COMMENTARY

MUNGANA AND THE MUNGANA HOSPITAL

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ABSTRACT

The charred and sun-bleached stumps, the sole remnant of the Mungana Hospital stand quietly, enigmatically under the vivid blue North Queensland sky in the ghost town now reclaimed by the bush. The stories of that vibrant, often violent, short lived mining town with its frequently insolvent mining companies and its medical problems are tantalizingly close and distant at the same time. The background and available details of its medical history are related, and the hypothesis that town demographics posed public health issues that persist today in remote and isolated towns in rural Queensland is proffered.

KEY WORDS: Mungana Hospital, Mary Jane and Girofla Mines, North Queensland, Remote Medicine, Chillagoe, Mining Towns.

SUBMITTED: 5 March 2011; ACCEPTED: 17 July 2011

RESEARCH METHODS

Information about the Mungana Hospital is elusive and limited. Primary sources of information are found in the Queensland State Library, the Queensland Archives (QSA), the Chillagoe Museum and local newspapers archived at the Trove website (Trove), plus biographies and autobiographies of significant local personnel and other citizens of the area. Comparisons with the present day are taken from the extensive literature on the problems of rural medicine as published by the Medical Journal of Australia.

PREHISTORY

The Mungana and Chillagoe region, a coastal area with a coral reef in the Devonian period 400 million years ago, has changed with the passage of time and geological processes, through the reign of the Dinosaurs, when giant marine reptiles swam in the warm waters of the Apian Sea, through the isolation of the Australian land mass, with its unique marsupial fauna, to the landscape of today with caves and rich mineral deposits.

MINING ERA

Chillagoe, named originally from the chorus of an old sea shanty, is located in Northern Queensland 141 km west of Mareeba, 205 km west of Cairns, at 352 metres above sea level. Gold was discovered nearby at the Palmer River and Hodgkinson Goldfields in the 1870's attracting prospectors who spread out over North East Queensland finding many small goldfields. The area was also good cattle country and pastoralists followed to the area (Queensland Government, 2006).

Chillagoe was first settled as a pastoral property by William Atherton who lived on the Atherton Tableland with his father John and his brother Edmund, and subsequently played a large part in the development of Mungana and Chillagoe. Following the discovery of copper, lead, gold and silver deposits in the area in 1887 and 1888, the mining baron John Moffat opened mines, while Atherton became the owner of Chillagoe Station, about 250 square miles of good cattle country (Pike, 1976).

Atherton erected the present *Chillagoe* homestead, a quaint comfortable Queenslander in 1890, married Josephine

Armstrong and had three daughters, one of whom, Josephine, born 25/6/1895, died on 15th January 1949, was buried on 16th January 1949 in Chillagoe Cemetery. Her grave can still be found as one of few remaining links with the past. Atherton was for many years a member of the local hospital committee, as well as being the Mungana town butcher and owning property in the town.

The Chillagoe smelter was opened on 12th September 1901 by John Moffat's Chillagoe Company to treat copper, and later lead ore. Up to 1000 men worked in the incredible heat extracting minerals, and the area had a population of around 10,000. 15 km to the north-west, the township of Mungana sprang up near the famous Lady Jane and Girofla copper mines. The Chillagoe Company built a private railway line from Mareeba to Mungana. Two trains a week arrived in Mungana from Cairns and the young miners were said to have come to meet and greet any young ladies arriving at a town event (Gliddon, 1981).

Chillagoe and Mungana experienced boom and bust cycles of mining and the Chillagoe Company went broke, leaving the miners without a smelter for their ore. In this period State government enterprises were begun including cattle stations, butchers' shops, timber and sugar mills, banking and insurance services to curb private monopoly. From 1914 when the smelters closed, the Queensland Government slowly acquired ownership of the railway, smelters and two Mungana mines, claiming the maintenance of regional production and employment was a consideration (Kennedy, 1978). The Mungana mines closed again in 1926 and Mungana Township slowly declined, surviving only on the railway traffic. In 1943 Chillagoe smelters and therefore most of the mines finally closed, having produced over 9.778 tonnes of gold, 184.36 tonnes of silver, 60 963 tonnes of copper and 5080 tonnes of lead. The population dwindled with the closure of the mines, down to about 150 in 1940 (QSA, 1940), and only a few residents by 1959.

