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SEEKING THE PRIZE OF ERADICATION

A social history of tuberculosis in New Zealand from World War Two to the 1970s

Deborah Ann Dunsford

A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in History

The University of Auckland
2008
ABSTRACT

Between World War Two and the 1970s, the danger of TB disappeared for most New Zealanders. Conducted against a background of rising living standards, the anti-TB campaign saw dramatic declines in TB mortality and incidence. But tuberculosis proved far more opportunistic than expected. Its continued entrenchment at low levels among New Zealand’s poor frustrated the campaign’s ultimate goal of eradication.

In the 1940s, the Health Department’s total commitment to the anti-TB campaign indicated the danger TB represented across society. The nationwide mass X-ray programme reflected the confidence in technology and medical science of the day. It operated for nearly 30 years but its value was largely symbolic. It was a costly means of identifying cases and a more targeted scheme may well have sufficed. BCG vaccination was introduced as the final block in a wall of anti-TB measures and the mass vaccination of school children sought to protect an entire at-risk age group.

The timeframe of the anti-TB campaign witnessed the final years of sanatorium treatment. In spite of the isolation and uncertain outcome, these institutions offered many patients a positive experience, safe from the stigmatising attitudes common in society. The drug revolution allowed treatment at home and a reliable cure that, nevertheless, brought its own problems of compliance.

The decline in TB was not shared equally. High Maori TB rates fell, but still lagged European rates and, from the 1960s, a growing Pacific Island immigrant population also challenged the goal of eradication. Attempts to control TB at the border reflected racist attitudes of the time. The Health Department grappled with the ethnic diversity of TB incidence and different cultural attitudes to the disease. Now curable, TB’s potential for stigmatisation faded, yet also persisted for those high-risk groups exposed to poverty. By the late 1970s, mainstream society was beginning to stigmatising ethnic minorities and immigrants as ‘responsible’ for TB.

This thesis contributes to the history of tuberculosis and public health in New Zealand and internationally. It reveals the shifting ground beneath a public health campaign, not just in medical developments, but in the diversity of the targeted population. The thesis highlights the need for a dynamic and layered approach to public health that anticipates change and diversity and continually adjusts its activities and messages to meet them.
ACKNOWLEDGEMENTS

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I appreciated the helpful efforts of staff at the archives and libraries I have visited; special thanks go to Philip Abela at Auckland University Library. Interviews from the Alexander Turnbull Library Oral Archive, especially Sue McCauley’s series of interviews on TB, formed a vital contribution to primary sources. The former TB patients and health professionals interviewed for this project were all generous and open in speaking to me about their lives. Thanks also to Anne Foley, Chris Gulley, Shona Guy and Tony Kember for their contributions. Visits to the sites of New Zealand’s sanatoria were evocative experiences and the current owners have graciously shared information and photographs. I am very grateful to Ruth and Mike Houghton of Pleasant Valley, Max Annabell and Kate Norman of Pukeora, and also to Margaret Long and Jan Harris of the Otaki Historical Society.
It has been a pleasure to work with the diverse group of social scientists from the TB project. My eyes have been opened to the possibilities of their disciplines and this has influenced my own work. Staff and post-graduate students in the History Department have provided a very sociable support network. Of special importance, the medical history group commented on and challenged my work, providing valuable feedback, an incentive for improvement, but also sympathetic collegiality. My friendship with Jennifer Ashton grew out of the shared experience of earlier theses and she generously put her expert eye to this one. Barbara Batt, Gay Fortune, Debbie Jowitt and Nisha Saheed helped me stay connected to life beyond the thesis.

Many thanks also go to my family and friends, who have remained interested and supportive, while no doubt wondering if the project would ever finish. Anne Foley deserves special thanks for providing a home away from home, and a hectic social life, in Wellington. My love and gratitude go to my husband, Kevin, who has been endlessly supportive and always reassuringly confident of a good result.
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<th>Description</th>
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<td>Alexander Turnbull Library, Wellington</td>
<td>ATL</td>
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<td>Appendices to the Journals of the House of Representatives</td>
<td>AJHR</td>
</tr>
<tr>
<td>Archives New Zealand Head Office (Wellington)</td>
<td>ANZW</td>
</tr>
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<td>Archives New Zealand (Auckland)</td>
<td>ANZA</td>
</tr>
<tr>
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<td>ANZC</td>
</tr>
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<td>Archives New Zealand (Dunedin)</td>
<td>ANZD</td>
</tr>
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<td>AHB</td>
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<tr>
<td>Auckland Star</td>
<td>Star</td>
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<tr>
<td>Bacillus Calmette Guerin vaccination</td>
<td>BCG</td>
</tr>
<tr>
<td>Christchurch Press</td>
<td>Press</td>
</tr>
<tr>
<td>Department of Health</td>
<td>DH</td>
</tr>
<tr>
<td>Director, Division of Tuberculosis</td>
<td>DDT</td>
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<tr>
<td>Division of Tuberculosis</td>
<td>DT</td>
</tr>
<tr>
<td>Hocken Library, Dunedin</td>
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<tr>
<td>Medical Officer of Health</td>
<td>MOH</td>
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<td>Medical Officers of Health</td>
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<td>New Zealand Herald</td>
<td>NZH</td>
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<tr>
<td>New Zealand Parliamentary Debates</td>
<td>NZPD</td>
</tr>
<tr>
<td>Taranaki Research Centre, New Plymouth</td>
<td>TRC</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>TB</td>
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FIGURE 1: Cities, Towns and Sanatoria in New Zealand

