, besides conducing to the mingling together of healthy residents of a locality with others suffering from infectious diseases in a place open for public drinking.[83]

Waterfall Sanatorium opened in April 1909 with 180 beds for male patients only. In May 1912 a new section provided for 120 female patients many transferring from Newington State Hospital.[84] Newington began as a government benevolent asylum in 1886 and became the Newington State Hospital and Home for Aged Women in 1913.[85] By 1916 the New South Wales Government was providing 350 beds at Waterfall, 230 for men and 120 for women as well as subsidising the 108 beds, equally divided between men and women, in the Queen Victoria Homes for Consumptives.[86] Additional state funded beds in special wards were made available

[82] 'Our Overcrowded Asylums', *Evening News*, 2 July, 1906.
[83] *Evening News*, 2 July, 1906.
[84] New South Wales, *Report of the Director General of Public Health New South Wales*, 1913, p. 153.
[85] Stephen Garton, *Out of Luck, Poor Australians and Social Welfare 1788-1988*, Allen &Unwin, Sydney, 1990, p. 96. New South Wales State Records Archives Investigator, Newington Hospital.
[86] Australia, Department of Trade and Customs, Committee Concerning Causes of Death and Invalidity in the Commonwealth, *Report on Tuberculosis*, 1916, p. 28.

at Rookwood State Hospital and Asylum for Men and Newington State Hospitals for women.[87]

After World War I both the Repatriation Department and the Red Cross established separate accommodation for returned soldiers suffering from tuberculosis. The Repatriation Department offered beds at Turramurra Sanatorium and Randwick Hospital, while the Red Cross (established in Australia in 1914) provided three sanatoria in New South Wales as well as a tuberculosis prevention home (preventoria) for children of returned soldiers.[88] By 1928 the total number of beds including provision for children and returned soldiers was 1,051. Table 3.3 sets out the number of tuberculosis beds in New South Wales by 1928.

DISAPPOINTING RESULTS

Just as sanatoria began to emerge in Australia, the sanatorium solution came under more critical scrutiny overseas. Physicians found sanatoria did not yield the hoped for cures. In Australia too, optimism among the medical profession about the curative and educative effects of sanatorium treatment was frustrated by an increasing realisation that such optimism had been exaggerated.[89] As early as 1904 the *Intercolonial Medical Journal* reported overseas disappointment with the sanatorium cure:

> Signs are not wanting that the optimistic wave of opinion as to the curability of consumption, upon the crest of which the sanatorium treatment was lifted into notice, is being succeeded by a profound disappointment.[90]

[87] New South Wales, *Report of the Director General of Public Health*, 1913, pp. 3, 157. 'Board of Health New South Wales', *MJA*, January 6, 1917, p. 21.
[88] NAA: A1928, 1105/30, M.J. Holmes, *Report on the Control of Tuberculosis in Australia*, p. 5.
[89] 'The Consumptive', *AMJ*, 20 August, 1910, pp. 471-472. 'Sanatorium Treatment', *AMJ*, 19 August, 1911, p. 51. 'Some Recent Views on Tuberculosis', *AMJ*, 30 August, 1913, p. 1189. 'The Ambulatory Diagnosis and Treatment of Pulmonary Tuberculosis', *Transactions of the Australasian Medical Congress, 1908*, Melbourne, 1909, p. 170.
[90] *IMJ*, 20 February, 1904, p. 84.

Table 3.3

Sanatoria and Hospital Accommodation for Tubercular Patients in New South Wales, 1928

Institution	Number of Beds			Classification of Patient
	Male	Female	Total	
Royal Prince Alfred Hospital				Temporary accommodation pending transfer. Beds available for observation, artificial pneumothorax and cases related to Hospital TB dispensary.
Royal North Shore Hospital				As above
Coast Hospital auxiliary, Randwick	60		60	Advanced cases
Coast Hospital				TB admission for observation and diagnosis
Royal Alexandra Hospital for children, convalescent home, Collaroy			60	
Royal Alexandra Hospital for children			20	
Queen Victoria Home, Wentworth Falls	54	-	54	Early cases
Queen Victoria Home, Thirlmere	-	54	54	Early cases
Red Cross Sanatorium, "Bodington"	76	22	98	Early cases
Red Cross Home, Pennant Hills			21	Advanced cases
Red Cross Home, Exeter	20	-	20	Advanced cases
Waterfall Sanatorium	284	130	414	Males – intermediate cases Females – intermediate and advanced
Newington State Hospital	-	10	10	
Turramurra – Repatriation Dept	100	-	100	
Randwick Hospital – Repatriation Dept	50	-	50	
Private Sanatoria			50	
Preventoria – Red Cross Home, Leura (females);			20	Pre-tubercular or under-nourished children of returned soldiers.
Preventoria – Red Cross Home, Springwood (males)			20	Pre-tubercular or under-nourished children of returned soldiers.

Source: NAA: A1928/1, 1105/30, 6, u.d. (1929). M.J. Holmes, D.S.O., M.B.B.S., D.P.H., Commonwealth Department of Health, *Report on the Control of Tuberculosis in Australia*. The New South Wales Department's Health Report of 1927 lists 902 beds, excluding children, but as with Victoria, the discrepancy is not significant for the purpose of testing bed numbers against a suggested formula.

To illustrate why physicians were disappointed with Australia's sanatoria, table 3.4, printed at the end of this chapter, presents a selection of sanatoria results between 1900 and 1928. Examples of charitable institutions are included but most figures are those of state institutions in New South Wales and Victoria. The tables show improvement rates and mortality rates as a percentage of total inpatients and as a percentage of completed cases for each period. Much of the data are subjective and affected by a range of variables including length of stay, stage of the disease, treatment and medical interpretation. Nevertheless, the schedule provides a general pattern of results in sanatoria over nearly 30 years. Waterfall State Sanatorium in New South Wales provided the best example because reports were extensive and because New South Wales imposed no time restriction on the length of stay as was the case in Victoria. Waterfall also admitted patients at various stages of disease thereby providing a better overall view than institutions dominated by either early or advanced cases. The South Australian data, particularly of the Adelaide Cancer and Consumptive Home, was less comprehensive than in Victoria and New South Wales.

Between 1913 and 1928 Waterfall's percentage of arrested cases as a proportion of total patients for the year, did not rise above 12% and decreased over time. Mortality rates declined slightly. In 1913, mortality as a percentage of total annual patients was 18% and in 1928 14%. If Waterfall's patients were grouped into the same broader category of 'improved' as in Victoria rather than 'arrested, much improved and improved', the improvement rate ranged from 30% to 41%. In Victorian state sanatoria, which admitted mainly early cases, the improvement rate was considerably higher ranging from a high of 77% at Amherst in the two years

1908 to 1910 to 29% at Greenvale in 1925. Although Greenvale was intended for early cases, advanced cases often gained entry especially during the 1920s,[91] which would bring the improvement rate down. Victoria's apparent rate of success is tarnished when averaged across a wider range of patient classification. In 1916 the Commonwealth's Committee on Death and Invalidity presented a sum of Victorian statistics that included figures for advanced cases as well as early cases. (These figures are included in table 3.4.) These suggested a Victorian arrest rate of only 5.5%, or an arrested and improved rate of 27%. When the results are set against completed cases rather than total inmates, the arrest percentages increase but so does mortality.

Sanatorium statistics, however, were based on the interpretation of physicians, the perceptions of patients could be quite different. As one sufferer pointed out, what was 'the difference between partly cured and materially benefiting'?[92] He said that there was no difference between the two because partly cured was a curse, a temporary state of relief subject to reversal if favourable conditions changed.[93] This consumptive intimated that he had benefited from a treatment, which had 'a magic effect', a treatment that the Government should try before spending public money on consumptive homes.[94] Whatever this patient's experience or the veracity of the claims for non-sanatorium treatment his perception of cure differed from that of the treating physicians. This does not mean that all patient perceptions clashed with the medical view, nor does it invalidate the physician's interpretation, but does illustrate the complexities inherent in determining what proportion of patients

[91]. Royal Commission on Health 1925, *Minutes of Evidence*, question 12792, 1 May, 1925, (Thomas Dimelow, Secretary, Public Health Department, Victoria).
[92] *SMH*, 17 July 1905, p. 11.
[93] ibid.

found any lasting benefit from their sanatorium treatment. The figures presented in table 3.4 must be regarded, not as a definitive representation, but as a quantitative guide to understanding the effectiveness of sanatorium treatment. They suggest that fewer than 50% of patients improved and because many of these would suffer a relapse, that the majority of people entering a sanatorium had little hope of lasting relief from their disease.

Sanatoria statistics exposed the gap between rhetoric and practice. Yet most medical observers continued to support the concept of sanatorium treatment blaming inefficient and inadequate implementation of the sanatorium philosophy for disappointing results.[95] The two fundamental aims of isolation and treatment, supporters argued, proved to be incompatible within a single institution. Instead, early and late stage patients had to be treated separately, preferably in different institutions. Only early stage cases could hope to benefit from the sanatorium regime and then only if the careful regimen of preventive measures and hygienic living could be and would be maintained after discharge. Advanced cases required either palliative care in an institution or education on how to minimise the spread of infection if they remained at home. H.W. Palmer, Medical Superintendent of Waterfall Sanatorium complained about the high proportion of advanced cases in the sanatorium. He commented in his 1923 report,

> While we are forced to take all advanced and hopeless cases of tuberculosis occurring in this State, we cannot hope to satisfactorily treat hopeful cases. In fact, it is impossible to keep curable cases long enough to even train them as to their proper mode of living, when they see all round them cases dying of the self-same disease they are suffering with.[96]

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[94] ibid.

[95] Victoria, Department of Public Health, *Report of the Commission of Public Health*, 1922, p. 24; *Fifth Report of the Commission of Public Health*, 1926-27, pp. 4-5.

Palmer remained convinced though that treating early cases in a sanatorium was the formula for successful control of the disease.[97]

In practice, Australia's public sanatoria were accommodating mainly advanced cases. Admission classifications for Waterfall presented in Table 3.5, attest to Palmer's concerns. From 1913 to 1925 the majority of discharged or deceased patients had been classified as moderately advanced or far advanced when admitted to the sanatorium. The proportion ranged from 63% to 89%. In 1926 the Coast Hospital, New South Wales's first infectious disease hospital, provided an additional 60 beds for advanced cases, reducing the number of 'far advanced' cases admitted to Waterfall.[98] But admissions of 'moderately advanced' tuberculosis cases remained high (except in 1926) and so the proportion of advanced stage patients returned to former levels by 1928, although in the lower range of 68%. James Gordon Hislop,[99] a physician in the outpatients department of the Melbourne Hospital, commenting on the admission of high numbers of advanced cases, said:

> This can neither be called treatment nor prevention, for patients in this stage can expect no amelioration of their condition by any of our present known methods and it does not take into account the fact that from the time of onset of disease until admission in an advanced stage into a sanatorium these patients are acting as infecting agents. The filling of our sanatoria with patients in advanced stages means taking away such benefits from those patients who would respond to the treatment. Once we allow our sanatoria to become "advanced homes" we virtually say to our "early patients: "We can do nothing for you, or for your contacts, until

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[96] H.W. Palmer, 'Waterfall State Sanatorium', New South Wales, *Report of the Director-General of Public Health, New South Wales, 1923,* 1924, p. 121.

[97] 'Tuberculosis. Problem of Control. Why Sanatoria Fail', *SMH*, 30 March, 1922. *Minutes of the Anti-Tuberculosis Association for the Prevention of Consumption*, 1919-1925, ML.

