Letter of transmittal

30 January 2026

Ms Julia Knight
Secretary to the Public Accounts Committee
GPO Box 3721
DARWIN NT 0801

By email only: LA.PAC@nt.gov.au

Dear Ms Knight

RE: Supplementary Submission to the Inquiry into the Acacia Digital Patient Record System

Thank you for the invitation to submit a supplementary submission to the Public Accounts Committee's *Inquiry into the Digital patient Record System*.

We are pleased to provide the **enclosed** supplementary submission, which provides an update to the Committee on the current status of the implementation of Acacia, as requested. This submission should be read in conjunction with the Department of Health's and the Department of Corporate and Digital Development's joint submission dated 30 April 2025 (**Joint Submission**).

This supplementary submission is suitable for publication by the Committee, and we remain willing to appear before the Committee, at a time convenient to it, to answer any questions it may have.

Yours faithfully

[redacted]

Chris Hosking
Chief Executive Officer
Department of Health

30/1/26.

[redacted]

Catherine Weber PSM
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30/1/26

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1 Executive Summary

1. This supplementary submission should be read with the **Joint Submission** of the Department of Health and the Department of Corporate and Digital Development (together, **the Departments**), dated 29 April 2025.[1]

2. Since the Joint Submission was provided to the Committee in April 2025, the Core Clinical Services Renewal **Program** — the largest information technology reform in Northern Territory history, to replace five outdated clinical systems with a single, comprehensive solution — has continued to achieve significant milestones. In particular:

   (a) In August 2025, the most significant component of the Acacia environment, the Patient Administration System, went live in both the Alice Springs Hospital and the Tennant Creek Hospital.

   (b) In November 2025, the Patient Administration System was successfully reimplemented into the Royal Darwin and Palmerston Hospitals' Emergency Departments.

3. Acacia is now utilised 24 hours per day, 7 days per week by over 6,000 clinicians across the Territory's six hospitals, as well as in every renal dialysis facility. The successful, Territory-wide implementation of Acacia 1.0 has allowed the retirement of the Territory's highest-risk legacy system, CareSys, and is delivering clinical benefits at the point of care.[2]

4. Functional Group 1 of the Program is now complete.[3] That is in addition to Functional Group 0, the Electronic Patient Record (**EPR**), which was completed in 2020–2021. Together, they position the Territory's public health system for a material uplift in the coming years, as further functionality of the full Acacia system is unlocked.

5. Future investments in Functional Groups 3 (e-Medication management) and 4 (remote and urban primary health care) will allow complete integration between acute, primary and community health settings, improving clinical outcomes and patient experience.

6. With Acacia 1.0 operational across the Territory, the key infrastructure underpinning those additional tranches is now in place.

2 Significant Program Achievements

2.1 Go Live at Alice Springs Hospital and Tennant Creek Hospital

7. Acacia 1.0 went live at the Alice Springs Hospital and at the Tennant Creek Hospital on the morning of 23 August 2025. No significant issues were reported following the Go Live, and the deployment was overwhelmingly successful. CareSys is no longer being used in either hospital for any admissions post-Go Live.

8. In the lead up to the Go Live, a significant body of work was undertaken to ensure staff and systems were prepared. In particular:

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1 Terms referred to in this Supplementary Submission are defined in the Glossary of Key Terms in the Joint Submission.
2 The clinical and operational benefits of Acacia 1.0 are discussed in sections 6.3 (inpatient) and 6.4 (outpatient) of the Joint Submission.
3 The Program is split into five Functional Groups, details of which are set out on page 21 of the Joint Submission.

(a) Training commenced on 7 July 2025 at the Alice Springs Hospital, and on 4 August 2025 at the Tennant Creek Hospital. Over 1,200 training attendances were recorded across multiple sessions in Alice Springs, and over 150 in Tennant Creek. In addition, 45 Super Users, which are end users who are selected to be comprehensively trained in the workings of the system so that they can assist other users and answer questions, were inducted across nursing, administration, and medical streams. By Go Live, training uptake exceeded the Program target of 70%, with 72% of users completing Instructor-Led Training (ILT) in Central Australia, and 78% in Barkly.