In today's post-mining era the soil of the Mungana area contains high levels of copper and zinc, though the natural rich

vein of minerals found between the limestone and the metamorphic rocks cannot be distinguished from tailings left from the mining era. The Girofla was primarily a lead mine, so pollution with copper would not have come from its ore dust. There was also a small smelter at Girofla for a few years but given its short working life it is unlikely to have contributed to the environmental copper.

The 'copper plant' grows in the area which is a sure sign that the copper has always been in the soil. It would be interesting to speculate on the health problems possibly caused by high soil concentrations of copper when the water supply was taken partly from wells, though perhaps with sufficient tungsten to be a health hazard today. Pyatt analysed the flora and fauna at three mining sites in North Queensland including Mungana for copper and tungsten discovering copper concentrations in the flora and fauna of Mungana up to ten thousand times greater than in a nearby coastal area (Pyatt, 2004).

Copper and Zinc are usually perceived as being relatively harmless in moderate excess, but high levels of intake, can cause acute abdominal pain, vomiting and diarrhoea, then indistinguishable from typhoid and other causes of gastroenteritis. It is possible that the water supply in Mungana contained high levels of metals which may have been further enhanced by metallic fluid containers used by the miners and other inhabitants.

POLITICAL SCANDAL

The name Mungana became nationally famous during the 1920s because of the "Mungana Affair", a scandal that erupted over the Queensland government's purchase of the mines in 1919 (Kennedy, 1978). 'Red Ted' Theodore and William McCormack, former ministers in the government at the time of purchase, had failed to declare their shareholdings in the mine. Both went on to become Queensland Premiers and when the shareholdings became public knowledge, Theodore was Federal Treasurer in the Scullin government. A Royal Commission found both Theodore and former premier McCormack were guilty of fraud, dishonesty and abuse of ministerial position. However a civil court cleared both men of charges in 1931, and Scullin restored Theodore to his former cabinet position. Nevertheless the scandal ruined both men's political careers and Theodore soon resigned and went on to make a fortune gold mining in New Guinea.

MUNGANA TOWNSHIP

Most of the initial small mining camp of Girofla moved to the railhead a kilometer north when the railway was built and was renamed Mungana, which essentially began as a town with the opening of the Mungana mines, the Lady Jane and Girofla. A Court of Petty Sessions was heard in Mungana between 18/11/1897 to 16/5/1901, when the court moved to Chillagoe. (Court of Petty Sessions, 1897) William Atherton J.P. often sat as magistrate. John Leahy, licensee, the first case, was fined one pound for having his hotel open during prohibited hours, and the second charge of permitting drunk and disorderly persons upon licensed premises was withdrawn by the police. Most cases were assault, obscene language, failure to pay wages and for opening hotels during prohibited hours. The Chinese were often convicted for possession and trading of opium. The Inspector of slaughterhouses accused William Atherton of having meat unfit for food of mankind after receiving complaints of maggots in a cask of salted meat. This case was dismissed (QSA, 1901).

Once the mines were opened, alcohol followed soon after the miners and the town boomed. The first period was from 1894 to 1914, when the town rapidly acquired services and businesses. Three hotels, the Royal, the Cosmopolitan and the Girofla opened between 1897 and 1900. Until the 1910s, pubs tended to serve hard liquor more than beer, causing problems for both health and public order (Bolton, 1998). General stores, a bakery, a restaurant, a drapery and a butcher's shop soon followed. On 1st January 1897 the first races at the amateur turf club occurred and by 1901 the town had a cricket club, a Progress Association, a Court House, and a library with a reading room. Divine Services were initially held in a store with Catholic and Anglican Churches built in 1908 and 1913, respectively.