[98] New South Wales, *Report of the Director-General of Public Health, New South Wales, 1926*, Govt printer, Sydney, 1928, p. 9. New South Wales, *Report of the Director-General,1928*, Govt printer, Sydney, 1930, pp. 3, 89.

[99] James Gordon Hislop (1895-1972) had an interest in chest diseases and was active in the British Medical Association. In 1941 he was elected to the Western Australian Legislative Council where he served until 1971. [R.A. Joske, 'Hislop, James Gordon (1895-1972), *Australian Dictionary of Biography*, National Centre of Biography, Australian National University, http://adb.anu.du.au/biography/hislop-james-gordon-10511/text118653, accessed 17 March 2012.]

> such time as you have become an advanced case, when we will remove you to a sanatorium and see that you are no longer a menace to those around you."[100]

Advanced cases, it was argued, could not hope to improve and should be isolated in different institutions or parts of institutions. They would not then endanger the wider community, would not have a pessimistic effect on early cases and could die in comfort. Sanatoria failed to treat, educate and prevent if consumptives at all stages of the disease were treated generically. Admissions, doctors argued, should be tailored for success.

A further difficulty identified by physicians was the amount of time patients would or could spend in the institutions and a lack of after-care. Physicians regularly pointed to the need for patients to remain under sanatorium treatment for as long as 12 months[101] and the great risk of regression once they left the sanatorium. Although sometimes exceeded, the Victorian Government's policy of limiting sanatorium residence to three months, made this problem particularly acute in that state.[102] Henry Featonby, Medical Officer of the Victorian Health Department, considered Victoria's sanatoria system a failure. He told a Federal Royal Commission on Health in 1925:

> …sanatoria as at present situated are a failure, as they have not taken that matter [the time limit] into consideration. The trouble is that the patient does not stay long enough for the sanatoria treatment. When a poor man is discharged there is no provision for after treatment, and there is no provision for finding him work. He has to go back and compete, and therefore he breaks down. … The State assumes the responsibility of treating a man, and tuberculosis is not cured but

[100] J. Gordon Hislop, M.B., Ch.B (Melbourne), M.R.C.P. (London), 'The Control of Pulmonary Tuberculosis: Sanatorium Treatment', *MJA*, May 31, 1924, p. 528.
[101] F.J. Drake, M.A., M.B.,B.S. Melb, 'Some Remarks on the Sanatorium for the Open-air Treatment of Pulmonary Tuberculosis and its Methods', *IMJ*, 20 July 1907, p. 380. The famous Adirondach Sanatorium in the United States of America expected patients to remain for most of a twelve month period.
[102] Victoria, Department of Public Health, *Report of the Board of Public Health 1905-6-7*, p. 79.

> merely arrested. The man goes back and the State practically assumes no further responsibility, and its previous expenditure has gone for nothing.[103]

Throughout the 1920s the Victorian Health Commission promoted a scheme of tuberculosis control that included additional sanatoria accommodation, especially for advanced cases and removal of the three month limit. The members of the Health Commission failed to inspire the government to action until the latter years of the decade.[104] In 1923 the Health Commission wrote in frustration:

> The Commission has done everything it can to point out what should be done in respect of combating tuberculosis, and cannot accept the responsibility for the fact that nothing further has been done, and again strongly urges that the fullest consideration be given to its recommendations,…[105]

Table 3.5

Admission Classification of Discharged or Deceased Patients, Waterfall State Sanatorium, NSW

Year	Incipient	Moderately Early	Moderately Advanced	Far Advanced	Completed advanced cases as percentage of completed cases
1913	2	58	217	234	88%
1914	23	140	200	147	68%
1916	19	172	169	152	63%
1917	17	49	187	243	87%
1918	5	44	134	269	89%
1919	20	62	167	183	81%
1920	51	93	121	195	69%
1921	46	108	227	189	73%
1925	37	134	270	105	69%
1926	106	248	175	24	36%
1927	46	166	308	40	54%
1928	30	146	344	34	68%

Source: Waterfall State Sanatorium, *Reports of the Director-General of Public Health, NSW*, 1913, 1914, 1916, 1917, 1918, 1919, 1920, 1921, 1925, 1926, 1927, 1928.

[103] Royal Commission on Health 1925, *Minutes of Evidence*, question 12096.
[104] Victoria, Department of Public Health, *Third Report of the Commission of Public Health, 1924-25, Fifth Report of the Commission of Public Health, 1926-27.*
[105] Victoria, Department of Public Health, *Second Report of the Commission of Public Health, 1922-23*, Govt Printer, Melbourne, 1024, p. 10.

Public health authorities and physicians faced a circular problem. In practice, the nature of both the disease and sanatorium treatment hindered the aims of the sanatorium method. Few patients in early stages of the disease wanted, or could afford, to reside in a sanatorium for a prolonged period, nor while they were well enough to continue employment, did they see it as necessary or desirable. The problem of inducing early cases to enter sanatoria persisted.[106] In 1931, Sinclair Gilles, Physician at the Royal Prince Alfred Hospital Anti-tuberculosis Dispensary in Sydney,[107] observed,

> The patient in the early stage does not see the necessity for sacrificing time and money and of possibly losing his job in extinguishing the incipient conflagration, nor frequently does his medical attendant. Neither seems to grasp the fact that a month or two sacrificed at this stage spells arrest while a little later the period required for cure grows from months to years, or the chance of cure has been forever lost. It might also be said, pulmonary tuberculosis is a very serious malady mainly because it is not recognized to be so in its early stages.[108]

The unpredictable nature of the disease, its chronic nature and ability to remain undetected in early stages impaired the aims of the sanatorium. Dr Camac Wilkinson's vivid description is apposite:

> Tuberculosis is a vagabond among diseases of its own class. It wantonly violates the laws that govern the behaviour of other infectious diseases. … it has no definite incubation period; like the wind "we cannot tell whence it cometh or wither it goeth." It runs a capricious career; it masquerades in the uniform of other diseases and it refuses to recognize the well-proven principles or rules of immunity that obtain in other infections. Worst of all, its very chronicity is the best proof that lasting absolute immunity is not easily secured.[109]

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[106] H.W. Palmer, M.B., CH.M (Sydney), 'Defects of Sanatorium Treatment with Relation to the Prevention of Tuberculosis', Transactions of Congress, *Supplement to MJA*, 3 May 1924, p. 282.

[107] *Australasian Medical Congress Transactions of the First Session*,, 12-17 November, 1923, Sydney, 1924,. Also Supplement to the *MJA*, May 3, 1924.

[108] Sinclair Gilles, M.A., M.D., D.P.H., 'Home and Institutional Treatment of Pulmonary Tuberculosis from the Point of View of Public health', *MJA*, August 8, 1931, p. 167.

[109] W. Camac Wilkinson, M.D., F.R.C.P., 'The Principles of Immunity in Tuberculosis and their Value in Diagnosis and Treatment', *MJA*, 2 February 1924, p. 103.

Failure to attract and hold early cases led to criticism of the management and physical environment of the institutions and the conclusion that Australian sanatoria did not generally offer facilities commodious enough to entice patients. Physicians themselves contributed to this problem. In an effort to induce public spending to isolate indigent consumptives, anti-tuberculosis campaigners had assured governments that sanatoria could be constructed cheaply.[110] It was not necessary to build substantial, solid buildings. This advice accorded with the widely held belief in open-air treatment and with many examples in Britain and North America[111] but also forestalled government resistance because of cost. It was also compatible with the view that while the sick poor deserved medical care, they deserved neither luxury, nor the best medical advice. For example, Dr Syme, President of the Australasian Medical Congress of 1905 said,

> In providing for the care of disease, it seems to me that it is the duty of the State, … to furnish free accommodation and treatment for the destitute sick, but for no others. It is not necessary, however, to provide palatial buildings, luxurious comforts, and the attendance, in an honorary capacity, of the most eminent men in the profession.[112]

Unsurprisingly, governments followed this advice, erecting cheaper wooden, and in some cases, temporary canvas structures. When Greenvale Government sanatorium opened in Victoria in May 1905 it consisted of seven tents or canvas structures with five patients per tent. Tents, uninhabitable in severe weather, were a temporary measure but even Greenvale's permanent buildings were timber

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[110] *DT*, 28 October 1905, 'Care of Consumptives', *SMH*, 24 May, 1906, p.4. Australia, Department of Trade and Customs, Committee Concerning Causes of Death and Invalidity in the Commonwealth, *Report on Tuberculosis*, 1916, p. 32.

[111] F.B. Smith, *The Retreat of Tuberculosis 1850-1950*, Croom Helm, London, 1988, pp. 107-110. Linda Bryder, *Below the Magic Mountain. A Social History of Tuberculosis in Twentieth-Century Britain*, Clarendon Press, Oxford, 1988, p. 52. Katherine Ott, 'The Intellectual Origins and Cultural Form of Tuberculosis in the United States, 1870-1925', PhD Thesis, Temple University, 1990, pp. 169-171. Carolyn June McQuien, 'Tuberculosis as Chronic Illness in the United States: Understanding, Treating, and Living with the Disease, 1884-1954', PhD Thesis, University of Texas at Austin, 1993, p. 121.

structures rather than more solid stone buildings like most other hospitals.[113] Some early charitable institutions such as Kalyra in South Australia and Thirlmere in New South Wales were built of stone but when Queen Victoria Homes in New South Wales opened a second sanatorium it consisted of wooden pavilion blocks connected by corridors.[114]

In 1925 a Commonwealth Royal Commission on Health found, with few exceptions, that Australia's sanatoria were not comfortable enough to attract early stage patients for sufficient periods of time. The Commissioners wrote:

> It is … desirable that these institutions should be attractive, with a fair degree of comfort and with adequate provision for recreation and occupation. We found that, except in one or two instances, these considerations had been overlooked.[115]

Greenvale's medical officer, for example, reported to the Commission on the need to refurbish Greenvale, which had no recreation room or proper open-air facilities and had not been repainted for fourteen years. The sanatorium had great difficulty negotiating the political system to obtain funds for improvements.