Layout: desuza.communications (www.desuza.com)
FIGURE 2: Named Hospital Boards
(does not include all Boards)

Source: Julius Petro Terrain Map of New Zealand, Land Information New Zealand.
Layout: desuza.communications (www.desuza.com)
INTRODUCTION

‘Tuberculosis, like the poor, is always with us, or, at all events, has been in the past.’¹

This contribution to the parliamentary debate on the 1948 Tuberculosis Bill by Labour Member of Parliament Dr Martyn Finlay conveyed how common-place tuberculosis (TB) was at that time but also hinted at the growing hope this would cease to be so in the future. It was indeed the cusp of a new era in tuberculosis treatment, one that would witness significant decline in TB incidence and death rates. Yet over the following decades, Finlay’s linking of poverty and the resilience of tuberculosis would prove disappointingly perceptive. So, too, his remark ‘that our familiarity with tuberculosis has bred, if not contempt for the disease, at least complacency’ was an apt concept for TB in future decades. The complacency was no longer related to familiarity with the disease because of the lack of a medical cure but to unfamiliarity because of TB’s virtual invisibility, in spite of the continuing pool of tuberculosis among society’s poorest and most disadvantaged groups.²

This social history of tuberculosis in New Zealand from World War Two to the 1970s explores the anti-tuberculosis public health campaigns that were significant both for the breadth of their approach and their stated goal of

² ibid.
eradicating the disease. The use of mass screening technology provided the impetus for and confidence in the campaign, even before effective drug therapy was available, and was indicative of the high level of confidence in medical science and new technology in the mid-twentieth century. For part of New Zealand’s population, the promise of eradication was as good as fulfilled, and this can be seen in changing attitudes to the disease as well as its declining incidence; yet the link between tuberculosis and the poor had always been strong and became more so. Social deprivation and ethnic disparity remained persistent and confounding hallmarks of residual TB incidence in New Zealand, reflecting the long-standing trend of high incidence among the indigenous Maori people, as well as changing ethnic patterns of immigration. This study examines a public health campaign based on the promise of modern medicine and technology and reinforced by political commitment, social reform and a buoyant economy. The campaign’s goal was to eradicate the most significant of infectious diseases. There were elements of great success but the campaign’s ultimate failure fortifies the piercing truth of the link between tuberculosis and poverty.

**Tuberculosis in New Zealand**

Tuberculosis is an infectious disease caused by the *mycobacterium tuberculosis* (*M. tuberculosis*) bacillus. *M. tuberculosis* can reside in and infect any part of the human body but pulmonary (tuberculosis of the lung) is by far the most common form. Humans can also be infected by the animal form, *mycobacterium bovis*, through the consumption of infected meat and milk, resulting in extra-pulmonary forms of the disease. Prior to the discovery of *M. tuberculosis* by Robert Koch in 1882, TB was not known as contagious and was thought to be a wasting disease
arising from a person’s constitutional weakness, hence the name of consumption. This thesis is concerned mostly with pulmonary tuberculosis, the dominant form of the disease in humans and the focus of twentieth-century public health campaigns. Pulmonary TB holds the greatest risk of contagion, being passed between humans by droplets from coughing and spitting, and direct contact with infected persons, their belongings or environment. Disease follows infection when an exposed person has poor immune function or if a healthy person receives frequent exposure to infection. It is important to note that contact with the bacillus does not necessarily lead to TB disease, for a healthy person’s immune system will ward off casual exposure to the infection with ease. However the nature of the bacillus means it is able to remain within the body as latent tuberculosis infection (LTBI) with the potential to develop into TB at a later time if the person’s immune system becomes damaged or stressed.

Tuberculosis came to New Zealand with European settlement, affecting colonists and to an even greater extent Maori. In 1901, the New Zealand Health Department instigated compulsory notification of pulmonary (but not other forms) of tuberculosis. The accurate recording of tuberculosis deaths for European New Zealanders also occurred from this time and showed a steady decline, in common with wider trends in the Western world. The decline that occurred before the 1950s in the absence of an effective drug treatment has been attributed to improvements in living standards from the mid-nineteenth century.  