Abdul Wade's camel teams provided transport to more remote mines till 1907, when traction engines took over. Aborigines were now controlled by the restrictive 1897 Protection of Aborigines Act and required an employment permit. Without one, townspeople could be accused of the crime of 'harbouring' any Aborigines living with them. Aborigines in town were employed as servants and labourers while others were stock workers on the surrounding cattle stations.

Mungana soon acquired a reputation as a rowdy town with gambling and fights stimulated by the abundant alcohol. Dempsey described Mungana as "one of the wildest towns in Australia.... On pay nights it was not unusual for two or three fights to be going on simultaneously in the main street" (Pike, 1972). Alcohol precipitated the one murder in the town in October 1901, a barmaid, named Hannah Treacy was shot by a drunken miner, Richard Henderson, after she refused to give him a meal. He shot himself in the street soon after, and is believed to occupy one of at least three graves rumoured to exist at the end of Main Street (Hooper, 1993).

It is interesting to note that one of the doctors in Chillagoe, Dr McLaughlin, himself an amateur boxing champion, had an exhibition bout outside a Chillagoe pub with Tommy Burns, the World Heavy Weight Boxing Champion of 1908, when Burns visited with a travelling vaudeville show in 1909 (Hooper, 1993). The medical perception of boxing has changed drastically over the last century from a "noble art" to the cause of dementia pugilistica; hence the position of the Australian Medical Association on this event would have been quite different in 1909 than it is today.

By 1910, Mungana had ten hotels. (Dempsey, 1980) School attendance became compulsory in Queensland in 1900. The original Girofla School was relocated and renamed the Mungana School in about 1910, when the peak recorded enrolment was 80 boys and 65 girls. Thirty Anglican and nineteen Roman Catholic families resident in the area, sent children to school. School numbers declined with the mines to 68 in 1915, and 24 in 1917 (Pike, 1972).

After both mines had closed in 1914, the Mungana Mining Company went into liquidation on the 15th July 1918 causing a drastic drop in the town's population. In 1917 there were four hotels, though one was about to close, the town population dwindled to 30, and school enrolments were down to 10 children.

The Government purchased the mines in 1918 and re-opened them between 1920 and 1926, and the town flourished again. By 1920 Mungana had six hotels, a post office, a church, and a handful of shops. Mungana had cricket teams and the Race

Club again and football teams won an area premiership three years out of the next four (Bolton, 1972). School enrolments had risen again to 80 in 1925 before declining to 33 in 1935, and 10 in 1942 when the last single teacher signed up in the air force, closing the school briefly before final closure on the 31st May 1943 when only six children remained. The post office was present from 1907 to 1960. By 1959, there was one hotel, about to close for lack of business, a store and seven residents, with stockmen loading cattle being the only remaining trade.

Mungana Hospital

Mungana Hospital was burnt to the ground in 1928, but the opening date is unclear. Correspondence from the hospital committee in 1906 clarifies the presence of some establishment considered to be a hospital then, though the structure pictured in Chillagoe Museum dates from 1911. Information about the hospital is scant; and records might have been destroyed by the fire. The Queensland State archives have some early hospital correspondence with the state public department (QSA, 1906), plus a newspaper cutting and an inquest relating to the fire (QSA, 1928).

In 1972, Bolton wrote in his book "A Thousand Miles Away" that he could not find any surviving copies of The Chillagoe Standard published between 1900 and 1906 nor the Mount Garnet and Chillagoe Miner published during 1903. An internet search of "Mungana Hospital" scores only one hit the recently developed Trove website of early Queensland newspapers, with the Cairns Post having most news about Mungana (Cairns Post and Cairns Morning Post, 1884-1954).