(b) Simulation and testing was undertaken in three key areas, on the basis of the lessons learned from earlier deployments as to where issues were most likely to arise, being the Emergency Department, Outpatients Department, and Operating Theatre (covering theatre scheduling and theatre clinicals). These sessions were completed after training in the Acacia environment had been undertaken, and were designed to allow for the identification of any practical errors, bugs or issues prior to the Go Live. Those simulation sessions were successful, with a number of changes identified and made to both the Acacia system, and to existing clinical business processes, following those sessions and prior to Go Live.

(c) A comprehensive Clinical Safety Case was prepared which identified, assessed, and mitigated any clinical risks. The Clinical Risk Reviewers who developed the Clinical Safety Case included clinicians, and concluded that the risks could be appropriately managed with Go Live.

(d) A 24-hour, 7-day support roster of approximately 30 Program technical staff was put in place following Go Live, to immediately respond to and assist staff with any issues. At-elbow support, in which staff were located on site, was provided at the Alice Springs Hospital from 7 am until 7 pm from Go Live until 24 October 2025, a period of eight weeks. In Tennant Creek, at-elbow support was provided until 26 September 2025. In addition, on-call support was available overnight and on weekends.

9. The Go Live proceeded without significant incident, as evidenced by the post-Go Live support volume. For example, the number of support calls received in the Call Hub decreased by 70% after the first week, and continued a downward trend, as staff became accustomed to the new operating environment and minor problems were resolved.

10. Acacia continues to be effectively utilised at the Alice Springs and Tennant Creek Hospitals presently.

2.2 Royal Darwin and Palmerston Hospitals' Emergency Departments Remediation

11. Acacia 1.0 was reimplemented to the Royal Darwin and Palmerston Hospitals' Emergency Departments on 13 November 2025, following its temporary rollback in March 2024. No significant issues were reported, and the Go Live was successful.

Remediation works

12. As set out in section 7.2 of the Joint Submission, Acacia 1.0 was temporarily suspended from the Royal Darwin and Palmerston Hospitals' Emergency Departments on 20 March 2024. That decision was taken to allow a number of targeted technical modifications and improvements to be made to the system, so that it better aligned with the needs in the unique Emergency Department clinical environment.

13. As part of that process, Emergency Department and Program staff collaborated to identify discrete improvements. Approximately 170 remediation requirements were identified. Most of those related to the visual representation of clinical information on the screen, in a way in that clinicians were familiar with, and which enabled them to have "situational awareness" of what was happening across patients in the Department at any one time.

14. By Go Live, all remediation requirements had been actioned. The overwhelming majority of them were able to be developed as requested in conjunction with the vendor, InterSystems. Those developments were progressively implemented in tranches to the Acacia 1.0 systems in use at other tertiary hospitals across the Territory, prior to the reimplementation at the Royal Darwin and Palmerston Hospitals' Emergency Departments.

15. In some instances, the precise improvement request was not able to be delivered due to technical limitations, however an alternative solution was identified and proposed by Program and InterSystems staff to achieve the same outcome. Those proposals were considered by Emergency Department clinicians and accepted.

Simulation Testing

16. In preparation for the re-implementation at the Royal Darwin and Palmerston Hospitals' Emergency Departments, two rounds of simulation testing were conducted to replicate real-life workflows for Emergency Department clinicians, on 17 July 2025 and 10 October 2025. These sessions were completed by clinicians to practise real-world tasks across the patient journey, in a controlled and monitored environment, and allowed for the identification of any practical bugs or issues prior to Go Live.

17. As is the purpose of simulation testing sessions, those exercises resulted in a further eleven inquiries and follow-up actions, all of which were actioned prior to Go Live.

Training

18. Training was offered to clinicians and administrative staff at the Royal Darwin and Palmerston Hospitals' Emergency Departments, both online and face-to-face, in the months preceding the Go Live.

