

Supplementary Data for “*Helicobacter pylori* hotspots: Epidemiology of *Helicobacter pylori* related disease in Western Australia”

Data Sets Obtained from the Australian Bureau of Statistics

- 2011 Australian Census (data for state of Western Australia)
 - 2011Census_B01_WA_SA2_short.csv
 - 2011Census_B07_WA_SA2_short.csv
 - 2011Census_B16A_WA_SA2_short.csv
 - 2011Census_B16B_WA_SA2_short.csv
 - 2011Census_B37_WA_SA2_short.csv
 - POA_2011_AUST.csv
- 2010 and 2015 Population Estimates for state of Western Australia
 - 32350ds0005_wa_2010_2015.csv

Table 1: Age distribution of UBT positive individuals. Based on a binomial distribution statistic, a negative p-value indicates a count of UBT-positive people below the expected number, while a positive p-value is a count above the expected number. Age ranges follow those used in 2011 Census tables, except the 0-4 age range, which has been ignored due to small numbers

| Age Range | N UBT_pos | UBT_pos% | WApop% | Signed p-value |
|------------|-----------|----------|--------|----------------|
| (5 .. 14) | 620 | 0.0390 | 0.1293 | -0 |
| (15 .. 19) | 488 | 0.0307 | 0.0663 | -1.483e-89 |
| (20 .. 24) | 866 | 0.0545 | 0.0710 | -2.071e-17 |
| (25 .. 34) | 2730 | 0.1717 | 0.1445 | 7.362e-22 |
| (35 .. 44) | 3098 | 0.1948 | 0.1465 | 8.581e-62 |
| (45 .. 54) | 3040 | 0.1912 | 0.1385 | 1.246e-75 |
| (55 .. 64) | 2479 | 0.1559 | 0.1134 | 9.091e-59 |
| (65 .. 74) | 1607 | 0.1011 | 0.0681 | 1.879e-54 |
| (75 .. 84) | 782 | 0.0492 | 0.0394 | 5.051e-10 |
| (85 ..) | 171 | 0.0108 | 0.0153 | -4.557e-07 |

Table 2: Distribution of negative, positive and borderline UBT test result counts by age range, together with the ratio of borderline to determinate (i.e positive plus negative) results

| Age Range | N UBT_neg | N UBT_border | N UBT_pos | Borderline Ratio |
|-----------|-----------|--------------|-----------|------------------|
| 5 - 14 | 1877 | 768 | 528 | 0.1996 |
| 15 - 19 | 2762 | 575 | 316 | 0.0947 |
| 20 - 24 | 3944 | 1037 | 351 | 0.0705 |
| 25 - 34 | 10860 | 3330 | 898 | 0.0633 |
| 35 - 44 | 12010 | 3942 | 1019 | 0.0639 |
| 45 - 54 | 12789 | 3859 | 1164 | 0.0699 |
| 55 - 64 | 11867 | 3258 | 1347 | 0.0891 |
| 65 - 74 | 7984 | 2108 | 1117 | 0.1107 |
| 75 - 84 | 3306 | 1020 | 660 | 0.1526 |
| 85 - | 581 | 209 | 160 | 0.2025 |

Table 3: Age distribution of median negative, positive and borderline UBT test values

| Age Range | med UBT_neg | med UBT_border | med UBT_pos |
|-----------|-------------|----------------|-------------|
| 5 - 14 | 15.0 | 98.0 | 1189.5 |
| 15 - 19 | 10.0 | 91.5 | 1898.0 |
| 20 - 24 | 10.0 | 84.0 | 2020.0 |
| 25 - 34 | 8.0 | 91.0 | 1998.0 |
| 35 - 44 | 9.0 | 87.0 | 2048.5 |
| 45 - 54 | 9.0 | 90.0 | 1896.0 |
| 55 - 64 | 10.0 | 90.0 | 1736.5 |
| 65 - 74 | 11.0 | 92.0 | 1440.5 |
| 75 - 84 | 12.0 | 92.0 | 1190.0 |
| 85 - | 15.0 | 96.0 | 833.0 |