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Figure 3 shows the decline in tuberculosis deaths in New Zealand for Europeans from 1877, and for Maori from 1926. Statistics for Maori before that date either do not exist or are extremely inaccurate. As death rates fell to extremely low levels from the 1950s, death from tuberculosis ceased to be meaningful measure of the amount of disease in the community (for actual figures, see Appendix I).4

Compulsory notification of all forms of TB was introduced in 1940. Figure 4 shows the notification rate per 100,000 of mean population of all forms of TB from 1940 to 1980. The rate peaked in 1943 and, the occasional spike apart, trended steadily down to a low level by 1980.

It is difficult to produce continual series of statistical measures for the period from 1940 to 1980. The notification rates in Figure 4 do not show the differences in ethnic or racial rates that were a continuing feature of tuberculosis in New Zealand. Figure 5 shows the fluctuating and much higher rate of new notifications of respiratory tuberculosis for Maori from 1945 to 1978, together with its continued elevation relative to the European rate (see also Appendix VII).
In addition, as Figure 6 below shows, the 1979 rates show new cases of tuberculosis among Pacific Islanders being reported at rates substantially above the rest of the population including Maori.

<table>
<thead>
<tr>
<th></th>
<th>Other*</th>
<th>Maori</th>
<th>Pacific Islander†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of new cases</td>
<td>294</td>
<td>171</td>
<td>77</td>
</tr>
<tr>
<td>all forms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td>1.05</td>
<td>5.97</td>
<td>10.47</td>
</tr>
</tbody>
</table>

* Includes Europeans and others not included elsewhere.
† Pacific Islanders included: Samoan, Cook Island Maori, Niuean, Tokelauan, Tongan, Fijian.
The dramatic falling away of tuberculosis deaths and notifications is the simple statistical backdrop to this study of the anti-TB public health campaigns of the mid-twentieth century. As Figures 5 and 6 indicate, that steady downward trend was experienced unequally across New Zealand society, perplexing public health professionals and their hopes for eradication, and is a major theme throughout this thesis.

**Historiography**

Tuberculosis was of minor interest to historians and social scientists before the late decades of the twentieth century, medical history until that time being written mostly by scientists, medical researchers and practitioners. Physician Henry Sigerist’s *Civilisation and Disease* in 1942 discussed disease including tuberculosis in relation to society’s ideas, institutions and structures. While he was speaking before the discovery of streptomycin, he conveyed the progressive view of medical science of the time saying that ‘the day is not so far distant when tuberculosis will also be a disease of the past’. Sigerist’s confidence was representative of the medical profession as a whole, and increasingly the public as well; it dominated public health efforts against tuberculosis throughout the timeframe of this thesis. In 1952, microbiologists and environmentalists René and Jean Dubos published their classic study, *The White Plague: Tuberculosis, Man, and Society*. A refined account of the rise and decline of tuberculosis in Western industrial society during the nineteenth and first half of the twentieth centuries, it focused on the scientific and medical courses of cause, diagnosis, treatment and prevention. Insightfully and memorably, however, the Duboses

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also identified tuberculosis as a social disease; they pointed to the ‘great outburst of disease’ during the industrial revolution and the decrease in infection and mortality rates through the web of improvements in living standards, hygiene and labour conditions, together with societal assumption of responsibility for public health. *The White Plague* was published at a time of exciting medical developments, when public health authorities in the developed world anticipated that tuberculosis could shortly be eradicated entirely through chemotherapy. Importantly for this thesis, the Duboses instead predicted eradication would not be achieved simply through medical technology but would entail prevention through public health programmes and continued human resistance to the disease through a high standard of living for all.⁷

Since the late 1980s, social historians have recognised tuberculosis as a rich seam and mined it intensively. Pioneering analyses of tuberculosis within a wider social context in Britain and the United States were published in 1988 by Linda Bryder, F. B. Smith and Michael E. Teller.⁸ Bryder and Smith scrutinised the first half of the twentieth century especially. This was a period that saw bursts of intense political and public health activity, heightened public awareness and, eventually, medical developments that combined to overcome tuberculosis in Britain. Their studies revealed, however, just what a small part most anti-TB activities and especially the institutional solution of the sanatorium played. Bryder linked motivations for the anti-tuberculosis campaign directly to the

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⁷ ibid.
wider concerns of the day about ‘national efficiency’ and the survival of the European race and British Empire and concluded that the therapeutic and preventive measures of the period made very little contribution to the decline of the disease.\(^9\) She illustrated that, although tuberculosis was recognised as a disease of poverty with its roots in poor nutrition, poor housing and poor living standards, the middle-class members of the National Association for the Prevention of Tuberculosis could not conceive that social reform might be the answer to their problem and instead concentrated on the education of the poor.\(^{10}\) Smith similarly found that, despite growing evidence that the value of the sanatorium was uncertain, the alternative of social reform was politically unacceptable. He too argued that the decline of tuberculosis up to 1950 was not so much due to medical and public health initiatives as to the slowly increasing standard of living that allowed the development of increased individual resistance to the tubercle bacillus.\(^{11}\) In his book on TB in early twentieth-century America, Teller identified the limited effectiveness of sanatoria and most other therapeutic and preventive efforts in the decline of tuberculosis. His analysis placed the individual lay anti-tuberculosis associations that sprang up across the country as a refinement of the concept of public health in the United States, and he linked the traditional tension-laden model of charity and self-help to a more modern model of government responsibility for public health.\(^{12}\)