> In order to get anything done at Greenvale a scheme has first to be evolved, which takes about six months; then it takes six months for the money to be granted, and, by that time, the financial year is over, and the vote lapses.[116]

Greenvale operated under the constraints of government parsimony. For example, although the sanatorium received ample rainfall for its water supply, the Victorian Government would not grant the necessary funds for a rainwater tank. Without the tank, drinking water was often exhausted during dry periods and sanatorium

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[112] G.A. Syme, M.S., F.R.C.S., Eng, 'Presidential Address', Section of State Medicine and Medical Ethics, *Transactions of Australasian Medical Congress*, 1905, pp. 467-8.
[113] Arthur H. Gault, M.D. Lond., 'The Present Position of the Sanatorium Treatment in Australasia', Transactions of Australasian Med Congress, 1905, p. 33 and *IMJ*, 20 August 1907, p. 479.
[114] Gault, M.D. 'The Present Position of the Sanatorium Treatment in Australasia', 1905, p. 33.
[115] Australia, Parliament, 1926, Royal Commission on Health 1925, *Report,* p. 23.
[116] Royal Commission on Health 1925, *Minutes of Evidence*, question 21158.

management found it necessary to send some patients home and to import water in carts.[117] Dr Donald McColl, a former superintendent of Glasgow Sanatorium in Scotland, found Greenvale to be an unsatisfactory institution. He told the Royal Commission:

> It is absolutely impossible to have ideal conditions where there is not an abundant water supply… If Parliament could only be made to realize the importance of properly dealing with this disease in its early stages, a great many cures could be turned out. Of course, I use the word cure in a relative sense. …[118]

Waterfall experienced similar difficulties in gaining the extensions and improvements its management called for year after year. Finally, in 1926 a NSW Parliamentary Committee of Inquiry investigated Waterfall and recommended immediate action on additions and improvements.[119]

Later sanatoria such as Northfield, opened Adelaide in 1931, were more substantial, though some public health authorities and physicians still preferred to minimise spending on sanatoria. Dr Darcy Cowan, honorary physician to the Adelaide Hospital who would became physician in charge of the Adelaide Chest Clinic in 1938, publicly criticised the South Australian Government in 1931 for erecting an expensive building (Northfield) as a consumptive home. Advanced consumptives, he argued, needed only simple, cheap, comfortable housing and a greater public benefit could be derived from spending money on the diagnosis and treatment of early cases.[120] Others supported more substantial buildings because,

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[117] Royal Commission on Health 1925, *Minutes of Evidence*, question 21163. (Bernard Charles Scott, M.O. at Greenvale Sanatorium, 10 July 1925.)
[118] Royal Commission on Health 1925, *Minutes of Evidence*, question 22109. (Donald Steward McColl, Medical Practitioner.)
[119] New South Wales, *Report of the Director-General of Public health, New South Wales, for the year 1926*, p. 131.
[120] Forbes, *From Colonial Surgeon*, p 156.

although more expensive to build, lasted longer and were more economically viable over the longer period.[121]

Parsimonious management of sanatoria was also reflected in staff numbers, some institutions operating without a resident medical officer. Sinclair Gillies, consulting physician at Sydney's Royal Prince Alfred Hospital, complained that sanatoria could not be conducted efficiently without a resident medical officer, nor could they be successful if staffed with doctors who were themselves tubercular or who had no specific training in the disease, as was often the case.[122] Criena Fitzgerald has argued that working with tuberculosis patients, particularly in a sanatorium setting, appealed little to medical graduates because the work was seen as dull and, with no cure available, unsatisfying.[123] Sinclair Gilles argued that a thorough understanding of each patient's condition and circumstances was integral to sanatorium treatment and this knowledge required a level of intimacy unattainable through short visits from a non-residential officer.

> It takes long to reach the individual inside the patient, to gain his confidence, to grasp his character and all the ramifications of his economic and domestic position, to train him in the details of autoinoculation by rest and exercise, and to drill him efficiently in the essentials which will render him innocuous to his fellows. Not only is a resident medical officer a necessary part of the equipment of a sanatorium, but on his character and ability will depend the success or failure of the institution.[124]

The Royal Commission on Health in 1925 heard evidence from doctors that sanatoria were not well supported financially and generally understaffed. Donald

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[121] Victoria, Department of Public Health, *Fifth Report of the Commission of Public Health 1926-27*, p. 5.

[122] Sinclair Gillies, M.A., M.D., D.P.H., 'Home and Institutional Treatment of Pulmonary Tuberculosis from the Point of View of Public Health', *MJA*, August 8, 1931, p. 167.

[123] Criena Fitzgerald, 'Making tuberculosis everyone's business: The public health campaigns to prevent and control tuberculosis in Western Australia 1900-1960', PhD thesis, University of Western Australia, September 2002, p. 120.

[124] Gilles, 'Home and Institutional Treatment of Pulmonary Tuberculosis, 1931, p. 167.

McColl claimed Australian sanatoria carried only half the staff of institutions like Glasgow.[125]

In addition to these problems the number of beds fell short of physicians' recommendations according to the number of tubercular in the community. Conferences, government investigations and reports regularly called for more beds and more sanatoria. In 1916 the Commonwealth's committee investigating death and invalidity recommended at least double the number of beds then open nationally.[126] At the 1925 Royal Commission on Health witnesses declared bed numbers to be inadequate, especially for advanced cases.[127] Beds for advanced cases were always in demand.[128] Table 3.6 shows the monthly waiting list in Victoria from March 1923 to March 1925. Although there were sometimes reports of empty beds in institutions for early cases, there were also reports of heavy demand.

[125] Royal Commission on Health 1925, *Minutes of Evidence*, question 22107.

[126] Australia, Department of Trade and Customs, Committee Concerning Causes of Death and Invalidity in the Commonwealth, *Report on Tuberculosis*, 1916, p. 29.

[127] In institutions for early cases such as Kalyra and Greenvale, empty beds were sometimes reported. On the other hand Amherst Sanatorium in Victoria managed to keep their early beds fully occupied even though some patients were housed in tents. [Australia, Department of Trade and Customs, Committee Concerning Causes of Death and Invalidity in the Commonwealth, *Report on Tuberculosis*, 1916, p. 28. Conference on Consumption, *A Digest of Proceedings of the Conference of Representatives of Local Boards of Health in the Metropolitan Area of Adelaide, 1909*, SLSA. Royal Commission on Health 1925, *Minutes of Evidence*, questions 21254, 12792.

Table 3.6

Cases Waiting for Admission to Sanatoria in The State of Victoria, March 1923 to March 1925

Month	Year	Male	Female	Total
March	1923	10	8	18
April	1923	10	9	19
May	1923	14	7	21
June	1923	8	10	18
July	1923	6	10	16
August	1923	3	7	10
September	1923	1	1	2
October	1923	12	3	15
November	1923	9	2	11
December	1923	11	2	13
January	1924	6	2	8
February	1924	13	9	22
March	1924	1	3	4
April	1924	-	8	8
June	1924	-	16	16
July	1924	5	37	42
August	1924	3	48	51
September	1924	-	57	57
October	1924	10	58	68
November	1924	8	45	53
December	1924	7	44	51
January	1925	8	39	47
February	1925	3	37	40
March	1925	6	38	44

Source: Royal Commission on Health, 1925, *Report,* Appendix 11 (f), *CPP*, Vol 4, p. 81.

[128] Royal Commission Health 1925, *Minutes of Evidence*, questions 21254; 16446; 12794-19796; 12082; 21055; 8011.

Bed numbers did not meet the expectations of tuberculosis physicians nor the requirements numerical guidelines suggested. The national conference of Principal Medical Officers, held in 1911 recommended the number of beds for advanced cases be equal to a minimum of 25% of average annual deaths for the preceding three years.[129] In 1914, based on this formula, Victoria fell short by about 60 beds and South Australia by about six, while New South Wales's bed numbers were sufficient.[130] But that year the public health authorities in New South Wales called for 100 more beds for men at Waterfall to relieve overcrowding at the sanatorium and to allow consumptive patients at Rookwood State Hospital to enter Waterfall.[131] If New South Wales met the numerical guidelines, but still experienced overcrowding, this formula understated bed requirements and the three states needed more accommodation for advanced cases. A later British report proposed one bed for every 2,500 of the population.[132] Using these figures Victoria needed 166 extra beds in 1925[133] and South Australia 49. Again New South Wales satisfied bed numbers using this model but the superintendent of Waterfall reported overcrowding and an urgent need for more beds at Waterfall and Rookwood. By the late 1920s medical opinion favoured a ratio of one bed for every death per annum.[134] These calculations left New South Wales some 133 beds below

[129] States of Australia, *Consumption. Report of a Conference of Principal Medical Officers on uniform measures for the control of consumption in the States of Australia*, Government Printer, Melbourne, 1911, p. 13, ML.

[130] These figures are calculated using figures from the report on tuberculosis of the Death and Invalidity Committee of 1916 and have assumed all Waterfall cases were in an advanced stage of the disease. Australia, Department of Trade and Customs, Committee Concerning Causes of Death and Invalidity in the Commonwealth, *Report on Tuberculosis*, 1916, pp. 28-29.

[131] New South Wales, *Report of the Director-General of Public Health, New South Wales, for the year ended 31st December, 1914*, p. 9.

[132] Royal Commission on Health 1925, *Report* 1926, Appendix No. 11 (b), Question No. 12104, p. 81. Bryder, *Below the Magic Mountain*, Clarendon Press, 1988, p. 39.

[133] Royal Commission on Health 1925, *Report,* Appendix 11 (b), p. 81. Victoria, *Report of the Commissioner of Public Health*, 1925, p. 19.

[134] New South Wales, 1928, *Report of the Director-General of Public Health, New South Wales, for the Year 1927*, p. 68. NAA: A1928, 1105/30, Holmes, *Report on the Control of Tuberculosis in Australia*, pp. 20, 26.

optimum, Victoria 294 (94 with the addition of 200 planned beds) and South Australia 114.[135] Some cases were treated in major hospitals although a number of general hospitals such as the Alfred in Melbourne and the Royal Prince Alfred in Sydney received tuberculosis patients only as a temporary expedient.[136] In New South Wales, Newington and Rookwood state hospitals admitted pulmonary tuberculosis cases and in South Australia the Adelaide Hospital admitted pulmonary cases into general wards until a special consumptive ward opened in 1932.[137] The South Australian case illustrated the dilemma of treating this chronic disease in all its stages. While pulmonary tuberculosis remained among the leading causes of admissions to the Adelaide Hospital into the 1920s, Kalyra sanatorium, catering for early tubercular cases, sometimes had empty beds.[138]

ILLUSTRATION 4

Women's Hospital, Waterfall Sanatorium, New South Wales circa 1912
Source: State Library of New South Wales

[135] NAA: A1928, 1105/30, M.J. Holmes, *Report on the Control of Tuberculosis in Australia,* p. 20.
[136] Royal Commission on Health 1925, *Minutes of Evidence,* questions 21249-21250, 8229-3230.
[137] J. Estcourt Hughes, V.R.D., M.S. (Adelaide), F.R.A.C.S., *A History of the Royal Adelaide Hospital*, Second (revised) edition, Board of Management of the Royal Adelaide Hospital, Adelaide, 1982, p. 48.
[138] Conference on Consumption, *A Digest of Proceedings,* 1909, pp. 10, 11. Board of Management of the Adelaide Hospital, *Thirty-Sixth Annual Report*, 1905, Government Printer, Adelaide, 1906, p. 9, RAH Heritage Office.

Empty beds and the observations of tuberculosis physicians that patients either failed to seek sanatorium treatment or left too soon raises the question of patient compliance with treatment in a sanatorium. From sanatoria physicians' reports we can say that there were ample consumptives in later stages of the disease willing to enter sanatoria. They did so for many reasons. Some went in hope of being cured, some because the sanatorium was more comfortable than their home, some on medical advice, some to protect their families from infection and some because poverty precluded any other course. But early cases also used the sanatorium. For example, Amherst Sanatorium for incipient male cases in Victoria was normally full and sometimes overcrowded.[139] The question of patient compliance with the sanatorium system of treatment is complex. Some historians have found the regimented nature of sanatoria drove patients out.[140] The routine and rules of Greenvale (reproduced overleaf) support this view. Rules such as separating men and women during exercise periods, restricting table games and talking to specific times, and requiring patients to stand by their beds during official visits would have been resented. It also seems likely that ambulant patients suffered from boredom. Nevertheless, while some sanatoria adopted a moralistic and regimented approach, others were more relaxed. The Adelaide Consumptive Home had little power to keep patients in the Home and, located in the centre of the City, patients regularly left the Home to go into the city.[141]

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[139] Royal Commission on Health 1925, *Minutes of Evidence*, question 12792, 1 May, 1925, (Thomas Dimelow, Secretary, Public Health Department, Victoria).