Table 4: List of SA2 Statistical Areas with at least 500 residents in descending count of UBT persons

| SA2 | SA2 Name | UBT Persons |
|-------|------------------------------------|-------------|
| 51086 | Dianella | 424.054 |
| 51045 | Bayswater - Embleton - Bedford | 303.298 |
| 51124 | Bentley - Wilson - St James | 263.914 |
| 51056 | Ballajura | 237.000 |
| 51132 | Beckenham - Kenwick - Langford | 229.050 |
| 51136 | Maddington - Orange Grove - Martin | 214.201 |
| 51138 | Forrestfield - Wattle Grove | 213.276 |
| 51059 | Ellenbrook | 212.061 |
| 51133 | Canning Vale - East | 208.257 |
| 51041 | Perth City | 207.000 |
| 51057 | Beechboro | 206.410 |
| 51137 | Thornlie | 198.000 |
| 51085 | Balga - Mirrabooka | 180.389 |
| 51131 | Willetton | 176.595 |
| 51098 | Alexander Heights - Koondoola | 172.472 |
| 51099 | Butler - Merriwa - Ridgewood | 171.443 |
| 51108 | Wanneroo | 167.757 |
| 51104 | Marangaroo | 156.520 |
| 51105 | Mindarie - Quinns Rocks - Jindalee | 156.115 |
| 51128 | Parkwood - Ferndale - Lynwood | 154.728 |
| 51185 | Baldivis | 153.000 |
| 51047 | Morley | 151.068 |
| 51090 | Nollamara - Westminster | 150.557 |
| 51122 | Rivervale - Kewdale - Cloverdale | 146.195 |

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|-------|--|---------|
| 51205 | Broome | 141.434 |
| 51097 | Yokine - Coolbinia - Menora | 139.821 |
| 51044 | Bassendean - Eden Hill - Ashfield | 137.877 |
| 51159 | South Lake - Cockburn Central | 137.672 |
| 51103 | Madeley - Darch - Landsdale | 137.621 |
| 51199 | Kalgoorlie | 127.475 |
| 51102 | Girrawheen | 124.008 |
| 51134 | Gosnells | 122.184 |
| 51182 | Murdoch - Kardinya | 122.145 |
| 51012 | Eaton - Pelican Point | 121.339 |
| 51191 | Singleton - Golden Bay - Secret Harbour | 118.000 |
| 51110 | Armadale - Wungong - Brookdale | 117.025 |
| 51166 | Fremantle - South | 114.321 |
| 51188 | Rockingham | 112.513 |
| 51084 | Balcatta - Hamersley | 109.211 |
| 51006 | Bunbury | 107.532 |
| 51093 | Stirling - Osborne Park | 106.789 |
| 51119 | East Victoria Park - Carlisle | 106.000 |
| 51125 | Canning Vale - West | 103.148 |
| 51127 | Cannington - Queens Park | 100.820 |
| 51165 | Fremantle | 100.721 |
| 51181 | Melville | 100.402 |
| 51140 | Kalamunda - Maida Vale - Gooseberry Hill | 95.948 |
| 51210 | Geraldton | 95.695 |
| 51148 | Banjup | 95.690 |
| 51042 | Subiaco - Shenton Park | 92.615 |
| 51135 | Huntingdale - Southern River | 92.615 |
| 51118 | Belmont - Ascot - Redcliffe | 92.000 |
| 51123 | Victoria Park - Lathlain - Burswood | 92.000 |
| 51141 | Lesmurdie - Bickley - Carmel | 91.648 |
| 51107 | Tapping - Ashby - Sinagra | 91.622 |
| 51062 | Lockridge - Kiara | 91.115 |
| 51046 | Maylands | 91.000 |
| 51208 | Kununurra | 90.771 |
| 51206 | Derby - West Kimberley | 89.000 |
| 51089 | Karrinyup - Gwelup - Carine | 88.759 |
| 51100 | Carramar | 87.000 |
| 51225 | Albany | 86.590 |
| 51147 | South Perth - Kensington | 85.000 |
| 51024 | Halls Head - Erskine | 84.336 |
| 51178 | Booragoon | 83.301 |
| 51200 | Kalgoorlie - North | 83.246 |
| 51213 | Geraldton - South | 78.022 |
| 51109 | Yanchep | 78.000 |