During WW I, events of greater significance fill the local newspapers and Mungana Hospital is not mentioned between 1915 and 1918. Despite proposals to build a bigger hospital it remained at the same site. Lists of Queensland state hospitals and occupied beds, including many small rural establishments such as Forsayth and Chillagoe, do not include Mungana. Chillagoe Hospital was rebuilt in 1939 and is stated to be the only hospital serving the area. (North Queensland's Mining Heritage Trails, 1999) The Mungana Hospital Committee and the local inhabitants worked hard for their hospital, which confronted the problem of providing health care in a very remote community with environmental problems on limited funds. The nearest large centre, Cairns, was a day's train ride away. Many social events raised funds to equip the wards and the committee wrote frequently to the government for more financial support.

The working environment in the mines was unsafe with exposure to lead and silica dust, and accidents. Lady Jane Mine had a lot of sulphur in the ore causing acid mine water and increased heat with fires, one of which forced the mine to close. Alcohol consumption was high and while beef was abundant, though not always of best quality. Fruit and vegetables were expensive as most were freighted in from the coast. There were two Chinese gardeners in the town but their produce was not cheap either. The water supply was poor, as residents relied mainly on tank water supplemented from wells which were contaminated by earth toilets, hence typhoid, one of the biggest killers in Queensland, was common. Mungana did have a nightsoil removal service from 1912 until around 1944.

Medical staff recruitment to such a small isolated town was a recurring problem as few doctors remained for long. The hospital was always short of funds, as hospitals until 1923 were

built and financed locally through subscriptions with some Government grant assistance only for construction. Even after 1923 smaller hospitals like Mungana were unlikely to receive funds while there was a District Hospital connected by train, nearby at Chillagoe.

In 1906, E. Derrick, president, and W.D. Wardle, secretary, wrote three times to the Home Secretary's office, urgently seeking promised funding as the Mungana Hospital faced closure. Supporting medical rationale for funds included "at the typhoid period of the year", "as the fever season is approaching" and "typhoid has broken out and the resources of the hospital taxed to the utmost. The money is urgently required." (QSA, 1906)

In 1910, the Hospital Committee and townsfolk sought either a new bigger hospital or to relocate the hospital at the OK township to Mungana (Cairns Post, 1910 A), but had made no progress by 1913 when a design for a new hospital was selected and two possible sites debated (Cairns Post, 1913 A, QSA 1914). A fund raising event in September acclaimed Miss Lily Matheson the hospital matron as the most popular lady in town (Cairns Post, 1913 B). Miss Matheson left for the position of Matron at Many Peaks Hospital at the end of the year (Cairns Post, 1913 C) and married in 1915 (The Queenslander, 1915). M.A. Maloney was appointed matron in 1923 (Morning Bulletin, 1923), and in 1924 was reported as maintaining an excellent service, especially in obstetrics. She tendered her resignation in May (Morning Bulletin, 1924), but appears to have remained to the end of the year when she was complimented in the Cairns Post (1924) who reported: "The staff at the hospital are worthy of the most eulogistic remarks, the Matron has proved herself a very capable and experienced nurse, and very reliable person for maternity cases, which is a matter of considerable importance to Mungana".

In 1925, the townspeople and the hospital committee were again seeking a new hospital. The budget deficit was £1,088, predominantly due to the enormous expense of locum medical and nursing staff early in the year, however; the current doctor was highly recommended. Miss Maloney after fifteen months in the Rockhampton Sanatorium, returned to Mungana for a second term. (Morning Bulletin, 1926)

The Doctors

Queensland University did not have a medical school till 1935; therefore Mungana, initially just the town, and after its opening, the hospital also, were always dependent on interstate or overseas graduates, and had ongoing problems finding permanent doctors. The Queensland Medical Board Register lists the following doctors who were registered in Mungana (QSA, 1937)(Box 1). The duration of residence of these doctors was not recorded.