[140] Bryder, *Below the Magic Mountain*, 1988, pp. 210-211. Worboys, *Medical Innovations*, 1992, pp. 47-71. McQuien, 'Tuberculosis as Chronic Illness in the United States', 1993, p. 136. Sheila M Rothman, *Living in the Shadow of Death. Tuberculosis and the Social Experience of Illness in American History*, The Johns Hopkins University Press, Baltimore, 1994, pp. 244-245. Rothman analyses the writings of sanatorium patients and finds, with few exceptions, a bleak psychological existence in the sanatorium.

[141] Royal Commission on Health 1925, *Minutes of Evidence*, questions 13556-13558, (Frank Howard Beare, Pathologist at the Mareeba Babies' Hospital and Temporary Assistant Physician at the Adelaide Hospital).

The extent to which patients acquiesced or resisted the demands of the sanatorium is unclear. The extended stay would of itself create personal, social, psychological and economic difficulties for patients. Many patients preferred to return to their homes than remain in less comfortable or inhospitable institutions. Edward Robertson, Chief Health Officer, in Victoria remarked in 1925:

> I have noticed a very strong tendency, … for tubercular sufferers to leave institutions and go to their own homes, and I do not think there would be so much desire to go to their own familiar surroundings if more cheerful conditions of life could be provided … .[142]

Patients also left sanatoria after two or three months if their health improved and could not be persuaded to extend their stay because of economic and family commitments.[143] As the matron of Angorichina Hostel reported, 'Poor old Mr. Thomas seems to have too many family responsibilities to rest contentedly here'.[144] On the other hand, the matron also reported regularly that her small group of patients was happy to be in the hostel and willingly worked on maintaining the home.[145]

Sanatoria themselves and expectations of sanatoria varied over time. In 1906 a former patient of the Queen Victoria Home at Wentworth Falls found the institution 'a paradise, as far as comfort, climate, careful nursing, and skilled medical treatment [was] concerned', his only complaint being that patients could

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[142] Royal Commission on Health 1925, *Minutes of* Evidence, question 672, (Edward Robertson, Chief Health Officer, Department of Health, Victoria).

[143]Royal Commission on Health 1925, *Minutes of Evidence*, question 22112, (Donald Stewart McColl).

[144]SRSA, SRG 488 Box 1, Tubercular Soldiers Aid Society, Correspondence re Angorichina Hostel, Correspondence from Matron to Tubercular Soldiers Aid Society, 31 Aug 1927.

[145] SRSA SRG 488/1927/1, Correspondence between Angorichina Hostel and Tubercular Soldiers Aid Society.

not stay longer than a year.[146] Some institutions did not set a time limit. At the Adelaide Cancer and Consumptive Home for advanced cases, although some patients did not stay, some remained for long periods, one for fifteen years.[147] Assessment of how patients reacted to management of their disease through sanatorium treatment and segregation is dogged by a range of variables including class, gender, government policies, sanatoria management, and individual psychology. Physicians' reports show that advanced cases were more likely than early cases to seek the respite of hospital care. This is unsurprising given that patients in late stages of the disease were likely to be extremely ill and perhaps close to death.

To further this analysis from qualitative evidence it is useful also to consider quantitative evidence. One method of using quantitative data is to compare the occupancy rates of sanatoria with other hospitals. This, of course, does not offer precision because general hospitals catered for all illnesses, diseases, accidents and surgery. Nevertheless, during the growth of sanatoria, the voluntary use of hospitals by Australians of all classes was increasing rendering such a comparison a useful means to assess the degree to which the sanatorium was rejected or utilised.

Based on the average daily number of occupied beds, occupancy rates of sanatoria generally equated with, or exceeded, occupancy rates of other hospitals. For example, from 1906 to 1915, Greenvale, with its majority of early cases, had higher

[146] *SMH*, 14 September, 1906, p.4.
[147] Royal Commission on Health 1925, *Minutes of Evidence*, questions 13560-13561, (Frank Howard Beare, Pathologist at the Mareeba Babies Hospital and temporary physician at the Adelaide Hospital).

daily average bed occupancy as a percentage of total beds, than general hospitals. General hospitals' average occupancy ranged from 65% to 70%, while Greenvale's ranged between 75% and 95%. When Heatherton Sanatorium for intermediate and advanced cases was opened in 1913 its occupancy rate was higher than Greenvale. In its early years of operation (1914-15) Heatherton operated at an average occupancy rate of 88% and in 1927-28 recorded a rate of 97%.[148] In New South Wales, Waterfall Sanatorium and state run hospitals had higher occupancy rates than Victoria (except for Heatherton) and, in contrast to Victoria, Waterfall rates were usually lower than its general hospital counterparts. Nevertheless, the state sanatorium occupancy rate was generally comparable with other state institutions. Table 3.7 compares daily average bed occupancy of the Coast Hospital, Rookwood State Hospitals for Men and Waterfall Sanatorium during most years from 1913-1920. With the exception of 1920, the Coast Hospital operated at full capacity, Rookwood at an average of 95% capacity and Waterfall at an average of 90% capacity. These examples suggest Australians entered sanatoria at much the same rate as they did other hospitals.

As it was the retention of patients for appropriate periods of time that most concerned doctors, it is important to consider this aspect quantitatively. Victorian statistics are unhelpful in this instance because of that State's policy of limiting stays in state sanatoria to three months. Waterfall state sanatorium in New South Wales, however, can be used as an example, although with qualification. Because this institution admitted patients at all stages of the disease, the average length of

[148] Calculated from data in Australian Bureau of Statistics. Victorian Office, *Victorian year books*, 1907-08, pp. 164, 384; 1908-09, pp. 178, 418-419; 1909-10, pp. 308, 550; 1910-11, pp. 256, 565; 1913-14, pp. 188, 551-552; 1914-15, pp. 203, 565-566.

residence will be more distorted than would an institution limited to one class of patient. Nevertheless, a general pattern can still be gauged. Between 1913 and 1925 the average length of residence at Waterfall ranged from a low of 169 days in 1913 to a high of 317 days in 1925.[149] In South Australia at its sanatorium for early cases, retention time increased over time but not by much. Between 1895 and 1901 patients remained an average of 120 days and in 1920-21 for 179 days.[150] Kalyra's experience suggests that many early patients did not stay as long as doctors suggested. Yet Kalyra's average stay of 179 days or nearly six months in 1920-21 was twice as long as the Victorian Government set down for Greenvale. Waterfall's figures suggest that, overall, patient compliance grew rather than diminished. Despite this, the view of health authorities, as they reported it to government inquiries, was that Australian tuberculosis institutions lacked the necessary appeal to keep patients long enough for cure. The majority of Australians with tuberculosis did not experience the cocooned, leisurely life famously portrayed in Thomas Mann's *Magic Mountain*. Nevertheless, thousands entered the institutions. Some died, some remained for a long time, some stayed for a short time perhaps to return after a relapse, some improved, some complained, some found comforts they did not have at home and some found the regime and staff intolerable.

[149] Calculated from New South Wales, *Reports of the Director General of Public Health*, 1914-1925.
[150] Walker, *Historical Studies*, 1983, p. 449.

ROUTINE OF THE SANATORIUM.

7 a.m. – Milk (hot or cold). Temperature and pulse taken and recorded
Bath (shower).
8 a.m. – Breakfast.
Rest after meal.
9 a.m. – Morning visit of medical attendant.
Destruction of sputum, &c., and cleansing of mugs at incinerator.
Exercise and tasks as ordered until 11.30 a.m.
11.30 a.m. – Return to wards.
Temperature and pulse taken and recorded.
12 noon to 1 p.m. – Test hour. (Rest to be unbroken).
1 p.m. – Dinner.
Rest after meal.
2 p.m. – Midday visit of medical attendant.
Exercise as ordered until 4.30 p.m.
4.30 p.m. – Return to wards.
Temperature and pulse taken and recorded.
5 to 6 p.m. – Rest hour. (Rest to be unbroken.)
6 p.m. – Tea.
Rest after meal.
7 p.m. – Evening visit of medical attendant.
8 p.m. – Temperature and pulse taken and recorded.
8 p.m. – Supper. Milk (hot or cold).
9 p.m. – Bed. Lights out. Night nurse in charge.
A rest of half-hour must be taken after each meal.

RULES OF THE SANATORIUM

Patients shall strictly observe all rules of the sanatorium, and all instructions of the medical superintendent or matron in accordance with the agreement signed prior to admission.

Patients shall not go outside the sanatorium grounds without permission of the medical superintendent or matron.

Patients shall not visit or loiter about the tents of other patients.

The congregating of patients is conducive to over-excitement, excessive talking, or laughing, all of which is injurious to damaged lungs.

Male and female patients shall not associate while taking exercise.

Draughts, dominoes, or other table games are (except by express permission) allowed only after 7 p.m.

Singing is forbidden, as are also dancing and the playing of musical wind instruments. No consumptive should use such instruments.

Letters may be written between 2 and 2.30 p.m., and between 7 and 8 p.m., but at no other time.

Patients are expected, unless confined to bed, to stand beside their beds during official visits.

Fruit or other edibles sent or brought by patients' friends must be handed to the nurse in charge of the ward, and such articles, unless considered unwholesome or injurious, will be served to the patients at meal times.

No intoxicating liquor shall be brought into the sanatorium or be received by patients.

Only unexciting literature is allowed in the sanatorium, and any papers or books obtained by patients from their friends must be passed by a responsible officer. Literature not so passed will be confiscated.

Female patients should not that in order to allow the lungs freedom of action, loose clothing is essential, and that the wearing of corsets is prohibited.

Visiting is not encouraged, but patients, when well enough, may receive their friends on any afternoon, between 2.00 and 4.30 p.m. Intending visitors must obtain a written permit from the health Department's offices in Queen-street, Melbourne. Such permits may be suspended by the medical officer or matron the sanatorium, if the condition of the patient is such as to render it undesirable for him to receive visitors.

Smoking is forbidden in wards or tents.

Talking is forbidden in the tents and wards during the rest periods; before 6.30 a.m. in the summer months; before 7 a.m. in the winter months; and after 9 p.m. throughout the year. Other patients may wish to sleep even if the talkers do not.

Permission to visit Melbourne or any other place will not be given to patients except in cases of urgency.

Patients are liable to immediate dismissal for any breach of the rules.

Source: Department of Public Health, 'Appendix III, Greenvale Sanatorium,' *Report of the Board of Public Health for the years 1905-6-7*, p. 80, Govt Printer, Melbourne, Butlin Collection, J.L.S.

Table 3.7

Comparison of Average Bed Occupancy in Selected NSW State Hospitals and Waterfall State Sanatorium, 1913-1920

YEAR	INSTITUTION	Number of Beds	Average Daily number of occupied beds	Average Occupancy Rate
1913	Coast Hospital	333	336	101%
	Rookwood State Hospitals for Men	656	603	92%
	State Sanatorium, Waterfall	350	302	86%
1914	Coast Hospital	337	373	111%
	Rookwood State Hospitals for Men	678	642	95%
	State Sanatorium, Waterfall	348	309	89%
1916	Coast Hospital	411	447	109%
	Rookwood State Hospitals for Men	678	654	96%
	State Sanatorium, Waterfall	366	349	95%
1918	Coast Hospital	620	605	98%
	Rookwood Hospitals for Men	678	639	94%
	State Sanatorium, Waterfall	334	327	98%
1919	Coast Hospital	341	385	113%
	Rookwood State Hospitals for Men	678	616	91%
	State Sanatorium, Waterfall	408	333	82%
1920	Coast Hospital	694	478	69%
	Rookwood State Hospitals for Men	678	698	103%
	State Sanatorium, Waterfall	408	373	91%

Source: Compiled from New South Wales, *Report of the Director General of Public Health*, 1914-1921.