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|-------|--|--------|
| 51014 | Harvey | 77.867 |
| 51169 | Bertram - Wellard (West) | 77.856 |
| 51039 | Mount Lawley - Inglewood | 77.824 |
| 51149 | Beeliar | 77.510 |
| 51095 | Tuart Hill - Joondanna | 76.874 |
| 51027 | Mandurah - North | 76.418 |
| 51187 | Port Kennedy | 76.000 |
| 51020 | Pemberton | 75.491 |
| 51145 | Como | 74.769 |
| 51161 | Success - Hammond Park | 73.750 |
| 51066 | Midland - Guildford | 73.633 |
| 51170 | Calista | 73.282 |
| 51096 | Wembley Downs - Churchlands - Woodlands | 73.230 |
| 51043 | Wembley - West Leederville - Glendalough | 73.152 |
| 51035 | Nedlands - Dalkeith - Crawley | 73.000 |
| 51003 | Busselton Region | 72.407 |
| 51068 | The Vines | 71.684 |
| 51002 | Busselton | 71.593 |
| 51101 | Clarkson | 71.442 |
| 51054 | Swan View - Greenmount - Midvale | 71.426 |
| 51079 | Mullaloo - Kallaroo | 71.076 |
| 51180 | Leeming | 70.247 |
| 51192 | Waikiki | 70.176 |
| 51243 | Northam | 69.000 |
| 51013 | Gelorup - Dalyellup - Stratham | 68.952 |
| 51071 | Currambine - Kinross | 68.653 |
| 51129 | Riverton - Shelley - Rossmoyne | 68.018 |
| 51174 | Parmelia - Orelia | 66.663 |
| 51117 | Seville Grove | 66.413 |
| 51211 | Geraldton - East | 65.912 |
| 51190 | Safety Bay - Shoalwater | 65.813 |
| 51186 | Cooloongup | 65.487 |
| 51193 | Warnbro | 65.011 |
| 51177 | Bicton - Palmyra | 65.000 |
| 51219 | East Pilbara | 64.275 |
| 51220 | Karratha | 64.028 |
| 51070 | Craigie - Beldon | 61.944 |
| 51146 | Manning - Waterford | 61.231 |
| 51040 | North Perth | 61.000 |
| 51072 | Duncraig | 61.000 |
| 51009 | Collie | 61.000 |
| 51048 | Noranda | 60.116 |
| 51217 | Northampton - Mullewa - Greenough | 60.104 |
| 51233 | McKail - Willyung | 59.752 |

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| 51143 | Mundijong | 58.259 |
| 51005 | Australind - Leschenault | 58.133 |
| 51019 | Manjimup | 56.509 |
| 51154 | Hamilton Hill | 56.467 |
| 51197 | Exmouth | 55.890 |
| 51212 | Geraldton - North | 55.291 |
| 51207 | Halls Creek | 54.229 |
| 51198 | Boulder | 54.000 |
| 51073 | Greenwood - Warwick | 54.000 |
| 51113 | Forrestdale - Harrisdale - Piara Waters | 53.746 |
| 51115 | Mount Nasura - Mount Richon - Bedforddale | 52.816 |
| 51160 | Spearwood | 52.118 |
| 51049 | Chidlow | 51.000 |
| 51078 | Kingsley | 50.702 |
| 51196 | Carnarvon | 50.085 |
| 51077 | Joondalup - Edgewater | 49.867 |
| 51017 | Bridgetown - Boyup Brook | 49.000 |
| 51023 | Greenfields | 48.895 |
| 51163 | Yangebup | 48.010 |
| 51179 | Bull Creek | 47.753 |
| 51034 | Mosman Park - Peppermint Grove | 47.445 |
| 51152 | Coogee | 47.102 |
| 51239 | Gingin - Dandaragan | 46.000 |
| 51053 | Mundaring | 46.000 |
| 51028 | Mandurah - South | 45.619 |
| 51153 | Coolbellup | 44.371 |
| 51088 | Innaloo - Doubleview | 44.276 |
| 51224 | South Hedland | 44.012 |
| 51223 | Roebourne | 43.972 |
| 51015 | Koombana | 43.324 |
| 51114 | Kelmscott | 42.336 |
| 51025 | Mandurah | 42.160 |
| 51175 | Applecross - Ardross | 42.077 |
| 51092 | Scarborough | 41.427 |
| 51008 | College Grove - Carey Park | 40.980 |
| 51067 | Stratton - Jane Brook | 39.954 |
| 51142 | Byford | 39.478 |
| 51029 | Pinjarra | 38.182 |
| 51238 | Dowerin | 38.000 |
| 51074 | Heathridge - Connolly | 37.850 |
| 51022 | Falcon - Wannanup | 36.573 |
| 51083 | Woodvale | 35.298 |
| 51164 | East Fremantle | 33.000 |
| 51234 | Plantagenet | 33.000 |

