Mr James Downie
Chief Executive
Independent Hospital Pricing Authority
Email: secretariatihpa@ihpa.gov.au

Your ref D21-3356
Our ref S21/114

Dear Mr Downie

Thank you for writing about the submission of a completed data quality statement (DQS) for round 24 of the National Hospital Cost Data Collection (NHCDC).

Please find attached the NSW Health DQS for the round 24 (2019-20) NHCDC.

Data provided by NSW for round 24 of the NHCDC has been prepared in adherence with the Australia Hospital Patient Costing Standards (AHPCS) Version 4.0 and is complete and free of material errors.

Adherence to the AHPCS Version 4.0 is qualified by the following items:

- Standard 1.2 Third Party Expenses – expenses that sit outside Local Health District/ Specialty Health Network general ledgers relating to private and compensable patient pathology and medical expenses and recorded in Private Practice Trust Funds have not been included in the NHCDC submission.

Assurance is given that to the best of my knowledge, data provided is suitable to be used for the primary purpose of the NHCDC, which includes development of the National Efficient Price.

NSW Health appreciates the assistance provided by IHPA's costing team during the round 24 submission period. As previously indicated, NSW Health is willing to work with IHPA on the development of a new NHCDC submission portal.

Thank you again for writing. For more information, please contact Mr Neville Onley, Executive Director, Activity Based Management, NSW Ministry of Health, at neville.onley@health.nsw.gov.au or on 9391 9855.

Yours sincerely

Elizabeth Koff
Secretary, NSW Health

Encl.

4/7/21

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Data Quality Statement and Signed Declaration

New South Wales

1. Overview of costing environment

Address the following:

1.1 Who undertakes patient costing in your jurisdiction?

In NSW, patient costing is processed by costing practitioners within each of the fifteen Local Health Districts and three Specialty Health Networks (Districts and Networks). The NSW Health Activity Based Management (ABM) Group Costing Team provides State-wide leadership and coordination of the patient costing data preparation and submission process.

The patient costing submission in NSW is referred to as the District and Network Return (DNR).

The ABM Group is responsible for transforming DNR submissions into the National Hospital Cost Data Collection (NHCDC) format and submitting patient costing data to the Independent Hospital Pricing Authority (IHPA).

1.2 How often is costing undertaken?

Usually the DNR is processed twice a year, with a July to December submission and a July to June full year submission.

When the COVID-19 pandemic was declared in March 2020, the six-month DNR submission was being prepared. This submission was suspended, and a monthly cost modelling process was commenced by all Districts and Networks. In May 2020, two large metropolitan Districts, who were key leads in the NSW COVID-19 response, processed a nine-month DNR for two of their principal referral hospitals. The monthly cost modelling and the two principal referral hospital DNRs were established to ascertain the veracity of National Weighted Activity Unit (NWAU) price weights for COVID-19 patients.

While the two nine-month DNR submissions did not suggest any concerns with the NWAU price weights for COVID-19 patients in NSW, the monthly cost modelled results suggested the significant change in hospital case mix, across all activity streams from the last week in March 2020 indicated a modified approach to the DNR would be required.

Subsequently, a July 2019 to March 2020 DNR and an April to June 2020 DNR was separately prepared. These two DNRs were then consolidated in the costing system to generate a full year patient costing submission that adequately reflected the cost profile of the first nine months and the cost profile of the last three months.

1.3 Which costing systems are in use?

One costing application is in use across all Districts and Networks in NSW. The commercially sourced costing application was implemented in 2012 and regular upgrades are installed. While each District and Network has their own instance of the costing application, all sites are on the same version to facilitate consistency and efficient reporting processes.

1.4 Is there any jurisdiction-wide training/support for costing practitioners? If so, provide details.

There is significant jurisdiction-wide training and support for costing practitioners in NSW.

A Costing Standards User Group (CSUG) meets regularly throughout the year. Each February, there is a three-day workshop that typically reviews the previous year and develops priorities for the coming calendar year. The workshop program includes topics of interest for key costing stakeholder groups, such as business managers, who are invited to attend one day of the workshop.

The usual pattern of six monthly CSUG workshops after the February 2020 CSUG workshop was abandoned after the COVID-19 pandemic was declared in March. A total of 26 CSUG meetings were held between late March and the end of November 2020 to collaboratively develop technical guidance documents and to provide support required for the monthly modelling and the two-costing period DNR submission process.

ABM provides technical support through the development of various spreadsheet and database tools to assist with preparation of general ledger and activity data for loading into the costing system. Change requests for the DNR module in the costing system are managed by ABM to ensure consistency between all Districts and Networks.

ABM manages ongoing refinement of the multi-volume publication the NSW Cost Accounting Guidelines (CAG) in consultation with CSUG. The Australian Public Hospital Costing Standards Version 4.0 provides the foundation for CAG Volume 2: Costing Standards.