RETAINING THE SANATORIUM

Australian sanatoria developed in line with international ideas and in response to concerns about contagion, but also within an existing hospital system. To understand Australia's commitment to sanatorium treatment (however incomplete) and the medical profession's loyalty to it, we need to set the sanatorium within a broader institutional context. Public sanatoria emerged at a time when public expectations of hospital care were changing. Citizens turned to hospitals in greater numbers and from broader economic groups than had traditionally been the case. This, combined with a growing population, meant that hospitals struggled to meet demand. Charitable and government asylums also felt the pressure of increasing calls on their institutions, particularly from the chronically ill. In addition, public health legislation demanded greater control of infectious diseases leading to a greater emphasis on special hospitals for such diseases.

Throughout the late colonial period conditions in charitable and government asylums for the destitute and sick poor were often deplorable with regimented management, overcrowding, poor ventilation and unsanitary conditions.[151] During the latter decades of the nineteenth century concerns about the state of institutions for the destitute (concerns sometimes raised as a result of inmate riots) led to a number of government inquiries, which found mismanagement, waste, inefficiency, overcrowding and brutality.[152] Hospitals too suffered many of the same problems and criticisms as asylums. Investigations into the Sydney Hospital in 1873 found infestation, dirty and broken water-closets, mouldy potatoes,

[151] Garton, *Out of Luck.*, 1990, pp. 58-59. Dickey, 'Charity in New South Wales 1850-1914', 1966, pp. 285-286.
[152] M.A. Jones, *The Australian Welfare State*, George Allen & Unwin, Sydney, 1980, pp. 12-13.

mattresses on the floor and rats in the mortuary.[153] Despite some expansion, general improvements and more government control in the 1880s and 1890s,[154] at the beginning of the twentieth century the problems were largely unresolved. Again New South Wales provides examples. In 1902 women were refusing to enter the Newington Asylum for Destitute Women[155] and an inquiry into Parramatta asylum in 1903 found structural problems, few properly trained staff and insensitive treatment.[156]

In Victoria the government controlled prisons, lunatic asylums, reform schools and inebriate homes,[157] all other asylums for the poor and hospitals being managed by private charities with substantial government subsidies. The proliferation of charitable institutions led to a perception[158] that Victoria had too many institutions and claims that the sick poor were given more than adequate care.[159] Despite these assertions, Melbourne's benevolent institutions were heavily criticised with calls for government representatives on boards to check bad management and 'watch over the interests of the poor unfortunate people in these institutions'.[160] Melbourne's principal hospital, located in the centre of the city, was so overcrowded many needy cases were turned away. One reason, according to a

[153] Garton, *Out of Luck.*, 1990, p. 58.
[154] Dickey, 'Charity in New South Wales 1850-1914', 1966, p. 285. Stephen Garton, *Out of Luck*, 1990, pp. 94-95. Ann M Mitchell, *The Hospital South of the Yarra. A history of Alfred Hospital Melbourne from foundation to the nineteen-forties*, Alfred Hospital, Melbourne, 1977, p. 7. Forbes, *From Colonial Surgeon to Health Commission*, 1996, pp. 104-106.
[155] 'The Newington Asylum for Destitute Women', *AMG*, January 20, 1902, p. 30.
[156] The New South Wales Labor Party put pressure on the Liberal-Reform Government and Premier Carruthers to improve the conditions of the asylums. Its newspaper, *The Worker* reported a lack of enquiry into negligent actions such as deliberately overdosing an elderly and difficult inmate with morphine.['Asylum Atrocities', *The Worker*, 5 September, 1903, p. 4.]
[157] Richard Kennedy, 'Charity and Ideology in Colonial Victoria', in Richard Kennedy, (ed.) *Australian Welfare History Critical Essays*, Macmillan, 1982, p. 67.
[158] Kennedy, *Australian Welfare History*, 1982, pp. 61-64.
[159] James Jamieson, M.D., 'Tuberculosis and its Prevention', *IMJ*, Vol. 3, No. 2, November, 1898, p. 643. 'Medical Charities in Victoria', *AMG*, 20 December, 1902, p. 631. Kennedy, *Australian Welfare History*, 1982, p. 61.

member of parliament, was the large numbers of cancer and tuberculosis patients 'crowd[ing] out' the Melbourne.[161] In South Australia, too, the State's destitute asylum was overcrowded predominantly with the incurably ill[162] and, as discussed earlier, the South Australian Government came under increasing pressure to isolate consumptives. With tuberculosis now firmly in the contagious disease category and pressure on relief institutions for the sick poor increasing[163] the demand to isolate the tubercular could not be ignored. The prevalent belief that only fresh air (preferably rural), abundant food and precautionary behaviour could help the consumptive and protect the community meant that the insalubrious environment of urban asylums and hospitals was especially dangerous for the consumptive, and consequently the wider community.

In the early years of the twentieth century hospitals faced shifting social ideas about hospital care that exacerbated existing problems. Hospital treatment was becoming acceptable to an increasing number of Australians outside the pauper category. Table 3.9 shows that total hospital admissions in New South Wales rose steadily between 1890 and 1914. These raw figures must be read within a context of hospital and population expansion. Between the census years of 1901 and 1911 the population of New South Wales increased by 21.5%,[164] hospital beds increased

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[160] Victoria, *Parliamentary Debates*, House of Assembly Vol. 106, 17 December, 1903, p. 2051; 23 December, 1903, p. 2321; Vol. 88, 19 July 1898, p. 305.

[161] Victoria, *Parliamentary Debates*, House of Assembly, Vol. 106, 17 December 1903, pp. 2051, 2052.

[162] Brian Dickey, *Rations, Residence, Resources. A History of Social Welfare in South Australia since 1836*, Wakefield Press, 1986, p. 138.

[163] Dickey, 'Charity in New South Wales', 1966, p. 277. Garton, *Out of Luck*, p, 99. *MJA* 13 January, 1917, p. 44.

[164] Australian Bureau of Statistics, New South Wales Office, *Official Year Book of New South Wales 1940-41*, p. 42. This figure excludes the aboriginal population who were not counted in the census.

by 46% and hospital admissions rose by 80%.[165] Demand for hospital beds ran ahead of population increases and hospital expansion. In Victoria, hospital admissions during the 1890s increased by 15%, the population by only 7%.[166] From 1907 to 1915 admissions to Victorian general hospitals rose by 24%, bed numbers by 5% and the population by 13%.[167] In the early years of the census decade, South Australia's statistics were less comprehensive than New South Wales and Victoria with only the Adelaide Hospital consistently represented. But, since this hospital was Adelaide's only large general hospital, its experience was representative of the state and especially of the metropolitan area. Graph 3.8.1 shows an overall increase in admissions particularly from the late 1890s. But from 1901 to 1911 the increase of 14.5% matched the population increase of 14% and the average daily number of patients at 11% fell below the population increase. Nevertheless the hospital's annual reports regularly reported rising patient numbers and problems with congestion. In 1899 the Board reported the hospital's desire to isolate consumptives but also its inability to do so because of inadequate space. In 1905 it acted to eliminate the rising number of patients who could afford private fees from entering the hospital.[168] The Adelaide Hospital and the Destitute Asylum struggled to meet the needs of Adelaide's sick poor.[169] Hospital facilities were stretched as the not-so-poor as well as the poor looked more to the hospital for treatment. In this environment consumptives were an additional burden.

[165] Calculated from figures in Dickey, 'Charity in New South Wales 1850-1914', 1966, p. 400.
[166] Calculated from data in Victoria, Parliament, *Statistical Register of the Colony of Victoria for the year 1900, Social Condition*, Govt Printer, Melbourne, 1902, p. 21.
[167] Calculated from data in Australian Bureau of Statistics. Victorian Office, *Victorian Year Books*, 1907-08, pp. 164, 384; 1908-09, pp. 178, 418-419; 1909-10, pp. 308, 550; 1910-11, pp. 256, 565; 1913-14, pp. 188, 551-552; 1914-15, pp. 203, 565-566.
[168] Board of Management of the Adelaide Hospital, *Thirty-Sixth Annual Report*, 1905, p. 9.

The increasing use of public hospitals by a wider section of society alarmed doctors because it undermined their private practice if patients able to afford medical fees took advantage of free treatment at hospitals. The President of the Victorian BMA reflected the view of many of his colleagues, especially hospital honoraries, when he said that public hospitals must maintain their position as institutions for the destitute. More affluent sections of society should be treated at home or in private hospitals. 'The more facilities you grant', he said, 'for obtaining gratuitous medical attention, the more they will be availed of, and in such proportion will the demoralisation of the community progress'.[170] Other sectors of society saw it differently. The labour movement, which was steadily gaining strength and political power, saw health care and hospitals as a state not a charitable responsibility, a service that should be available to all Australians. In contrast to the physician's view that extending free hospital care was morally regressive, the labour movement saw it as morally progressive and socially beneficial. A commentator in the labour movement's paper, *The Worker*, wrote,

> Hospitals…[are] not intended to provide the well-to-do with moral exercise, as the golf links and tennis courts provide them with physical exercise. The great function of hospitals is to heal sickness and minimise pain, irrespective of social status, colour, or creed; merely because civilisation is mutual aid, and because sickness and suffering are inimical to the public welfare.[171]

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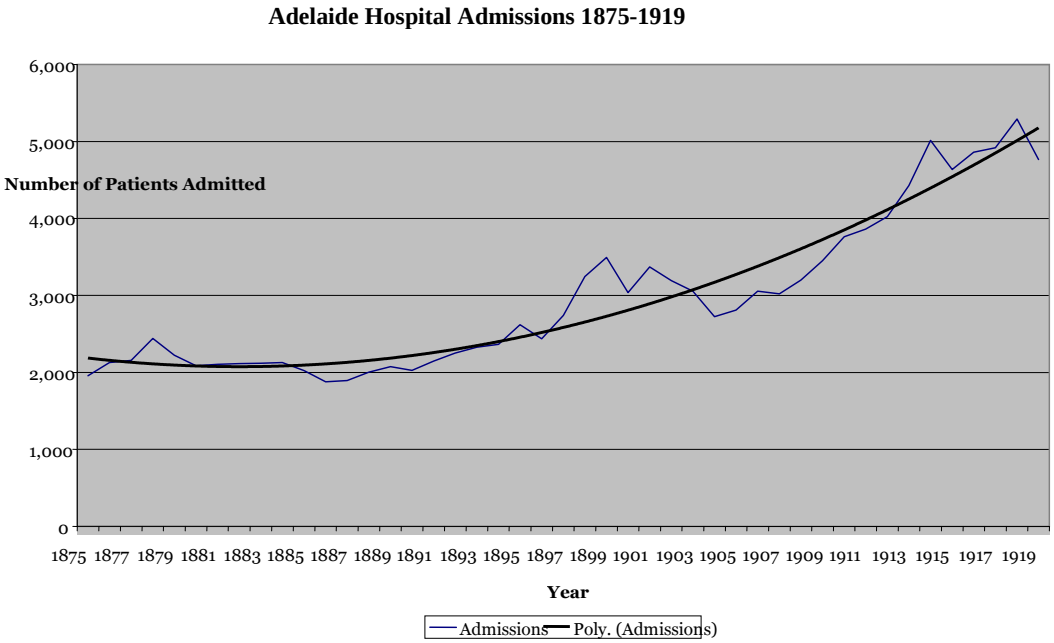
[169] South Australia, House of Assembly, *Parliamentary Debates*, 19 November, 1901, p. 787. Adelaide Hospital, *Thirty Third Annual Report*, 1902; *Thirty Fourth Annual Report*, 1903, p. 11; *40th Annual Report*, 1909, p. 9; *Fiftieth Annual Report*, 1909, p. 11.