Box 1: Doctors registered in Mungana, Queensland, in the early 1900s

4/6/1908 Frank Harold LOONEY M.B., B.S. Melbourne 1907 2/6/1910 William Eric GIBLIN M.B. Sydney 1908 4/4/1912 Eustace Cooper BLACK M.B., B.S. Adelaide 1910 6/2/1913 Ernest Charles JENNINGS Lic. Midwifery R. Coll. P S Ireland 1904 5/6/1913 Henry Strawson TURNER L.R.C.S., L.R.C.P. Lond. 1904 8/5/1924 Archibald JENKINS M,B,, Ch. M. Sydney 1923 2/3/1925 Owen PERDRIAU M.B., Ch. M. Sydney 1924

The Townsville Daily Bulletin of 12th December 1913 also reported that a Dr Cole had taken up his new duties during the

previous week, after having been appointed medical officer at Mungana.

Cooper Black had been resident doctor in Adelaide Hospital gaining experience in surgery, obstetrics, ear and eye, nose and throat diseases, and the Mungana Hospital must have been pleased to obtain the services of a gentleman of such abilities (Cairns Post, 1912 A). He arrived in Mungana in February 1912 and noting much sickness in the town, perhaps linked to drinking creek water. He advised a town well to prevent pollution of the drinking water supply from extensive faecal contamination of the topsoil which was then widely recognised as causing outbreaks of typhoid as described in USA (Wood and Jackson, 1911). A local informant from Chillagoe stated the insanitary water supply could cause typhoid, but that it did not really matter as Chillagoe-ites did not drink water as a rule (Bolton, 1998). Black left Australia for a distinguished career on active service in 1914, but no further details are available of the other doctors.

In October 1919, the monthly hospital board meeting recorded Dr. T. E. Abbott as the hospital doctor, though his primary appointment was to Chillagoe Hospital (Cairns Post, October 1919 A). The committee also arranged that the doctor should be in attendance in Mungana on each Saturday afternoon between two to four in the afternoon.

The problem of working in a single-handed practice in the Mungana-Chillagoe district many miles from any other doctor is demonstrated by the story of Dr Tunstan. When working in Chillagoe, he correctly diagnosed his abdominal pain as appendicitis and attempted to remove his own appendix. However, even with the aid of the matron, was unable to return his intestines to his abdominal cavity. The matron wrapped him in a blanket and accompanied him by train to Mareeba where a local doctor completed the operation and sutured his abdomen successfully (Holthouse, 1973).

The Patients

Little is known of individual hospital patients beyond the more sensational cases that made the newspapers. It is not always clear if the fatal injuries actually survived till hospitalisation. Details of admissions for two months in 1919 record 22 admissions, with one death and an average of five inpatients per day, and an average length of stay of fourteen days, plus 133 outpatient visits (Cairns Post, 1919 B A).

On the 4th May 1910, Dennis Driscoll was fatally injured underground whilst he was helping to split a large piece of ore with a bar when the ladder came away and he fell 4.5 feet through an opening he had helped to make. Death was reported as instantaneous and he would not have reached Mungana Hospital (The Brisbane Courier, 1910). In 1912 Harry Brock, a school teacher at Mungana, was admitted critically ill, having slipped and fell while carrying a loaded gun, which exploded and the shot tore across his abdomen and blew away the muscle of his forearm, unfortunately the outcome is unknown (The Brisbane Courier, 1912). In 1913, the doctor successfully relocated a shoulder in 'a few seconds' when Denis O'Hara a miner, slipped and fell some feet in the Girofla mine that month, and sustained a dislocated shoulder with a few scratches (Cairns Post, 1913 A). In September Con.Calahane was admitted following a mine explosion which blew mullock and stone into his face and eyes. Dr. Turner found superficial lacerations and a penetrating wound of the eye-ball. However, vision was restored following treatment (Cairns Post, 1913 C).

Influenza was reported to be very prevalent and everybody 'is sick, is getting sick, or has been sick'. Also reported in September 1913, was a boy, Kenneth Foley, in the hospital for the past six or seven weeks, initially with quinsy, and subsequently with fits, such that it was thought he was dead (Cairns Post, 1913 D). The potential severity of measles at that time is demonstrated by the death in Chillagoe Hospital of Hugh Bovie, the contractor of the new Chillagoe Hotel from a relapse of measles (Brisbane Courier, 1913). The Courier also noted that the ambulance had attended 32 cases and travelled 23 miles, that Dr. Cole had commenced practice in Mungana, and that there was a lot of sickness in town, perhaps because the heat had depleted the well to a dangerously low level with infection of the drinking supply.