From the 1990s, further monographs extended the social historiography of tuberculosis; accounts of the decline of the disease in France, Ireland, Canada, France, Ireland, Canada, France, Ireland, Canada,

\(^{10}\) ibid, pp.19-20.
\(^{11}\) Smith, 1988.
Japan and the United States were published, confirming trends but also identifying international diversity in time and ideology.\textsuperscript{13} David Barnes’s study of tuberculosis in France ended at the First World War as the newspapers shouted, ‘[i]t is not enough to defend our borders / We must defend our race / It is threatened by tuberculosis, by slums, and by alcoholism’.\textsuperscript{14} Like Bryder, he placed the motivation for the turn of the century campaign against tuberculosis firmly within the eugenic fears of the day and showed that the major remedies of education and self-help largely mirrored those of England and the United States, although France was later in legislating for dispensaries and sanatoria. Greta Jones’s study of tuberculosis in Ireland provides further evidence about the ineffectiveness of turn-of-the-century public health campaigns and institutional solutions but also offers a point of contrast in the epidemic’s timeframe. Ireland’s late urbanisation meant its TB rates did not peak until 1904, whereas the earlier industrialised and urbanised countries had declining rates from the mid-1800s. In line with others, Jones also argued that TB was already declining at the time of effective chemotherapy, as a result of better standards of living, improved public health services and greater government willingness to improve social conditions.\textsuperscript{15} 

In emphasising the role of improved living standards in the decline of tuberculosis, many studies of TB supported Thomas McKeown’s thesis that the


\textsuperscript{14} Jones, 2001, p.247.

\textsuperscript{15} ibid, pp.232-5.
improved health of industrialised populations came about through better nutrition rather than sanitary and medical interventions such as vaccination and drug treatment. However, nutrition is just one aspect of socio-economic status and challenges to McKeown by Simon Srzeter and Anne Hardy have since reasserted the importance of public health initiatives, especially in housing and hygiene.

A common feature of the earlier studies of tuberculosis has been the intense interest in the early twentieth-century campaigns and institutional solution of the sanatorium; the treatment of the post-chemotherapy period is often regarded as an epilogue to the main narrative. In taking up the story from the earlier point of conclusion, this thesis examines those mass public health campaigns, the closing of the specialist TB institutions, and changes to the demography of TB incidence and to patient experience of the disease under chemotherapy. It explores the importance of socio-economic improvements and public health measures in the presence of effective chemotherapy as an example of what historian Anthony Brundage has called the ‘open-ended’ nature of history.

When the first social histories of tuberculosis were published in 1988, the disease had declined to the point where it was invisible in the affluent sectors of most developed societies and its importance seemed to be mainly historical. However, the New York epidemic from the late 1980s and elevated associations of the

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disease — especially drug resistant strains — with HIV-AIDs, intravenous drug use, alcoholism and homelessness suddenly made TB alarmingly visible again. This new public awareness of TB in developed countries including New Zealand was translated into a feeling that the disease had ‘returned’; the hopes for eradication of half a century before were now seen as unfulfilled and raised pertinent questions about what had been achieved by the post-war anti-tuberculosis public health campaigns when the ‘problem’ of TB in New Zealand appeared to have been solved through an effective drug cure. As this thesis will show, the ‘problem’ had waned and changed faces but it had not gone away.

In 1991, Linda Bryder contributed to the historiography of tuberculosis in New Zealand with essays in two distinct books. In *A Healthy Country: Essays on the Social History of Medicine*, social historians discussed aspects of medicine and health in the context of New Zealand’s social, economic and political development. In contrast, in A. J. Proust’s edited collection, *History of Tuberculosis in Australia, New Zealand and Papua New Guinea*, most of the contributors had practised medicine in the field of tuberculosis; their essays were valuable for being informed by their professional experience, although their perspectives were often dominated by medical rather than social concerns. Bryder’s succinct essay on tuberculosis in New Zealand confirmed the same issues seen in other Western countries: the anti-tuberculosis campaigns of the early twentieth century fuelled by fears around the health and strength of the nation; the setting up of public health departments and lay anti-tuberculosis

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associations; the emphasis on institutional care rather than social reform. It was also notable for looking beyond the arrival of chemotherapy in the 1950s and identifying the continuation of elevated TB rates among Maori and Pacific Island people. ²¹ This difficult feature of New Zealand’s post-war TB experience is a recurring theme that is expanded on throughout this thesis.