[170] G.T. Howard, B.A., M.D., Ch.B., Melb., 'Presidential Address. Some Matters Concerning our Hospitals from a Medical Point of View', *IMJ*, Vol. X., No. 1, 20 January 1905, pp. 1-5, 8. See also 'General Meeting of Congress', *Transactions of Australasian Medical Congress, Eighth Session*, Melbourne, 1908, pp. 38-63. Board of Management of the Adelaide Hospital, *Thirty-Sixth Annual Report*, 1906, p. 9. B. Champion, M.B., B.S., Melb., 'Presidential Address', *IMJ*, 20 April, 1909, pp. 169-171. 'Hospitals and the State, *MJA*, 9 June, 1917, pp. 488-489.

[171] 'The Dance of Death. A Plea for State Hospitals', *The Worker*, 26 June 1913, p. 5.

As Brian Dickey and others have noted, patients expressed their opinion by continuing to seek treatment in hospitals and the trend of rising hospital usage and over-crowding continued.[172]

Chart 3.8.1



Source: Compiled from statistics in Adelaide Hospital, Fiftieth Annual Report of the Board of Management, 1919, Adelaide, 1920, P. 6, R.A.H. Heritage Office.

The development of Australian sanatoria coincided with the establishment of separate hospitals for infectious diseases. By the turn of the twentieth century the myth of Australia's relative immunity from old world evils had faded, cities had grown rapidly, the nature of contagion was better understood and concerns about the nation's health were more visible in political and social forums. As increased hospital patronage strained resources in general hospitals and public health acts

[172] 'St Vincent's Hospital, Melbourne', *MJA*, 9 June 1917, p. 491. 'Queen's Memorial Infectious Disease Hospital', *MJA* 10 February 1917, p. 124. 'South Sydney Hospital', *MJA*, 10 February 1917, p. 131. 'Hospitals and the State', *MJA*, 9 June 1917, p. 488. Dickey, 'Charity in New South Wales 1850-1914'. 1966, pp. 172, 400-401. Brian Dickey, 'Some Welfare Statistics for NSW 1850-1914', *Australian Historical Studies* Bulletin No. 1, July, 1980, pp. 54-55. Claudia Thame, 'Health and the State: The Development of Collective Responsibility for Health Care in Australia in the First Half of the Twentieth Century', PhD thesis, Australian National University, 1974, p. 278.

more clearly defined government responsibility for controlling infectious diseases, Australian states began to isolate contagious patients with greater rigour.

In Britain, isolation hospitals for infectious diseases, however slow to develop and however crude in practice, grew up from the 1870s.[173] In Australia, doctors advocated better isolation and control of communicable disease cases[174] but infectious disease hospitals emerged more slowly than in Britain. Until the latter part of the nineteenth century colonial authorities' primary concern was to stop the most fearsome epidemic diseases like smallpox, cholera, plague and yellow fever from entering Australia.[175] By the 1870s and especially the 1880s, epidemics of measles, typhoid, diphtheria and the much-feared smallpox revealed inadequate public health administration and a paucity of isolation facilities.[176] The Adelaide

[173] Anthony S. Whol, *Endangered Lives. Public Health in Victorian Britain*, J.M. Dent & Sons Ltd., London, 1983, pp. 136-139. See also John V. Pickstone, *Medicine and industrial society. A history of Hospital development in Manchester and its region, 1752-1946,* Manchester University Press, Manchester, 1985, pp. 156-183. Anne Hardy notes that from 1867 and the establishment of the Metropolitan Asylums Board, this Board pursued an 'ambitious hospital building programme' which played an important role in British efforts to prevent the spread of infectious disease. [Anne Hardy, *The Epidemic Streets. Infectious Disease and the Rise of Preventive Medicine, 1856-1900*, Clarendon Press, Oxford, 1993, p. 5.]

[174] Sandra Holton, 'Social Medicine in Nineteenth Century South Australia', *Community Health Studies*, Volume VII, Number 2, 1983, pp. 131, 212. Victoria, Board of Public Health, *Report of the Board, 1891-2*, pp. 6-7. Mitchell, *The Hospital South of the Yarra.* 1977, pp. 96-100.

[175] Most feared was smallpox. South Australia's first official public health order was a reaction to the arrival of a vessel with smallpox sufferers on board. In September 1838 Order Number 11 instructed the colonial surgeon to board all incoming ships and quarantine any vessel found to have smallpox on board. [Forbes, *From Colonial Surgeon*, p 122] The colonial government of New South Wales passed an *Infectious Diseases Act* during a smallpox epidemic in 1881-82. Hastily enacted, this legislation established a Board of Health and required householders and medical practitioners to notify any case of smallpox. [P.H. Curson, *Times of Crisis, Epidemics in Sydney 1788-1900*, Sydney University Press, Sydney, 1985, pp. 16-18. *Infectious Diseases Supervision Act 1881* (No. 25) (NSW).] Sydney had been caught without a public health act, central authority or infectious disease hospital. For an analysis of Sydney's smallpox epidemic and a milder one in Melbourne at the same time see Alan Mayne, 'The dreadful scourge': responses to smallpox in Sydney and Melbourne, 1881-2, in Roy Macleod and Milton Lewis (eds.), *Diseases, Medicine, and Empire. Perspectives on Western Medicine and the Experience of European Expansion*, Routledge, London, 1988, pp. 219-241. See also Alison Bashford, 'Epidemic and Governmentality: smallpox in Sydney, 1881', *Critical Public Health*, Volume 9, Number 4, December, 1999.

[176] For a history of childhood epidemics in Australia see J.H.L. Cumpston, *The History of Diphtheria, Scarlet Fever, and Whooping Cough in Australia*, Government Printer, Canberra, 1927. See also, F.B. Smith, 'Comprehending Diphtheria', *Health and History*, Volume 1,

Hospital opened two infectious disease wards in 1877.[177] The Victorian Government, prompted by its Board of Health's concern about the rate of typhoid fever, decided to pay hospitals to provide isolation facilities. On the advice of its chief medical officer the Victorian Government also considered building an infectious disease hospital in 1874,[178] but it was to be another 20 years before a separate hospital opened. In 1881 the New South Wales Government opened the Coast Hospital, a roughly constructed isolation hospital at Little Bay, 14 kilometres south east of Sydney, for victims of the 1881-82 smallpox epidemic. The epidemic waned and beds emptied until 1883 when the government decided to use the buildings as a fever, smallpox and convalescent hospital. Although the Coast Hospital began to treat general and surgical as well as infectious cases, it remained Sydney's infectious diseases' hospital, and was administered and maintained entirely by the government.[179] At the turn of the twentieth-century special accommodation for endemic and epidemic infectious diseases in Australia was rudimentary.

The legislative demands of public health acts focussed attention on the establishment of infectious disease hospitals. In Victoria and South Australia local boards were empowered to build hospitals or make arrangements with existing

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Numbers 2 and 3, 1999, pp. 139-161. On diphtheria and immunisation see Claire Hooker, 'Diphtheria, Immunisation and the Bundaberg Tragedy: A Study of Public Health in Australia, *Health and History*, Volume 2, Number 1, July 2000, 52-78. For a brief overview of Australian urban mortality and the dismantling of the myth of a colonial paradise see, Milton Lewis and Roy MacLeod, 'A Workingman's Paradise? Reflections on Urban Mortality in Colonial Australia 1860-1900, *Medical History*, 1987, 387-402.

[177] Forbes, *From Colonial Surgeon*, p. 104.

[178] Ann M. Mitchell, *The Hospital South of the Yarra*, 1977, pp. 96-97.

Table 3.9

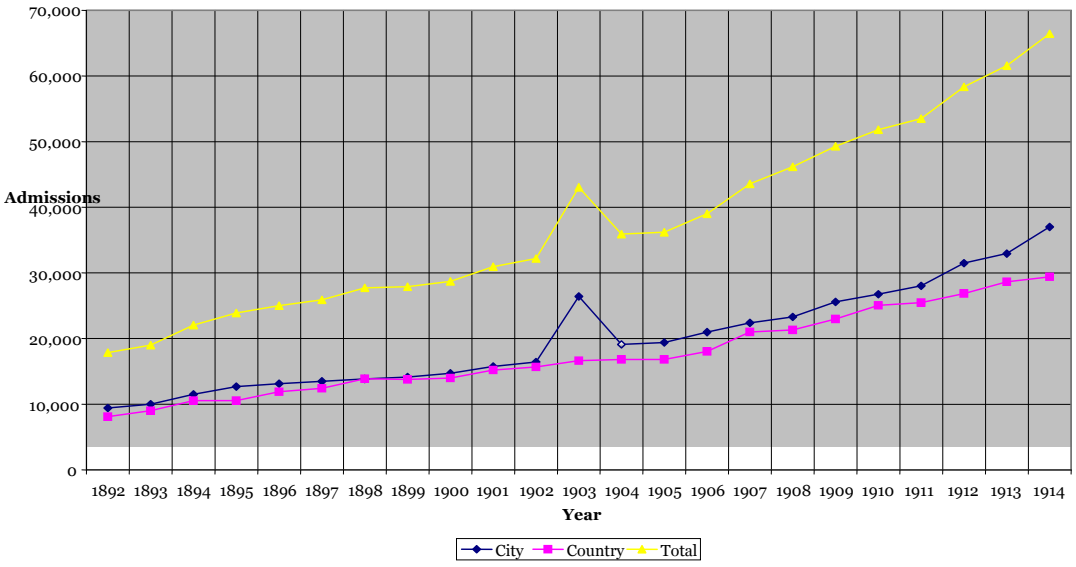
New South Wales Hospitals: Admissions 1890-1914

Year	City	Country	Total
1890	8,648	7,108	15,756
1891	--	--	--
1892	9,418	8,095	17,859
1893	9,980	9,004	18,984
1894	11,496	10,532	22,028
1895	12,676	10,532	23,879
1896	13,112	11,884	24,996
1897	13,485	12,404	25,889
1898	13,837	13,866	27,703
1899	14,120	13,776	27,896
1900	14,713	13,978	28,691
1901	15,752	15,191	30,943
1902	16,419	15,672	32,181
1903	26,406	16,633	43,039
1904	19,104	16,812	35,916
1905	19,376	16,811	36,187
1906	20,981	18,031	39,012
1907	22,380	21,001	43,561
1908	23,286	21,311	46,158
1909	25,578	22,988	49,277
1910	26,758	25,056	51,814
1911	28,017	25,481	53,498
1912	31,495	26,844	58,339
1913	32,938	28,642	61,580
1914	37,011	29,416	66,427

Source: B. Dickey, 'Some Welfare Statistics for New South Wales, 1850-1915, *Australian Historical Statistics*, Bulletin No. 1, July, 1980, 57.

[179] Brian Dickey, 'Charity in New South Wales 1850-1914', 1966, pp. 211-214.