Queensland Government mining files (Fatalities in Queensland, metalliferous mines, 2011) recorded five mining fatalities that occurred in the Mungana Mines, four in Girofla and one in Lady Jane. Only one of these casualties reached the hospital. On 11th January 1923, a 49 year-old man, Jack Girard former Lance Corporal, 6625–1st Tunnelling Company, (Girard, 2011) was hurt in Girofla, when one of six explosive devices detonated prematurely. He had lit four of six fuses when one charge exploded. Elliott, a fellow miner, was watching him from twenty-five feet away. The blast's concussion extinguished Elliott's lamp, but ignoring the three smoking fuses, and his own safety, he attempted unsuccessfully to find Girard in the total darkness. Elliot then retreated, summoned the shift manager, and they re-entered the shaft to find Girard standing against the mine wall dazed and breathless. They helped Girard out of the mine and to the Mungana Hospital, but he died later of his injuries.

Four Mungana births were recorded in web-based family trees, which may have been in the hospital or at home. No further details are available. Alice, one of three children born to John Austin (1880 – 1961) and Jane Allen (1886 – 1949) was born on 7th April 1910 in Mungana. (Oocities, 2011) George, the only sibling of four children of Thomas Anderson (1871 – 1916) and Amelia Chamberlin (dates uncertain), whose birth place was recorded, was born on 14th March 1911 (Lynne and Grayeme's genealogy, 2011). Helen Bell was born in Mungana on the 8th April 1911 (NASH of Bishops Cannings, 2011) and lastly, John, son of Edmund Atherton, nephew of William, was born on the 19th January 1913 in Mungana. John was killed while serving in the RAF in a flying accident on 24th December 1943, and was buried in Cambridge. (Edmund Atherton, Descendants 2011)

As previously noted, the expertise of the staff in delivering obstetric care was reported more than once in the Cairns Post. However, Evelyn Maunsell showed a lack of confidence in Mungana Hospital's care (Holthouse, 1973). Evelyn had two miscarriages at Mount Mulgrave station, but after travelling to Mungana, she departed by train to convalesce initially in Atherton Hospital and then after discharge, in a rented house with her husband in Malanda. She spent the later stages of her third pregnancy in Cairns, successfully giving birth to her son Ron on 8th May 1922 in Cairns Hospital.

The Brisbane Courier, in 1931, stated that the accident prone miner of the 1913 explosion, Cornelius Cahalane was admitted to the Mungana Hospital, after an eighty foot fall in a mine at Mungana. Since Mungana Hospital burnt down three years previously, this is clearly an error. Cahalane sustained fractures of all the ribs on the left side, one of which penetrating the lung, and severe injuries to his left shoulder and spine. His condition

was critical for days, and possibly exacerbated by the need to be taken, probably in great pain, to Chillagoe in the absence of an adjacent hospital. However, he slowly recovered and was discharged after a month. This pre-intensive care unit management, perhaps with an intercostal catheter was an outstanding success (Brisbane Courier, 1931).

The Fire

On the 14th June 1928, the Mungana Hospital burnt down. The premises were then valued at £1643, with insurance on the building of £750 (Cairns Post, 1928 A; The Brisbane Courier, 1928). An inquest took place the following month, and found that the fire commenced accidentally in the kitchen from the wood stove (QSA, 1928). Kate Bevan, the new matron, was the only person present in the hospital at the time. It is further known that the whole building was well alight when help arrived, and neither the contents nor the building could be saved. The bench noted that there was no fire fighting equipment in the hospital.