19. At the time of Go Live, training uptake was strong and above target: 100% of specialists in the Royal Darwin and Palmerston Hospitals' Emergency Departments had completed the training, along with 100% of administrative staff, and 100% of the triage nursing staff. Nursing training completion was 88%, above the target of 70%, and doctor training completion was 82%, above the target of 80%.

Clinical Safety Case and Pre-implementation Assurance Review

20. In accordance with the Program's governance framework, the decision to Go Live was supported by a comprehensive Clinical Safety Case, which was developed and reviewed by clinicians across medicine, nursing and pharmacy, including the Emergency Department.

21. In addition, prior to Go Live, an independent *Pre-implementation Assurance Review* was conducted by Deloitte, which did not identify any issues to prevent Go Live, and made a number of targeted recommendations to improve preparedness, each of which was actioned.

ED Reimplementation Wellbeing Plan

22. Given the difficulties encountered by Program staff and in the Emergency Departments with the initial implementation, and in the period following the temporary rollback, Program staff also worked closely with the Department of Health to develop a Wellbeing Plan to ensure all staff in the Departments (including contractors) were supported through the reimplementation into the Royal Darwin and Palmerston Hospitals' Emergency Departments.

23. The Wellbeing Plan provided for a number of work health and safety supports for those involved with the reimplementation, including on-site counselling supports, rostering and workload adjustments to de-prioritise non-urgent tasks and bolster staffing, and targeted communication and engagement with staff to check on wellbeing. The implementation of the Wellbeing Plan was overseen by the Project Steering Committee.

Post Go-Live Support

24. Following Go Live, a 24-hour, 7-day roster of Program technical staff support was put in place to immediately respond to and assist staff with any issues.

25. Technical specialists based at the Royal Darwin Hospital provided at-elbow support, 24 hours per day, 7 days per week in both Emergency Departments for three weeks following Go-Live, after which they were scaled down to be available from 7 am to 11 pm each day, with on-call support available overnight.

26. In preparation for Tropical Cyclone Fina, two Program technical specialists stayed at the Royal Darwin Hospital, with another two temporarily staying in on-campus accommodation to provide additional support if needed, while a further two stayed at the Palmerston Regional Hospital.

27. The Go-Live proceeded effectively, and systems and staff transitioned to Acacia with minimal disruption, as is evidenced by the volume of requests for support: in the first week following Go Live, 61 calls were received by the Acacia Go Live call centre. By the second week, that had decreased to only 15.

28. Acacia is now being utilised effectively across the entirety of the Royal Darwin and Palmerston Regional Hospitals.

3 Program Timeframe and Budget

29. On 13 May 2025, the Northern Territory Government delivered Budget 2025–26, which identified $30.25 million in 2025–26 for the Acacia program, including $6 million in new appropriation funding in each of 2025-26 and 2026-27. As at 31 December 2025, the total Program spend, since its inception, was $318.5 million.

30. That funding enabled the completion of the deployment of Functional Group 1 by the end of 2025,[4] with Acacia 1.0 now operational at all six tertiary hospitals across the Northern Territory, along with all renal dialysis facilities. The current Budget appropriation also allows the Program to continue at a reduced scope and resourcing level, focused on delivering the most critical priorities first.

31. Following the completion of Functional Group 1, allowing the retirement of the CareSys legacy system, and with Acacia now operational in all hospitals across the Territory, the deployment of the remainder of the Program will be completed through a smaller, scaled down approach.

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[4] For a description of the Functional Groups, see Table 1 on page 21 of the Joint Submission.

32. A core team of the Program's most highly skilled project professionals continue to work towards the deployment of Functional Group 2 – Clinical Documentation. Elements of Functional Group 2 will be delivered based on NT Health's clinical priority areas. This will support further transition to digital workflows, removing paper-based processes in key areas, and will allow the retirement of the Clinical Workstation (CWS) legacy system.

33. Certain of the features of Functional Group 2 have been deployed into the Central Australian Renal Units (in February/March 2025) and the Top End Renal Units (in June/July 2025). Delivery of Functional Groups 3 and 4, being the e-Medication portal and the replacement of CCIS and PCIS, will be deferred pending funding availability.