CHART 3.9.1 - New South Wales Hospitals: Admissions 1892-1914



Source: B. Dickey, 'Some Welfare Statistics for NSW 1850-1915, *Australian Historical Statistics.* Bulletin No. 1, July 1980, 57.

institutions for infectious cases in their districts.[180] This provision was not included in the New South Wales Act where the local government system was less developed, particularly in rural areas, and the Government provided beds at its Coast Hospital. Local boards were not interested in establishing their own institutions but simply made agreements with existing hospitals.[181] In 1890 the Victorian *Australian Medical Journal* bemoaned the colony's lack of infectious disease hospitals noting British opinion that all large towns needed one bed per thousand of population for communicable diseases.[182] Throughout the 1890s the Victorian Board of Health pressured state and local government to establish isolation hospitals.[183] In its annual report of 1891-2 the Board appealed to colonial pride.

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[180] *The Public Health Acts Amendment Act 1884* (SA), s. 13. *Health (Amendment 1883)* (Vic), s. 88.

[181] For a short discussion on typhoid in Victoria, see David Dunstan, 'Dirt and Disease', in Graeme Davison, David Dunstan & Chris McConvile (eds.), *The Outcasts of Melbourne*, Essays in social History, Allen & Unwin, Sydney, 1985, pp. 151-155.

[182] 'The Prevention of Communicable Disease', *AMJ*, 15 Aug 1890, pp. 369-370.

[183] Victoria, Board of Public Health, *Report of the Board 1891-2*. Victoria, Department of Public Health, *Report of the Board, 1896-7*, (James Styles, Acting Chairman), p. 7. Victoria, Department of Public Health, *Report of the Board, 1898-1904*, (W.P. Norris, M.D., D.P.H., Chairman), pp. 9, 13.

> It cannot be too strongly insisted on that at present Melbourne in this matter is behind the age, that she is put to shame by many smaller and less wealthy cities in other countries, and that the want of sufficient and proper hospital accommodation for infectious disease may at any time result in an unnecessary and disastrous loss of life and extension of disease.[184]

The Victorian situation was mirrored in South Australia. Dr Alan Campbell, for example, criticised the lack of legislative support for isolation hospitals. During debate on a new health bill, in 1896, he told the Legislative Council, 'The Bill said patients should be isolated, and infectious diseases treated by way of isolation … but not a single word was said as to how that isolation was to be carried out.'[185] In New South Wales, although the Coast Hospital provided New South Wales with an isolation facility, public health officials found it to be totally unsuitable. Built hastily of wood and iron, it was located away from Sydney 14 kilometres to the south east near Botany Bay, was maintained as cheaply as possible and had comparatively primitive amenities.[186] Ashburton Thompson, Chief Medical Officer of New South Wales, said of it in 1897, 'it may have been suited well enough for the purpose for which it was intended, but to call such an establishment a hospital would be a misuse of words'.[187]

Pressure on the state for better isolation of infectious patients came from several directions, from the public, hospitals and local government. General hospitals had

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[184] Victoria, Board of Public Health, *Report of the Board 1891-2*, p. 7. Ann Mitchell, *The Hospital South of the Yarra*, 1977, pp. 100-101.

[185] South Australia, Legislative Council, *Parliamentary Debates*, 20 Oct 1896, p. 228.

[186] Brian Dickey, 'Charity in New South Wales 1850-1914' 1966, pp. 212-214.

[187] New South Wales, Legislative Assembly 1898, Coast Hospital Report 1897, *Votes and* Proceedings, 1898, Vol. 3, p. 1215, quoted in Brian Dickey, 'Charity in New South Wales 1850-1914', 1966, p. 213. In spite of this bleak view of the hospital, when, in 1907, the Government tried to move the Coast's general wards to new wards at the Royal Prince Alfred, the local community and the hospital protested vigorously. Following some months of disputation, the Government decided against closure of the general section.[*SMH*, 12 August, 1907, p. 8; 14 August, 1907, p. 7; 15 August, 1907, p. 7; 30 August, 1907, p.10; 6 December, 1907, p. 6.] In the early 1930s, the Coast Hospital's name was changed to the Prince Henry Hospital. It closed in 2001.

always admitted infectious cases with reluctance[188] and greater demand for hospital care made it increasingly difficult for general hospitals to find separate space for patients suffering from infectious diseases. The number of infectious cases seeking hospital treatment also rose because local boards of health, obliged by public health legislation to properly isolate infectious patients, sent patients to public hospitals.[189] In South Australia after a new isolation block proved to be unworkable as an infectious diseases unit[190] the Adelaide Hospital refused all infectious cases except typhoid fever in 1903.[191] Just as hospitals were finding it more difficult to accommodate infectious cases, local boards of health were pressured by central boards to meet legislative obligations.[192] Unable, or reluctant, to commit funds, local government looked for central government assistance or simply obfuscated. South Australian local boards often had great difficulty collecting fees from councils for hospital isolation of infectious cases.[193] In Victoria the opening of the Queen's Memorial Infectious Diseases Hospital October 1904 was delayed by disputes over funding and management. The erection of the hospital was funded by public subscription, the state government and, to a lesser extent, metropolitan

[188] Brian Dickey, 'Charity in New South Wales 1850-1914', 1966, pp. 198, 204-205. Ann M. Mitchell, *The Hospital South of the Yarra* 1977, p. 100. Smith, *Health and History*, 1999, p. 141. For example, the Adelaide Children's Hospital at the turn of the twentieth century admitted only diphtheria and typhoid fever cases. [SRSA GRG 8/1, Public Health Department Correspondence Files, 1899, Adelaide Children's Hospital to CBH, 2 January, 1900. 2/2/1900; Infectious Diseases at Hospitals. Action taken by Local Boards to control.]

[189] Board of Management of the Adelaide Hospital, *Twenty-ninth Annual Report*, 1898, p. 9; *Thirtieth Annual Report*, 1899, p. 7; *Thirty-first Annual Report* 1900, p. 9.

[190] South Australia, Parliament 1900, *Report on New Infectious Disease Block, Adelaide Hospital* 1900, Parlt Paper 70, Volume 3, Adelaide, 1901. Board of Management of the Adelaide Hospital, *Thirty-third Annual Report*, 1902, p. 11.

[191] Board of Management of the Adelaide Hospital, *Thirty-fourth Annual Report* 1903, p. 11.

[192] SRSA, GRG8/1, Public Health Department Correspondence files 1899, Correspondence from various local boards of health and hospitals to Central Board of Health, December 1899 to March 1900; Infectious Diseases at Hospitals, Action taken by Local Boards to control. Victoria, Board of Public Health, *Report of the Board, 1891-2*, pp. 6-8; *1896-7*, p. 7; *1898-1904*, pp. 9-10; *1905-6-7*, pp. 11-12. In New South Wales, John Ashburton Thompson, Chief Medical Officer and President of the Board of Health, tried to implement public health reform. Local Government responsibilities for infectious disease control, however, were limited to cleansing and disinfection.

councils. The state government and metropolitan councils were to share maintenance and management costs equally but to the dismay of the Hospital's Committee, a number of councils withdrew financial support.[194] Hospital overcrowding, local government reluctance or inability to take on the burden of isolating the infectious and shifting public perceptions in favour of public hospitals pushed governments to establish and finance infectious disease hospitals.

As with sanatoria, just as Australia began expanding infectious disease hospitals, their efficacy was being questioned in other countries. Because many mild cases remained undetected and therefore not isolated, infectious disease hospitals failed to prevent epidemics. In England where isolation of scarlet fever had been comprehensively pursued, the expected significant decrease had not occurred. Yet, it was felt that isolation hospitals served a social and economic purpose by ameliorating public fear during epidemics and protecting businesses in areas where infection was found.[195] Episodes of bubonic plague in Sydney, Melbourne and Adelaide had demonstrated the power of such fearsome diseases to elicit public panic. Australian physicians and public health authorities continued to support the concept of infectious disease hospitals and pressed for expansion of facilities. In 1913 the New South Wales Director-General of Public Health noted an infectious diseases bed shortage of 580. Instead of the recommended one bed per 1,000 of

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The New South Wales *Public Health Act of 1896* did not require local government to build infectious disease hospitals.

[193] Board of Management of the Adelaide Hospital, *Thirty-first Annual Report* 1900, p. 9.

[194] Victoria, *Parliamentary Debates*, Legislative Assembly, 17 December 1903, Vol. 106, p. 2053, 2055, (Samuel Gillot, Member for Melbourne East, D.V. Hennessy, Member for Carlton South). 'Opening of the Queen's Memorial Infectious Diseases Hospital', *AMG*, 20 October 1904, p. 533, *AMG*, 21 November, 1904, p.602, *AMG*, 20 December, 1904, p. 664.

[195] 'Notes and Comments. Isolation Hospitals', *IMJ*, 20 October 1904, pp. 526-527; 20 May 1906, pp. 274-275.

population, Sydney had one bed for every 3600 of population.[196] Robert Paton, Director-General of Public Health, was still calling on the Government to expand accommodation for infectious diseases in the early 1920s.[197]

Once established, Australia's sanatoria system followed a similar path to the overall hospital system, its adequacy being constantly questioned. Governments came under increasing pressure to be the provider of more and more hospitals and specialist disease institutions to meet the growth of hospital usage.

Conclusion

During the first three decades of the twentieth century Australia, in common with other western nations, built sanatoria for the treatment and control of tuberculosis. At the turn of the twentieth century the immediate concern was to segregate indigent consumptives from the wider community, especially those in the latter stages of the disease who were seen as especially perilous for public health. State governments ultimately financed institutions, usually outside of major cities. Building sanatoria in rural settings accorded with international medical opinion on the value of open-air treatment away from urban pollution. This dictum was observed but the locations were also the result of local social and political pressure to keep contagious patients away from populated or salubrious areas than for the benefit of would-be patients. Along with the isolation imperative was a medical claim that sanatorium treatment could cure or greatly improve the condition of early cases or, at the very least, teach them how to care for themselves and protect

[196] New South Wales, *Report of the Director-General of Public Health, New South Wales, for the Year ended 31 December 1913*, Government Printer, 1915, p. 2.
[197] New South Wales, *Report of the Director-General of Public Health, New South Wales, for the Year 1919*, (1920), p. 2; *1920*, (1922) p. 69; *1923*, (1924), p. 4.

those around them from infection. The Victorian Government built Greenvale for this purpose. As these institutions evolved, the word sanatorium became a misnomer in many instances as later stage patients dominated the sanatoria populations. Some institutions were established specifically for consumptives requiring a hospital bed and palliative care rather than a sanatorium. The goal of treating, and hopefully arresting, the disease in early stage patients was frustrated by patient reluctance to submit to the sanatorium regime for a long period of time and the dominance of later stage patients.

Despite this the medical profession and public health authorities remained faithful to the concept of sanatorium treatment seeking to change the institutions to better meet the curative goal. Thus doctors pressed for more beds, a rigorous separation of patients according to the stage of their disease and improvements to the general environment of sanatoria. Doctors blamed the system, not the treatment regime. Moreover, sanatoria had succeeded in segregating some infectious consumptives. One doctor commented that 'hope springs eternal in the consumptive's breast',[198] an aphorism that might also be applied to doctors and tuberculosis. Successful treatment usually eluded them. The disease left them with contradictory results. Some sufferers lived for many years with only intermittent periods of illness, others sought treatment and sanctuary only when close to death, others succumbed quickly, and still others appeared to respond to a range of medical interventions. After early expressions of optimism about the benefits of sanatoria, the overall results were disappointing. Yet most physicians still felt that open-air regime in a

[198] 'South Australia', *AMG*, 20 February 1904, p. 85.

sanatorium, a good diet and medical supervision was the best treatment for tuberculosis.