Bevan on seeing the fire packed her clothes in two suitcases and left, rather than risk trying to extinguish the blaze. The hospital committee noted the loss of the most modern equipment and appliances with the building with deep regret. Initially the committee decided to secure an alternative building as a cottage hospital, and appealed for funds (Cairns Post, 1928 B), although the Home Office was not sounding supportive. By the 7th September, the Home Office in Brisbane were of the opinion that an amalgamation of the Mungana and Chillagoe Hospitals and Ambulances would serve both towns best (Cairns Post, 1928 C; Townsville Daily Bulletin, 1928).

By 1929, the Chillagoe Hospital Committee had essentially taken over the duties of the Mungana Hospital Committee. They wrote to the Home Office requesting access to the £750 insurance money in the Mungana account, resolved to charge the resident of the former doctor's residence in Mungana 2/6 per week and appointed Dr. Frank Tipping as medical officer to Chillagoe (Cairns Post, 12 January 1929).

Today Mungana Hospital is a few charred stumps and some bed frames rusting under the tropical sun in a ghost village where the bush has overgrown nearly all signs of previous habitation.

CONCURRENT MEDICINE IN NORTH QUEENSLAND

The medical profession knew of specific health problems of North Queensland, and after a seven year campaign by the Australian Medical Congress the Australian Institute of Tropical Medicine was established in 1910, under the directorship of Dr Anton Breinl, with a team of researchers. Leprosy, dysentery and plague occurred occasionally, especially among Indigenous Australians, and filariasis, malaria, dengue, hookworm and sprue were common amongst all North Queenslanders on the coast (Bolton, 1972). The Institute opened in 1909, moved from a small store to its own laboratory in 1913, was absorbed in 1921 into the Commonwealth Department of Health, and then in 1930 the University of Sydney School of Public Health took over the problem of tropical medicine, though over half a century later the Anton Breinl Centre for tropical health was reopened at James Cook University (James Cook University, 2011)

Dr E. Waite examined 15,000 residents for Hookworm in the Townsville to Cooktown area in 1918, finding infection in 20% of ethnic Europeans and in 75% to 95% of Indigenous people (Bolton, 1972). The common disease spectrum at the

beginning of the 20th century was quite different from the predominantly life-style diseases of 2008. The Queensland Register of Diseases in the year 1.7.1902–30.6.1903 recorded the following number of cases (Cilento, 1962).

Box 2: Diseases

Typhoid 2,362
Tuberculosis deaths 413
Diphtheria 239
Scarlet fever 219
Plague 108
Infantile paralysis 108
Erysipelas 72
Puerperal fever 24
Cerebro-spinal meningitis 23
Continued fever 12
Relapsing fever 2

Plague epidemics recurred annually between 1900 and 1909, and again in 1921/1922 (Amiet, 1998). In 1904/1905, Dr Thomas Bancroft suggested that this disease was caused by an ultra-microscopic organism carried by the mosquito *Stegomyia fasciata*, but he was prevented from undertaking further research into the transmission of the disease (Cilento, 1962). Inland Queensland escaped most typical "tropical" diseases but towns like Mungana were prone to epidemics of typhoid, 'dysentery' and malaria, as well as infectious childhood diseases such as diphtheria and measles.

Dr Bertie Burnett Ham was Commissioner of Public Health in the State Health Service from 1900 to 1909. He piloted regulations through the Health Department to reduce the spread of infectious diseases, particularly plague, smallpox, cholera, scarlet fever and typhoid (Thearle, 2002). Ham worked to improve drains and sewers, to reduce water pollution and provide safe drinking water, and to reduce pollution of milk and meat. He published a report on plague in 1907, which emphasized the importance of school hygiene, and established a cancer research fund as well as a quarantine station at Thursday Island (Thearle, 2002).

Small towns without doctors or hospitals, which described Mungana for most of its existence, were unlikely to benefit from this attention. They had no medical officers or health inspectors, no drains, no sewerage systems, and certainly no reticulated water supplies. Residents had to rely on their own resources or those of local philanthropists like the mining baron, John Moffat, who had opened up the area. Mrs. Robertson, President of the Queensland Branch of the Royal Geographical Society of Australia, unveiled a monument to John Moffat on May 27th 1950 and praised his assistance with the health of the community. She said "In early days, when doctors, nurses and dentists were not procurable, he attended in a most skilful way to the sick and suffering, and generously made available remedies from his own medicine chest" (Kerr, 2000).