Elevated TB rates among indigenous people and migrant or impoverished ethnic groups are a major theme in the history of tuberculosis worldwide in the twentieth century, and the experience of individual countries reflects the position of ethnic groups within the structure of each society. American historian Randall Packard’s 1989 book on TB in South Africa positioned that country as an outstanding example of the failure of twentieth-century TB drug treatment, in the absence of social programmes to improve living standards. Black migrant mine workers were at the centre of Packard’s analysis, and he concluded that their lack of political power and poor living standards under the apartheid political structure lay beneath their continued high TB rates. ²² Fiona Kilpatrick’s 2002 thesis was a case study of the anti-tuberculosis work of one Cape Town City Council TB clinic from the 1940s to the 1960s. She concluded that, although the clinic provided a worthwhile medical service, the accompanying social reform was rhetorical rather than real, contributing to the city’s failure to reap the full advantage of drug treatment from mid-century. ²³ Although focused mainly on an earlier time-period in the United States, Peggy Jane Hardman’s 1997 PhD thesis showed a situation comparable to South Africa; in Texas, segregation

meant that, for social and political reasons, tuberculosis in the African-American population was under-funded in terms both of treatment and social reform. Geographer Laura Kaye Moorehead’s PhD thesis analysed African-American TB mortality in mid-twentieth-century Los Angeles and found it correlated to poverty and, more specifically, lowest average incomes, oldest housing and very high rates of residential segregation. Clinical psychologist Pat Sandiford Grygier has documented the removal of Inuit in Canada, especially children, to sanatoria far from their homes and former public health officer Robert Fortuine has similarly examined the devastating effect of the tuberculosis epidemic on the indigenous people of Alaska. Such studies provide important resonances with New Zealand’s ongoing high rates of tuberculosis among its indigenous Maori people and post-war Pacific Island immigrants. Maori dislike of distant institutional treatment was a factor public health authorities had to address, especially prior to effective drug treatment. The impact of living standards and overcrowded housing on TB incidence, especially for Maori and immigrants from the Pacific Islands during the post-war years, are themes which will be developed throughout the thesis.

Australian historians have examined public health and social aspects of tuberculosis from the perspective of individual states; the similarity of Australia’s colonial cultural origins and close relationship to New Zealand make for useful comparison.\footnote{See Michael Roe, \textit{Life Over Death: Tasmanians and Tuberculosis}, Tasmanian Historical Research Association, Tasmania, 1999; Peter Tyler, \textit{No charge – No undressing: fronting up for good health}, Community Health and Tuberculosis Australia, Sydney, 2003.} Criena Fitzgerald’s study confirmed both public and medical confusion about the nature of the disease, as well as the ineffectiveness of treatments and control initiatives before 1940. Fitzgerald’s 1900-1960 timeframe highlights the role of mass X-ray and the reframing of tuberculosis as a disease whose prevention required the vigilance and compliance of everyone to ensure the whole community was safe. Her argument that TB was consciously made ‘everyone’s business’ at this time was echoed in the propaganda accompanying New Zealand’s own mass X-ray campaign and is discussed in this thesis.\footnote{Criena Fitzgerald, \textit{Kissing Can Be Dangerous: The Public Health Campaigns to Prevent and Control Tuberculosis in Western Australia, 1900-1960}, Crawley, WA, 2006.}

The adoption of the Bacillus Calmette-Guérin vaccine (BCG) as a preventive strategy against tuberculosis has been compared along national lines. Georgina Feldberg’s study on TB in America focused on BCG in the United States context, with comparison to Canada. She demonstrated that United States reluctance to use BCG was based on the firmly held belief that the cause of tuberculosis was both bacteriological and sociological — not just the seed but the soil — and she argued this widespread understanding by physicians and researchers blinded them to the potential of BCG vaccination. In dealing with the ‘seed’, it was believed that vaccination would potentially inhibit improvements to the ‘soil’. Feldberg also argued that middle-class institutions such as the medical
profession, voluntary organisations and public health authorities heavily
influenced the campaign to control and prevent TB, but she only obliquely
analysed BCG in terms of those middle-class values and institutions when she
concluded that the United States concern with the ‘soil’ was academic and futile
as long as they maintained their aversion to social and economic reform.30 It was
left for Bryder to draw a wider conclusion in her 1999 paper which examined
BCG in the context of contrasting responses in Scandinavia, Britain and the
United States. She argued that while, on the surface, the various debates over
BCG use were based on science, differences in the adoption of BCG were more
closely related to where on the political spectrum each society’s beliefs about the
provision of health services and welfare lay.31 This thesis examines New
Zealand’s post-war adoption of BCG as part of its broader social policy and
builds on Bryder’s analysis. The life of the mass secondary schools campaign
also indicates the breadth of New Zealand’s public health campaign against TB
and the changing nature of TB incidence.

