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Update on DNA Analysis Issues

15 December 2008




Queensland Government
Queensland **Health**



Background

- Purchased 4 automated platforms Jan 2006
- Verification of 1 platform – Feb – July 06 followed by implementation in Feb 07
- Verification of Extraction platforms – Jan 07 to Oct 07, implementation on 29 Oct 07
- Other States were not at the same stage as Qld


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Events

- 6 Batches in 6mth period (4CW, 2Ref) were affected
- Results deemed 'not reportable'
- Suggested cause: syringe wear & tear and programming of platform
- Cases affected: 113 (Major 27, Vol 86)
- 1 statement & 1 Link affected
- Actions: revert to manual processes, audit all results from platform, specialist to review programming, revert to manual extractions


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Review of results

- 278 batches of extractions were reviewed
- Further 10 batches had an adverse event associated with it
- Root causes appear to be –
inappropriate seal used to cover plate,
well to well seepage, programming of
instrument and/or syringe wear and
tear


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Actions:

- All cases containing DNA IQ results are being assessed using court date as a priority
- ~7,000 cases – 117 reports released – majority checked and passed (11 outstanding)
- Divided Reporting team into 2 – Routine Team and Investigation Team
- Using a checklist – re-sampling of items, re-extract of samples


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Actions cont

- 676 profiles loaded to NCIDD – converted to 'Intra', priority of checking Interstate links, Major then Volume
- Results – checked by a scientist – peer reviewed by another scientist – must agree
- If any question regarding the validity of the result, then the result is reported as a 'Quality Control Failure'.


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Automated platforms

- Adjustments made to programming and deck layout
- Alternative Seal tested
- Re-verification being conducted – including increased efficiency of the extraction
- External Audit held 12th November
- Changed to 1mL syringes (instead of 500 μ L)


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Verification

- Initial testing of the robotic platform conducted
- Results are clear of an adverse event
- Re-introduction of platforms next year, with a post implementation review scheduled

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Recommendations from DPP

- Add a paragraph into our appendix to state that:
- an event occurred during a particular period,
- the case was/wasn't affected by the event,
- If affected, if retesting/otherwise has occurred
- Outcomes of any investigations to give confidence in results

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