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|-------|-------------------------------------|--------|
| 51036 | Swanbourne - Mount Claremont | 32.604 |
| 51139 | High Wycombe | 32.246 |
| 51031 | Claremont (WA) | 31.396 |
| 51030 | City Beach | 31.000 |
| 51065 | Middle Swan - Herne Hill | 30.824 |
| 51076 | Iluka - Burns Beach | 30.347 |
| 51075 | Hillarys | 30.173 |
| 51222 | Port Hedland | 29.671 |
| 51080 | Ocean Reef | 29.455 |
| 51116 | Roleystone | 28.620 |
| 51051 | Helena Valley - Koongamia | 27.704 |
| 51184 | Winthrop | 27.002 |
| 51228 | Denmark | 27.000 |
| 51227 | Bayonet Head - Lower King | 26.964 |
| 51245 | York - Beverley | 25.000 |
| 51038 | Mount Hawthorn - Leederville | 24.534 |
| 51195 | Esperance Region | 24.218 |
| 51081 | Padbury | 23.635 |
| 51209 | Roebuck | 23.566 |
| 51236 | Chittering | 23.151 |
| 51050 | Glen Forrest - Darlington | 23.000 |
| 51218 | Ashburton (WA) | 23.000 |
| 51094 | Trigg - North Beach - Watermans Bay | 22.329 |
| 51112 | Camillo - Champion Lakes | 22.201 |
| 51230 | Katanning | 22.000 |
| 51018 | Donnybrook - Balingup | 22.000 |
| 51026 | Mandurah - East | 21.818 |
| 51244 | Toodyay | 21.341 |
| 51183 | Willagee | 21.219 |
| 51215 | Meekatharra | 21.000 |
| 51232 | Little Grove - Elleker | 20.723 |
| 51214 | Irwin | 20.000 |
| 51226 | Albany Region | 19.970 |
| 51194 | Esperance | 19.782 |
| 51171 | Casuarina - Wellard (East) | 19.230 |
| 51016 | Waroona | 19.000 |
| 51010 | Dardanup | 17.000 |
| 51082 | Sorrento - Marmion | 16.980 |
| 51156 | Jandakot | 16.967 |
| 51176 | Bateman | 16.269 |
| 51240 | Merredin | 16.000 |
| 51203 | Leinster - Leonora | 16.000 |
| 51007 | Capel | 14.873 |
| 51033 | Floreat | 14.700 |

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|-------|----------------------------------|--------|
| 51144 | Serpentine - Jarrahdale | 14.263 |
| 51216 | Morawa | 14.000 |
| 51001 | Augusta | 13.659 |
| 51248 | Murray | 13.000 |
| 51058 | Bullsbrook | 12.849 |
| 51247 | Kulin | 12.413 |
| 51250 | Wagin | 12.000 |
| 51241 | Moora | 11.000 |
| 51032 | Cottesloe | 10.555 |
| 51202 | Kambalda - Coolgardie - Norseman | 10.279 |
| 51021 | Dawesville - Bouvard | 10.000 |
| 51231 | Kojonup | 10.000 |
| 51004 | Margaret River | 9.341 |
| 51221 | Newman | 7.042 |
| 51242 | Mukinbudin | 7.000 |
| 51237 | Cunderdin | 7.000 |
| 51246 | Brookton | 7.000 |
| 51168 | Anketell - Wandi | 6.968 |
| 51061 | Hazelmere - South Guildford | 6.311 |
| 51249 | Narrogin | 5.587 |
| 51229 | Gnowangerup | 4.000 |
| 51060 | Gidgegannup | 3.659 |
| 51162 | Wattleup | 3.568 |
| 51158 | North Coogee | 3.318 |