The patient experience of tuberculosis, especially before drug treatment, has been
of special interest to social historians, who have drawn on the social sciences and
other humanities to explain responses to the disease and its treatments. There has
been increasing recognition that the experience of tuberculosis has differed
according to individual and group social conditions, cultural beliefs, knowledge,
prejudices and traditions. Sheila Rothman’s 1994 monograph borrowed from
psychiatry and anthropology and drew individual narratives of illness from

30 Georgina D. Feldberg, Disease and Class: Tuberculosis and the Shaping of Modern North
31 Linda Bryder, “We shall not find salvation in inoculation”: BCG vaccination in Scandinavia,
personal letters and manuscripts. She traced the reactions and experiences of
individuals in the United States as they tried to regain their health and identified
the differences in response according to time, geography, class and gender.32
Katherine Ott also explored the experience of illness in the United States from
the 1870s to the current day. In tracing the changing notions about TB, its
treatment and the way patients dealt with the disease, she argued that the
definition of tuberculosis is not fixed but shifts according to time, society and
culture.33 Charles Rosenberg, in his introduction to Framing Disease: Studies in
Cultural History, also emphasised the influence of the wider social context on
patient experience of chronic disease.34 This history contributes to that
historiography, especially in relation to the changing ethnic composition of TB
incidence and the shifting stigmatisation of the disease.

Judith Walzer Leavitt in her exploration of Mary Mallon’s incarceration as a
healthy carrier of typhoid in the United States in the early twentieth century
discussed an extreme example of the way in which personal liberty is balanced
against the wider public health.35 In New Zealand, the post-war period saw
voluntary screening by mass X-ray defined for the entire population as a personal
and public duty, although it was never made compulsory. On an individual basis,
infectious patients who refused to comply with the new drug treatments and, like
Mary Mallon, were perceived also as unco-operative, were threatened and very

35 Judith Walzer Leavitt, Typhoid Mary: Captive to the Public’s Health, Boston, 1996.
occasionally incarcerated in the name of public health. Drawing directly on the example of tuberculosis and exploring the tension between individual rights and public health, Barron Lerner’s sensitive and engaging study of patient confinement in Seattle’s Firland Sanatorium after World War Two was published in 1998. Lerner showed public health authorities’ eagerness to contain the infectious, especially those who were also unco-operative, that is, usually vagrant and/or alcoholic. At Firland, what had been intended as an exceptional measure became routine.  

As will be shown in this thesis, the ‘recalcitrant’ patient was an issue also in post-war New Zealand, though it had only mild echoes of the Seattle example.

Within the New Zealand historiography of TB, Linda Bryder has been a significant contributor and has provided the basis on which this study is built. The major position of tuberculosis on the scale of menaces to public health was also made clear in Derek A. Dow’s history of the New Zealand Department of Health and its particular toll on Maori was considered in his *Maori Health & Government Policy, 1840-1940*. Histories of many of the country’s hospitals and hospital boards illustrate differences in the extent and type of tuberculosis service provided from board to board. John Angus’s 1984 history of the Otago Hospital Board shows the early reluctance with which some hospital boards, each with its own political and fiscal agenda, took on the care of ‘consumptives’. This was largely overcome from the 1940s when TB services were co-ordinated under the direction of the Health Department’s Division of Tuberculosis; previously

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reluctant boards also reaped the cost-benefits of domiciliary drug treatment and the rapid closing of TB wards and sanatoria. Dr John McKenzie’s *A History of Timaru Hospital* explains how the serendipitous residence in the district of one thoracic surgeon led to the development of an unexpectedly high level of expertise in tuberculosis surgery at this minor hospital. *Up the Hill: Cashmere Sanatorium and Coronation Hospital, 1910 to 1991*, by chest physician, Dr Tom Enticott, is representative of the practitioner-led institutional history. *Up the Hill* officially commemorates the life of this sanatorium on the hill near Christchurch but, more importantly, provides a collection of memories of the patients and staff that give insight into the highs and lows of day-to-day sanatorium life.

Patient accounts are intrinsic to the experience of being stigmatised by having tuberculosis. There has been a long history of fear of the contagion and incurability of TB; patients with the disease found themselves, in Erving Goffman’s analysis, discredited and shamed in the eyes of others. Susan Sontag has explained further the stereotypes behind such stigmatisation, referring to the ‘lurid metaphors’ that make up the ‘landscape’ of tuberculosis. In the timeframe of this study, the sense of stigma attached to tuberculosis was in a state of change, yet the equation of TB to such abstractions as an infectious menace, a mysterious and insidious plague, a death sentence, the theft of life or years or a

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moral contagion lasted beyond the arrival of chemotherapy.\textsuperscript{42} Gussow and Tracy have extended our understanding of stigma by emphasising diversity of experience over time, place, ethnicity, society and culture and, importantly, the manner in which stigma could be removed, denied or managed.\textsuperscript{43} Stigmatisation has been recognised as fluid rather than fixed and as in Ilse J. Volinn’s words a process ‘of social interaction leading to rejection of persons with certain “objectionable” characteristics’.\textsuperscript{44} In their work on HIV-AIDS, Richard Parker and Peter Aggleton have extended the concept further to show how ‘stigma feeds upon, strengthens and reproduces existing inequalities of class, race, gender and sexuality’.\textsuperscript{45} These are all useful guiding points for an examination of the public health campaign to overcome stigma in New Zealand in the post-war period, and are explored in this thesis.

