



Attachment 4: Department of Health Uses of Linked Data: Examples

| Use | Comments |
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| Independent review of upper gastrointestinal surgical procedures at public health services in WA | <ul style="list-style-type: none">• Requested by the DoH Director General due to concerns about patient safety• Required to identify variation among hospitals and/or clinicians in clinical outcomes• Results provided back to hospitals to make improvements |
| Cancer cluster investigation at Royal Perth Hospital (RPH) | <ul style="list-style-type: none">• Occupational cohort analysis was conducted to determine if an excess of cancer cases or deaths occurred among Patient Support Services (PSS) staff at RPH compared to the Perth Metropolitan population from 1983 to 2008• Staff records were linked to WA Cancer Registry, Hospital Morbidity Data Collection, Death Registrations, Electoral Roll and National Death Index• Found there was no link between occupational exposure at RPH and cancer rates |
| Linkage of Bellevue Fire Register | <ul style="list-style-type: none">• After a chemical fire at Bellevue, a register was established to enable longitudinal tracking to ascertain any longer-term health problems that may arise from exposure• Annual linked data updates for 5 years• No further investigation warranted |
| Risk of osteoporotic and minimal-trauma re-fracture and costs related to incident osteoporotic fractures in Western Australia: a 10 year snapshot using the WA Hospital Morbidity Data System. | <ul style="list-style-type: none">• Assessed costs and re-fracture risks related to osteoporosis in WA• Provided further justification for the implementation of Fracture Liaison Services in health services |
| Demand and supply modelling for WA hospital services | <ul style="list-style-type: none">• Uses linked Emergency Department, Hospital Morbidity and mortality to forecast future hospital activity |
| Mortality data for influenza impact monitoring | <ul style="list-style-type: none">• Used by the Communicable Disease Control Directorate to monitor flu-related deaths |
| Monitoring of influenza hospitalisations within Western Australian public hospitals | <ul style="list-style-type: none">• Response to swine flu epidemic• Used to predict hospitalisation rates in WA |
| Elective surgery waitlist linkage | <ul style="list-style-type: none">• Use of links to mortality data to remove deceased patients to ensure the list of patients waiting for elective services are as current as possible |



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| Using links within data collections | <ul style="list-style-type: none">• Assists identify duplicate/merged records• Enables data collections to respond to Parliamentary Questions related to numbers of patients rather than events (e.g. how many patients were hospitalised with appendicitis) |
| Creation of Aboriginal and non-Aboriginal population estimates for small geographical areas | <ul style="list-style-type: none">• Estimated Resident Population data is adjusted using linked births and deaths to create Aboriginal and non-Aboriginal population estimates at the Statistical Area 2 level, by year and sex across WA.• These data are not available from any other source, and are crucial for DoH planning purposes. |