MUNGANA AND CHILLAGOE TODAY

Chillagoe today is a sleepy little outback town with a population of about 200. It is settled in front of stark, yet beautiful, limestone bluffs and offers a rare combination of a relic copper smelter, historic town with a rich and vibrant past history, limestone caves and Aboriginal rock paintings. In 1986, the Chillagoe marble quarry opened and has exported many high quality blocks of various colours to Italy, the home of marble for the previous 2000 years.

Tourism is a significant part of the current economy, as well as some residual mineral mining and cattle stations. A visit to the old State Smelter Reserve is a momentous heritage experience. The Mungana Affair is still a hotly debated topic amongst the senior citizens and amazing stories can still be heard of quilt and innocence.

Mungana is now a ghost town reclaimed by the bush. The hospital is marked only by burnt stumps and bed frames, while the houses and roads (Hooper, 1993; QSA, 2011) have disappeared under grass and rubber vine.

Conclusion

The limited information on the 30 year lifespan of the Mungana Hospital suggests it had issues which are echoed today: it was underfunded and unappreciated. Still available communication between the hospital administration and the state health department indicate that it was often on the edge of bankruptcy. Fortunately the local inhabitants supported the hospital with a vigorous program of fund raising, including very popular events such as horse racing, dances and card playing in a convivial atmosphere, usually also assisted by the local taverns.

The workload at the hospital included trauma, obstetrics and epidemics of infection interspersed with periods of inactivity. Alcohol and prostitution often followed the miners. Drunken brawls were common in Mungana with only minor trauma recorded, while sexually transmitted diseases were not mentioned in the available source material.

Recruitment of medical personnel was a regular problem before the opening of a medical school in Queensland, requiring the appointment of interstate or even overseas trained doctors to a remote area with minimal support. Few doctors remained long when large centres offered better conditions, duty hours and remuneration, profitable private practice, education with the hospital peer group, improved education for families and a much greater choice of facilities and infrastructure for spouses. This problem was clearly compounded by the Great War recruiting many of the dynamic young doctors when the hospital was just getting established.

The problems in rural and remote areas remain seemingly unchanged 100 years later. The failure to increase the medical student intake in Queensland until recently meant that remote communities or so called 'areas of need' still recruited predominantly overseas trained doctors. Today the medical workforce predominantly works in metropolitan areas. Although 34% of all Australians live outside the major cities, only 23% of medical specialists and 27% of general practitioners attend to their care (Murray and Wronski, 2006). This disproportion still impacts on rural health care.

Approximately 130 rural obstetric units have closed since 1995 (Pesce, 2008). Heart failure is more common in rural areas, 16.1% versus 12.4% in metropolitan areas, yet 67.3% of metropolitan patients have echocardiography versus 52% in rural areas, and 69.6% of metropolitan patients are referred for specialist opinion versus 59.1% in rural areas (Clark et al, 2007). Bone densitometry is nearly three times more likely to be performed on older female city dwellers than those women in rural areas (Ewald et al, 2009). Suicide is more common among young rural males than metropolitan counterparts (51.7 per 100,000 versus 40.4 per 100,000), yet only 11.4% of rural men with mental health issues seek psychiatric help compared with 25.2% in the city (Caldwell et al, 2004).

North Queensland and the neighbouring Northern Territory still have infections which are much less frequent further south such as meliodosis, dengue fever and *Chromobacterium violaceum* (Lim et al, 2009) The Indigenous Australian population is still prone to infectious diseases much less common in the Caucasian population such as trachoma and rheumatic fever

Today the ruins of Mungana Hospital slumber poignantly in the quiet brightly sunlit bush such that recall of the times of one of Queensland's roughest mining towns is elusive, but the problems of providing health care to rural and remote Queensland remain seemingly unchanged a century later.

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