Also linked to the discussion of stigma, immigration has moved from being a minor consideration in studies of TB in the first half of the twentieth century to a defining aspect of tuberculosis in the developed world post-World War Two. Alan Kraut’s work focuses on the United States in the earlier time-period of the turn of the twentieth century. It still offers compelling insight into the recurring ways in which disease has been the medium through which immigrants have been identified and condemned as ‘undesirable’ by a host population. Kraut

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observes ‘the double helix of health and fear’ that stigmatises and excludes immigrants on the basis of what is claimed to be the danger of contagion but is really a rejection of difference.46 Bryder’s 1996 article on changing attitudes towards British immigrants with tuberculosis arriving in New Zealand at the turn of the twentieth century shows early moves to exclude the ‘unhealthy’ and ‘diseased’.47 Alison Bashford has explored the role of hygiene and public health in the development of national identities, and in particular as a tool in the immigration process for the exclusion of those groups (races) deemed unfit or merely undesirable.48 The development of intensive screening of immigrants for TB is a continuing feature of the New Zealand experience after 1939; in the social and political context, the discussion of TB among immigrants also illustrates the unofficially racist policies of the time, the changing ethnic make-up of New Zealand’s immigrant population and the fading of tuberculosis as an important public health priority within the host society.

Thesis sources, themes and structure

This study of the anti-tuberculosis public health campaigns from World War Two to the 1970s is based primarily on an examination of Health Department files relating to tuberculosis held by Archives New Zealand in Wellington, Auckland, Christchurch and Dunedin. Further Archives New Zealand files used were those of the Auckland Hospital Board and other government departments where relevant. Other primary sources consulted were the Department of

Health’s Annual Reports, the New Zealand Parliamentary Debates and the New Zealand Gazette. I consulted journals published during the period, the New Zealand Medical Journal in particular. Daily newspapers were viewed to ascertain press coverage of tuberculosis across the period.

Two small regional collections of papers related specifically to mass X-ray were the Taranaki Mobile X-ray Unit papers at the Taranaki Research Centre – Puke Ariki, New Plymouth, and the Louise Croot papers at the Hocken Library, Dunedin. A valuable primary source was the collection of Preventive Medicine Dissertations of the Otago Medical School from the 1930s to the 1960s. Published memoirs and personal papers, such as the Eric Lee-Johnson papers at the Alexander Turnbull Library, were also used.

Thirteen oral interviews of medical practitioners, nurses, public health professionals, a politician and patients were conducted to support archival sources and provide an individual and human perspective. Most interviewees were obtained through the snowball method, generated by personal referral, responses to a paper presented at the Auckland Medical History Society and through the public health nurses of the Auckland District Health Board. Ethics approval was gained from the Auckland District Health Board Ethics Committee as part of the approval given to the Health Research Council of New Zealand / University of Auckland ‘Political Ecology of Tuberculosis in Auckland’ project. I was also fortunate to access the Alexander Turnbull Library Oral History Archive, in particular, the outstanding interview series conducted by Sue McCauley on tuberculosis and the sanatorium experience.
As Anna Green has written, oral history allows ‘access to the world of the majority who do not leave written accounts of their lives’. Of special relevance, Roy Porter’s view that ‘it takes two to make a medical encounter’ highlights the dangers of overlooking the patient experience in the writing of medical history. In this study, oral interviews are the major contributor to a chapter on patient experience and provide vital strands in narrative and analysis throughout. Such memories give insight into the day-to-day life, the physical, social and emotional responses of tuberculosis patients to their illness and treatment, and into the lives, actions and motivations of medical professionals.

The sanatorium life described by many interviewees is made up of ‘hospital tales’, which have been identified by Alessandro Portelli as ‘a coherent, if largely unrecognized, narrative genre, found with little variation across national, cultural, and linguistic boundaries’. A common aspect to these hospital tales was the remembering by former patients of their determination to overcome their illness and be cured. They did not view this as heroic but as a vital part of the mental and emotional process of cure. The identification of such strong resolve can also be seen as providing a sense of individual control over their lives at a time when they were very real captives of their illness, the institution and the limitations of treatment at the time. The identification of personal agency can also be interpreted as balancing the feelings of some that the time spent in a

49 Anna Green, ““Unpacking” the Stories”, Anna Green and Megan Hutching (eds), Remembering: Writing oral history, Auckland, 2004, p.12.
sanatorium were stolen years. The ‘dynamic and constructive dimensions of remembering’ are reflected in subtle differences in the act of remembering by patients and professionals. 52 Former patients interviewed about their experience at sanatoria sometimes expressed ambivalence about their ability to remember the detail of institutional life and concern that the value of their memories was insignificant. Some said they had thought little about the experience since and had got on with their lives, reinforcing the sense that they regarded their time in a sanatorium as an aberration, an interruption, to their real lives.