4 Responses to other issues raised

34. The Departments have had the opportunity to consider the following submissions received by the Committee from other stakeholder organisations:

    (a) the Australian Medical Association Northern Territory (**AMA**), dated 29 April 2025;

    (b) the Australian Nursing and Midwifery Federation Northern Territory (**ANMF**) dated 30 April 2025; and

    (c) Royal Australian and New Zealand College of Psychiatrists Northern Territory (**RACP**), dated 1 May 2025.

35. The Departments are grateful for their considered submissions.

36. To assist the Committee, the Departments provide the following information to contextualise and respond to the specific concerns raised in those submissions.

4.1 Medical chart overwriting

37. The AMA noted a specific concern that medication charts of patients were being deleted upon patient transfer from the Emergency Department to the ward. This was a historical issue, which was due to the technical limitations of a legacy system, and the Departments have taken active steps to resolve it and prevent it from occurring again.

38. The issue was limited to when an existing inpatient, such as a patient admitted to the Hospital in the Home scheme, [5] presented at the Emergency Department. These patients represent a very small, complex subset of patients. When these patients present at the Emergency Department, the triage nurse may not recognise that they have an inpatient 'episode' already active in Acacia. When they create a new one, that automatically sends a prompt to the electronic medication management system, eMMA, to replace the existing medication charts with a new one. In doing so, eMMA overwrites their existing medication charts.

39. The issue cannot be rectified within eMMA because it is a technically limited software that is not capable of handling multiple admissions at one time. However, the issue will be permanently resolved when eMMA is replaced with the Acacia e-medication module, which is part of Functional Group 3.

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[5] Hospital in the Home refers to an alternative to in-patient admission in which eligible patients are provided care at home by qualified clinicians, with a view to reducing hospital bed pressure.

40. Until then, the Departments have implemented effective workarounds which prevent the medication charts from being deleted by triage staff selecting "*Internal Transfer*" when patients with an active inpatient episode are admitted to the Emergency Department, rather than creating a new one.

4.2 Outpatients follow-up

41. The AMA also expressed concern in its submission that there were a number of patients whose outpatient appointments or surgeries were 'lost' within Acacia. This issue is also known to the Program staff, and is not due to a system limitation but a change in workplace processes due to the digitisation brought about by Acacia.

42. Previously, before Acacia 1.0 was used, clinicians would give patients a slip of paper at the end of their outpatient appointment which they were instructed to put into a specific tray. That tray was monitored by administrative staff, and the slip of paper would indicate when the patient needed to be followed up, if at all. This created a risk that patients would lose or forget to place their slip of paper in the tray.

43. Now, with Acacia 1.0, after the completion of an appointment with a clinician, the clinician has the opportunity to digitally confirm that a follow up is required with the patient, the date on which the follow up is required (e.g. 1 month, 3 months, 6 months), and then a free text box into which the clinician may enter specific notes. That then prompts the administrative officers in Acacia to book the follow up appointment for the patient, removing the need for the slip of paper and digitising the process.

44. Unfortunately, due to the change in business processes, that step is occasionally being missed by the clinician and booking officers are therefore not being prompted to book the follow up appointment, nor do they know when to book the follow up for.

45. A similar change occurred with the triaging of referrals in outpatients. Previously, clinicians would sift through the referrals (paper), and place post-it notes on the top regarding when the patient needed to be seen: for example, if the matter referred was urgent and the patient needed to be seen as soon as practicable, or if appointments could be booked in a few days or weeks. Those papers and post-it notes would then go the administrative staff, who would book the appointment accordingly.

46. Now, with Acacia 1.0, that triaging is done within the Acacia environment, where clinicians can read each referral, and digitally mark it as being urgent, semi-urgent, etc, and list when the patient needed to be seen. That referral then automatically prompts the administrative staff to book that patient accordingly. However, if that digital triaging is not done, then there is no trigger to the booking team as to when to book the patient.