Medical pride, a lack of alternative treatments and the hospital environment in which the Australian sanatorium developed all contributed to the retention and expansion of tuberculosis sanatoria in Australia. As a contagious disease, tuberculosis entered a public health space it had not previously occupied. At the same time Australian states extended public health controls over other endemic contagious diseases, and in so doing separated contagious diseases from the normal hospital system. The segregation of the tubercular was consistent with the logic of contemporary public health policy on contagious diseases. Moreover, general hospitals and asylums were over-crowded. Because tuberculosis was a chronic condition and often impoverished its sufferers, the tubercular occupied much of the crowded space in asylums and hospitals. Removing these consumptives to separate institutions was also consistent with the need to address this congestion.

ILLUSTRATION 5

Women's Verandah, Waterfall Sanatorium, New South Wales

Women's Verandah, Waterfall Sanatorium, New South Wales
Source: State Records of NSW, circa 1912-1920.

ILLUSTRATION 6

Chalets at Waterfall Sanatorium, New South Wales, 1932
Source: State Library of New South Wales, circa 1915-1920.

Table 3.4

RESULTS OF TREATMENT IN SANATORIA

New South Wales

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Thirlmere	Early	42	113	1903	Benefited….78 Unrelieved ..21 Died…….13	69% 19% 12%		12%		69%		Arrested – 128 days
Waterfall	All stages, men and women	350	849	1913	Arrested …..60 Much improved..125 Improved ..141 Unimproved.66 Died…….55 Under treatment…302	7% 15% 17% 8% 18% 35%	11% 23% 26% 12% 28%	18%	28%	7%	11%	169 days

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Waterfall	All stages, men and women	350	826	1914	Arrested.....96 Much improved....119 Improved…125 Unimproved.40 Died…….. 130 Under treatment .. 316	12% 14% 15% 5% 16% 38%	19% 23% 25% 8% 25%	16%	25%	12%	19%	Discharged – 193 days Arrested – 271 days Deceased – 209 days
Waterfall	All stages, men and women	366	851	1916	Arrested…...83 Much Improved…..91 Improved…137 Unimproved.45 Died……156 Under treatment....339	10% 11% 16% 5% 18% 40%	16% 18% 27% 9% 30%	18%	30%	10%	16%	Discharged – 217 days Arrested – 309 days Deceased – 259 days

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Waterfall	All stages, men and women	408	788	1919	Arrested…...59 Much Improved…..77 Improved…102 Unimproved.17 Died……...177 Under treatment 356	8% 10% 13% 2% 22% 45%	14% 18% 23% 4% 41%	22%	41%	8%	14%	Discharged – 225 days Arrested – 256 days Deceased – 285 days
Waterfall	All stages, men and women	408	932	1921	Arrested… 59 Much Improved…107 Improved…147 Not Improved….67 Died…..….190 Under treatment…362	6% 11% 16% 7% 20% 40%	10% 19% 26% 12% 33%	20%	33%	6%	10%	Discharged – 234 days Arrested – 363 days Deceased – 275 days
Waterfall	All stages, men and women	419	925	1923	Arrested….42 Much Improved….78 Improved…159 Unimproved.83 Died……167 Under treatment…39	5% 8% 17% 9% 18% 43%	8% 15% 30% 16% 31%	18%	31%	5%	8%	Discharged – 174 days Arrested – 272 days Deceased – 272

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Waterfall	All stages, men and women	417	994	1924	Arrested.…43 Much Improved..70 Improved.203 Unimproved.90 Died…….192 Under treatment.396	4% 7% 21% 9% 19% 40%	7% 12% 34% 15% 32%	19%	32%	4%	7%	Discharged – 202 days Arrested – 287 days Deceased – 300 days (approx)
Waterfall	All stages, men and women	417	983	1925	Arrested…47 Much Improved...115 Improved..195 Unimproved.31 Died……158 Under treatment...437	5% 12% 20% 3% 16% 44%	8% 21% 36% 6% 29%	16%	29%	5%	8%	Discharged – 317 days Arrested – 624 days
Waterfall	All stages, men and women	441	931	1928	Arrested…29 Much improved.78 Improved.199 Unimproved ……..121 Died……..127 Under treat 377	3% 8% 21% 13% 14% 41%	5% 14% 36% 22% 23%	14%	23%	3%	5%	Discharged – 319 days Arrested – 787 days

Arrested cases of tb stayed in Waterfall an average of 219 days in 1913 [New South Wales, *Report of the Director General of Public Health New South Wales*, 1913, p. 153, Butlin, JLS] and 271 days in 1917. [Bd of Health New South Wales, *MJA*, January 6, 1917, 21.]

Classifications – defined in New South Wales, *Report of the Director General*, 1913, pp. 153-154.
Arrested Cases – Have no signs of active disease; temperature normal; no sputum, and able to do a fair amount of work.
Much Improved - Have slight signs of active disease; temperature normal; with or without sputum; fit for light work.
Improved – Disease more or less active, with varying degrees of improvement since admission.
Unimproved – Disease progressing, or no apparent improvement.

Figures are adapted from various sources with differing methods of expressing results. Where results and inpatients do not match, the balance represents patients still in residence at the end of the statistical period.

Sources: New South Wales, *Report of the Director General of Public Health*, 1913, 1916, 1919, 1921, 1923, 1924, 1925, 1928. *Australasian Medical Gazette*, 20 April, 1904, p. 193.

South Australia

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Kalyra	All Stages	16 ↑ 28	250	1895-1901	Cured……..40	16%				16%		4 months or 120 days.
Kalyra	Early stage	52	308	1914-1915	Arrested 46 Improved 146 Unimproved80 Died Nil Under treatment 36	15% 47% 26% 0% 12%		0%		15%		1910-1911 – 105 days 1920-21 – 179 days.

Sources: 'The Fight Against Tuberculosis in Australasia', *AMG*, 20 January, 1902, p. 33. Australia, Department of Trade and Customs, Committee Concerning Causes of Death and Invalidity in the Commonwealth, *Final Report*, 19 September 1917, (J. Mathews, M.P., Chairman), Albert J. Mullett, Government Printer for the State of Victoria, 1918, p. 29. Robin Walker, 'The Struggle Against Pulmonary Tuberculosis in Australia, 1788-1950', *Historical Studies*, 20:80, April 1983, p. 449.

Victoria

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Victorian Sanatoria (Macedon & Echuca)	Mainly early stage, but some advanced		552	1900-1904	Arrested 140 Slightly improved …49 Invalid……79 Died…….247 Unknown…37	25% 9% 14% 45% 7%		7%		25%		
Greenvale Sanatorium	Mainly early	67	546	1907	Arrested or Much Improved…337 Incurable…77 Discharged at own request or other grounds……97 Died…….3 Under treatment 32	61.5% 14% 18% 0.5% 6%	65.5% 15% 18.9% 0.6%	0.5%	0.6%	61.5%	65.5%	Average patient stay – 74 days.

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Greenvale	Mainly early	90	980	1908-1910	Arrested or Much Improved.650 Incurable…103 Discharged at own request or other grounds…171 Died……2 Under treatment…54	66.3% 10.5% 17% 0.2% 6%	70.2% 11.1% 18.5% 0.2%	0.2%	0.2%	66.3%	70.2%	80 days
Amherst Sanatorium (State)	Mainly early	32	263	1908-1910	Arrested or Much Improved.202 Incurable…30 Discharged at own request or other grounds……3 Died…….0 Under treatment…28	77% 11% 1% 0% 11%	86% 13% 1% 0%	0%	0%	77%	86%	73 days

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Daylesford Sanatorium (State)	Mainly early	12	105	1908-1910	Arrested or Much Improved…72 Incurable…10 Discharged at own request or other grounds……6 Died…….6 Under treatment….11	68% 10% 6% 6% 10%	77% 11% 6% 6%	6%	6%	68%	77%	80.68 days
Greenvale Amherst Heatherton Austin Hospital	Early Early Advance Advance	100 62 90 120	Total 940	1913-1914	Total - Cured 52 Improved 199 No benefit 146 Disease progressed 164 Died 357 Under treatment 22	6%** 21% 16% 17% 38% 2%	6% 21% 16% 18% 39%	38%	39%	6%	6%	

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Greenvale	Early, but advanced increasing	90	299	1921	Arrested or Much Improved.120 Incurable….54 Discharged at own request or other grounds……54 Deaths……10 Under treatment…61	 40% 18% 18% 3% 20%	 50% 23% 23% 4%	3%	4%	40%	50%	
Amherst	Early	60	140	1921	Arrested or Much Improved…78 Incurable.…7 Discharged at own request or other grounds……7 Deaths……..6 Under treatment…42	 56% 5% 5% 4% 30%	 80% 7% 7% 6%	4%	6%	56%	80%	

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Greenvale	***Early, but advanced increasing	96	250	1924	Arrested or Much Improved…82 Incurable…48 Discharged at own request or other grounds……62 Deaths……5 Under treatment…53	 33% 19% 25% 2% 21%	 42% 24% 31% 3%	2%	3%	33%	42%	
Amherst	***Early (men and women)	70	213	1924	Arrested or Much Improved…130 Incurable…..5 Discharged at own request or other grounds……6 Deaths……..5 Under treatment…67	 61% 2% 3% 2% 32%	 89% 3.5% 4% 3.5%	2%	3.5%	61%	89%	

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Greenvale	Early, but advanced increasing (female)	90	173	1925	Arrested or Much Improved…50 Incurable…28 Discharged at own request or other grounds……30 Deaths……4 Under treatment…61	29% 16.1% 17.3% 2.3% 35.3%	45% 25% 27% 3%	2.3%	3.5%	29%	45%	
Amherst	Early (Male)	80	209	1925	Arrested or Much Improved…121 Incurable……9 Discharged at own request or other grounds……1 Deaths……..6 Under treatment…72	58% 4% 0.5% 3% 34.5%	88% 7% 0.7% 4.3%	3%	4.3%	58%	88%	

Sanatorium	Class of Patient	Bed Nos	Inpatients	Year	Results	Results as % of total inpatients for the period	Results as % of completed cases	Mortality as % of total inpatients for the period	Mortality as % of completed cases	Arrest or Cure as % of total inpatients for the period	Arrest or Cure as % of completed cases	Average residence in sanatorium
Austin Hospital for Incurables	All stages (male and female) Classed as late stage, instit, but all stages attend		152	1924-25	Improved……7 Discharged own request or other grounds…...24 Deaths……..65 Under treatment…56	5% 16% 43% 36%	7% 25% 68%	43%	68%	5%	7%	

** State institutions in Victoria usually accommodated patients for three-month periods only, with an average duration of residence of 70 days. [Death & Invalidity Committee, p. 28] This specific limit did not apply in New South Wales and South Australia.
***During 1924 beds for men and women were gradually separated between two sanatoria, Greenvale for women and Amherst for men. [Victoria, *Report of the Commissioner of Public Health*, 1924-25, 19; 1925-26, 10.]

Sources: *Transactions of the Seventh Session of the Australasian Medical Congress,* Adelaide, 1905, Government Printer, Adelaide, 1907, pp. 30-31. Victoria, Department of Public Health, *Report* 1905-6-7, p. 81; 1908-09-10, p. 26. Victoria, *Report of the Commissioner of Public Health,* 1921, p. 27; 1924-25, p. 19, 1925-26, p. 10, JLS, Butlin Collection. Australia, Parliament, 1926, *Royal Commission on Health*, *Minutes of Evidence,* questions 21234-36.