In contrast, physicians and nurses interviewed about their professional lives, and sometimes their experience as patients also, were more confident of their memories. This may indicate that such professionals’ memories of their working lives were reinforced and structured by their training, day-to-day routines and status. They regarded their professional work as having been significant and worth remembering. As patients too, their greater knowledge of their illness also made the details of any treatment easier to recall. Although former patients maintained they got on with their lives after leaving the sanatorium and thought little of the experience, they nevertheless appeared to have retained a degree of interest in the disease, often expressing their concern at contemporary reports of its resurgence.

The attitudes of public health professionals and the public, the recognition of the importance of socio-economic factors in combating TB, the ethnic diversity of the TB experience including both Maori and later immigrants from the Pacific

Islands and the public responses which includes the stigmatisation of TB patients dominate this thesis. Chapter One describes the initiatives arising out of the onset of World War Two, the X-ray screening of some at-risk groups and resulting optimism about being able to counter TB that culminated in the establishment of a dedicated Division of Tuberculosis. Chapter Two explores the subsequent period of intense activity that saw the promised expansion and co-ordination of the country’s TB services, an increase in institutional accommodation and the first use of BCG vaccination for at-risk groups. The Tuberculosis Act tightened the Health Department’s ability to require hospital board service provision and the population received the widespread benefits of increased social security, the state housing scheme and full employment. Chapter Three examines the nationwide mass X-ray scheme, including the pioneering Taranaki Mobile X-ray Unit that served as a pilot, and assesses the impact of mass X-ray on TB notifications. Chapter Four covers the use of BCG vaccination and the targeted mass secondary schools campaign. Both the mass X-ray and BCG campaigns helped to reform attitudes toward tuberculosis during this time, although their effect on TB incidence is questionable. Drawing extensively on conducted and archived oral interviews, together with official and private archival sources, Chapter Five traces the changing patient experience of TB, from uncertain cure and lengthy sanatorium treatment to the confidence of drug therapy and domiciliary treatment. Chapter Six examines the ‘problem’ of immigrants with TB arriving in New Zealand and the ongoing attempts by public health officials and TB physicians to introduce more thorough checks for TB in immigrants and visitors to New Zealand. This intersection between New Zealand’s changing immigrant profile and the overall decline in TB incidence
brought disappointment for TB physicians and changes in those groups regarded as a TB problem in New Zealand. Chapter Seven extends the theme of changing responses and tracks the decline of stigma but also its persistent and evolving nature.

**Modern trends and historical experience**

The years since 1988 have seen a flood of interest in tuberculosis as monographs, journal articles and post-graduate theses have sought to place the historical experience of the disease within the context of different countries, cultures, social surroundings and timeframes. Since the 1990s, these works have also been written against the perception of a resurgence of the disease in developed countries; there has been an element of public alarm over the spectre of drug-resistant strains of disease especially among those living on the fringes of society with multiple social and health problems, such as homelessness, alcoholism, intravenous-drug use and HIV-AIDS. Yet, globally, TB incidence has tracked a divided course since the 1950s. Effective drug treatment and high standards of living combined to reduce TB deaths and incidence dramatically in the developed world, including New Zealand. This was not the case in the developing world where, in the absence of population-wide public health programmes and the presence of widespread poverty, TB continued to have the highest death rate of the infectious diseases. As TB dropped out of sight in developed countries, it flourished in developing countries; in 1993, the World Health Organization declared TB a global emergency.\(^53\) This significant development recognised the need for international solutions as well as the inter-

connectedness of the emergency in the developing and the ongoing struggle against the disease in the developed worlds.

Contrary to the general impression in New Zealand and other developed countries that tuberculosis had been eradicated by drug therapy, a residual pool of disease remained in these societies that confounded public health programmes and, increasingly, chemotherapy. Understandably, social historians concentrated first on the energetic period of the early twentieth century, followed by the mid-century technological and medical climaxes of effective diagnosis, drug treatment and available vaccine. The post-war period was often treated as little more than an epilogue to the main story. This study of New Zealand’s anti-tuberculosis campaigns from World War Two to the 1970s extends the exploration of the influence of social factors on tuberculosis incidence in a way that earlier studies concentrating on the rise and fall of sanatorium treatment did not. This provides a longer view of the place of low socio-economic status in the ongoing incidence of tuberculosis in New Zealand, together with its greater concentration among at-risk ethnic and new immigrant groups. Poverty was always an important factor in TB incidence but, between World War Two and the 1970s, it became a crucial element in the continuing high rates of TB among the traditional at-risk group of Maori and new groups such as immigrants from high-incidence countries of origin. Evidence of declining disease rates and huge confidence in medical science and technology led to the expectation that TB would be eradicated. This led in turn to the virtual invisibility of the disease and a sense of complacency as public health efforts moved on to other projects. This thesis examines an important and apparently successful public health campaign
in a time of action and confidence; it also reveals the limitations of that success and the continuing role of poverty as critical to tuberculosis incidence.