47. In response, Program staff have delivered specific further training and guidance to both clinicians and administrative staff to prevent the issue, which include:

    (a) displaying a specific interface at the end of the day which lists each patient seen that day, along with any outcome reported, allowing easy view of those patients whose follow up appointments have not been booked; and

    (b) generating a system report using a few simple steps in the system which identifies those specific patients or referrals with missing outcomes.

4.3 Data transfer incident in 2018

48. A number of submissions also expressed concern about the data governance arrangements of the Program, by reference to an incident in 2018. This issue has been extensively addressed by the Departments previously, and additional controls have already been put in place. No such incident has occurred since. Nevertheless, the Departments provide the following information to the extent it is of assistance.

Background

49. Prior to Acacia, many clinical tasks were done through a variety of disparate manual forms. For example, many records were written on a paper form, or entered into a Word document or Excel spreadsheet. There is no single way to obtain and track that information, which means patients and clinicians would often have to re-submit the same information over and over, or scan and send materials across different platforms.

50. Once the deployment of Acacia is complete, most of those processes will be done in digital questionnaires or 'screens' within the Acacia environment. Typical examples of matters which will be handled through the Acacia environment include hospital discharge summaries, pathology requests, specialist referral letters, and operation notes.

51. In order to build the software environment for those questionnaires and screens, technical specialists in the Program (i.e. in DCDD) and in InterSystems needed to review templates of those forms and questionnaires so they could build like versions in Acacia.

52. As part of that process, in 2018 and 2019 the Program undertook a process of content collection, in which staff were invited to send example templates of forms and reports they used on a day-to-day basis so that those could be built in the Acacia system instead. Program staff specifically requested that examples not include any patient information, or that any information was deidentified. Those materials were shared with Program staff internally within the NT Government's secure environment by a number of methods (e.g. email, hard copies, USBs, SharePoint).

53. Overall, approximately 50,000 digital items (e.g. .docx, .pdf, and .xlsx files) were shared with Program staff. The overwhelming majority of those were blank templates, fictional examples, or contained de-identified patient data. The Program staff stored those items on the internal NT Government server, access to which was limited to Program staff.

54. Program staff then commenced uploading those documents to a secure, enterprise-grade SharePoint environment which was shared with a limited number of critical InterSystems software specialists.

Identification of incident and response

55. While in the process of sharing the files with InterSystems, Program staff observed that a small number of the files contained identifiable patient data. Immediately, the sharing of any further files was stopped, and the existing files were quarantined while an assessment was done, both to determine:

    (a) how many files were shared *internally* within the NT Government which contained identifiable patient data; and

    (b) how many of those were shared with InterSystems.

56. All user access to the items was revoked, save for DCDD's internal Data Control Management Team. On 31 July 2019, the Data Control Management Team commenced a review and analysis of the data stored on the NT Government business drives (internal) and SharePoint (accessible by InterSystems).

57. Following a comprehensive review and risk assessment, it was determined that of the approximately 50,000 files shared internally with the Program staff, approximately 427 files were found to contain identifiable patient data. Of the 3,000 files which had been uploaded to the SharePoint and were accessible to InterSystems, only 31 were found to contain identifiable patient data.

58. InterSystems and its staff is bound by strict confidentiality and privacy protections which are codified in its contract with the Northern Territory Government. Those requirements include complying with the *Privacy Act 1988* (Cth) and the Information Privacy Principles under the *Information Act 2002* (NT). It is banned from using personal information it obtains for any purpose unless authorised by the Government.

59. InterSystems confirmed that the files shared with it were downloaded to its internal enterprise-grade system which is stored at a data centre in Sydney. InterSystems promptly located and deleted all affected files, as it was required to do.

Actions in response

60. Following the incident, the Department of Health self-reported to the Ombudsman/Information Commissioner for independent advice and guidance. A comprehensive preliminary report on the incident, including the list of affected documents, was shared with the Ombudsman/Information Commissioner.

61. The Ombudsman/Information Commissioner provided a number of useful recommendations to ensure the error would not happen again, which the Departments have actioned.

62. Since that time, the Departments have developed and implemented additional controls to strengthen the governance of data received by Program staff throughout the deployment of Acacia. Those include the creation of a specific Data Governance Framework, supported by clear policies, procedures and training for the gathering and handling of sensitive documentation by Program staff.

63. The Departments acknowledge the incident was regrettable, and should not have happened. However, none of the files was ever accessed by anyone outside the Northern Territory Government and InterSystems. In addition, robust control mechanisms have since been put in place to ensure such incidents do not happen again.

4.4 Issue reporting and resolution mechanism

64. Some stakeholders expressed concern about the mechanism by which issues with Acacia are reported and followed up on by Program and technical staff.

65. All clinical incidents or concerns with relation to Acacia are logged in RiskMan, the risk management system used by the Department of Health for all clinical incidents.

66. In RiskMan, the person logging the incident report has an option to select an Acacia "tag" related to the incident. Details are then provided, including what happened, where and when.

67. Each incident report logged in RiskMan with an Acacia is tag is then reviewed by the Program staff. In particular, the Program employs two Clinical Safety Officers (**CSO**) who are both clinically trained professionals. The CSOs review and triage each report.

68. If the report relates to a flaw or issue in the Acacia system which requires rectification, the CSOs will raise a ticket with InterSystems. Sometimes, reports logged in RiskMan are tagged with Acacia but do not relate to issues *with* Acacia. For example, if a clinician noticed an error had been made in Acacia in relation to a patient's care, they may flag that with an Acacia tag because that is how the risk was identified, even though the risk itself it does not relate to the Acacia system.

69. When a ticket is raised with InterSystems, the CSOs complete and submit a Clinical Safety Assessment, which assesses the clinical risk presented by the system flaw or error identified in the report. That Assessment is then submitted with the ticket, and is received by InterSystems' clinical safety team. The teams then work together to agree on a solution which mitigates the clinical safety risk identified. Once agreed, the solution is sent to the InterSystems' product engineers to develop the system fix.

70. Those fixes are then deployed periodically as part of system-wide updates. In the interim, InterSystems will typically provide a temporary workaround to mitigate against the incident occurring again until a permanent fix can be deployed.

4.5 Locked patient records

71. The AMA referred in its submission to concerns that patient care is being delayed due to patients' Acacia record being "locked" when the record is open by another clinician at the same time.

72. Acacia, like almost all EMRs, does not allow two or more users to simultaneously edit the same record. That is a clinical safety feature to ensure that each clinician viewing and contributing to a patient record has access to the most up-to-date information from each other clinician, and prevents inconsistencies in care planning — for example, by users making different decisions, assessments or contributions on different information at the same time.

73. Typically, that does not cause any difficulties as the clinician editing the record saves and exits the record when they are finished, freeing the record up for editing by any other clinician. The restriction on simultaneous *editing* of a patient record also does not apply to *viewing*. Any number of users may view a patient's record at the same time, even if the record is being edited by another user.

74. However, on occasion, a patient's record may remain restricted for editing for an extended period of time. That may be because the clinician editing the record was called to a more urgent situation or was otherwise interrupted, or may have accidentally left the record open when they were done.

75. In response, the Program staff have implemented two specific system changes to mitigate the risk that clinicians will be delayed in their ability to contribute to a patient record due to the record remaining locked for editing:

    (a) *First*, the layout of the Acacia screens have been modified such that many aspects of a patient record will automatically open in view-only mode when clicked, with edit mode accessible by clicking a button. This reduces the likelihood that a user not intending to edit the record will unintentionally restrict it for editing by opening the record in edit mode.

    (b) *Second*, system permissions have been conferred on Hospital Resource Coordinators, Nurse Navigators and Team Leaders, who are hospital employees available 24 hours per day, 7 days per week at each tertiary hospital in the Northern Territory, to forcibly unlock a patient record for editing.

76. Those changes ensure that in the event a patient's record is accidentally locked for editing for longer than necessary, clinicians can quickly and easily obtain write access, while protecting patient security and consistency in care.

77. We trust this supplementary submission will be of assistance and welcome the opportunity to appear before the Committee, at a time convenient to it, to answer any questions it may have regarding Acacia.