1.5 Provide details of any changes from previous year specifically details of improvements in costing process and methodology.

The most significant change in round 24 was processing of the DNR in two separate costing periods to ensure the impact of the COVID-19 pandemic was appropriately reflected in the costing results.

The creation of two separate costing ledgers requires significantly more analysis than the creation of a single costing ledger as there are some expenses paid in one costing period that need to be pro-rated across the other costing period. Examples of these expenses are the actuarial adjustments and wash up intra-health cross charges at year-end or expenses that may be posted at the end of one costing period and reversed at the beginning of the next costing period. Usually the impact of these adjustments is mitigated by the creation of a single year to date costing ledger.

The creation of the two costing ledgers was facilitated by three elements:

- the monthly cost modelling submissions meant that costing practitioners had a greater familiarity with the general ledger than in previous years
- ABM created a tool that enabled costing practitioners to easily identify material variances in average monthly expense closing balances by cost account code in each of the two periods
- the general ledger extract tool was updated to include the various project codes implemented by Finance to capture COVID-19 related expenditure.

Costing practitioners also worked closely with finance departments, at both NSW Health and District/Network levels, to ensure expense reported under the National Partnership on COVID-19 Response (NPCR) State Public Health Payment was appropriately isolated in the costing ledgers, to ensure alignment of expense to either a National Health Reform Agreement product or a NPCR product.

During round 24, partly motivated by the two costing periods, detailed analysis of the cost of services (also known as intermediate products) was undertaken. This analysis built on the service linking improvement strategy implemented in round

23. The DNR Audit Program was also updated to test cost per service results for wards, medical specialties, non-admitted clinics, emergency department, pathology, imaging, physiotherapy and allied health.

A change was implemented for organ retrieval cost allocation. Previously, retrieval costs associated with the three retrieval teams at Western Sydney Local Health District (LHD), Sydney LHD and St Vincent's Health Network were distributed to the District and Network costing ledger where the donor episode was reported. In round 24, organ retrieval costs were allocated to the transplant episodes. This change is consistent with AHPCS Version 4.0 costing guidelines.

A State-wide standard was developed and implemented for medical and surgical supply service (feeder) data that is now available in five Districts and Networks. The standard developed ensured the integrity of the cost bucket structure. Standard service data will also facilitate benchmarking activities.

In March 2020, NSW Health commenced the Telestroke service which operates out of the South Eastern Sydney LHD. This service provides specialised neurology consultation for patients presenting with stroke to emergency departments in rural Districts. The cost of Telestroke services was appended to the relevant emergency department presentations to ensure the full cost for these patients was reported.

In March 2020, NSW Health commenced treatment of patients with acute lymphoblastic leukaemia and diffuse large B-cell lymphoma as part of the high cost, highly specialised therapies arrangements. In round 24, the allocation of gene therapy manufacturing costs was examined to ensure appropriate cost allocation.

Residual cost ($16.5m) from HealthShare NSW, a State-wide support service for patient meals, linen, employee services (such as payroll) and financial services (such as accounts payable) that was not distributed to Districts and Networks in the general ledger, was attached to episodes for the NHCDC submission.

Finally, the mapping of operating lease cost was updated. Previously these costs were mapped to the goods and services line item. They are now mapped to the lease line item.

2. Submitted cost data

Address the following:

2.1 How many hospitals provided cost data for the Round 24 NHCDC? Provide details about the number of submitting facilities and the changes from prior year (state movement in number of facilities and costs submitted)

Submission Year	Number of Hospitals/Entities	Activity	Expense ($m)
Round 24 (2019-20)	142	12,194,889	$15,987.7
Round 23 (2018-19)	128	11,587,625	$15,094.4
Variance	14	607,264	$893.3

NSW reported an additional 14 establishments in the round 24 NHCDC submission.

All these establishments are non-admitted mental health services submitting Australian Mental Health Care Classification (AMHCC) phase of care costs for the first time in 2019-20.

2.2 Provide explanation of costed results with explanation of significant movements from prior year.
(e.g. Costs submitted to NHCDC in Round 24 are [$x] which is $899.3 m higher than Round 23. The reasons for the change were ..)

Total activity submitted in round 24 was 12,194,889 records, an increase of 607,287 records (5.2%) from the round 23 2018-19 submission of 11,587,625 records.

The COVID-19 pandemic had a profound impact on activity volumes across all activity streams, higher workforce costs and the need to provide inpatient bed capacity for the anticipated COVID-19 surge of cases. Variations in hospital case mix suggest that any comparison with prior year results is both not appropriate and not meaningful.

Activity counts for acute admitted patient episodes decreased by 3.8%, by 5.9% for sub-acute admitted episodes and by 2.9% for emergency department episodes. These decreases were offset by a 9.2% increase in non-admitted patient activity. The increase in non-admitted patient activity was primarily driven by COVID-19 screening activity.

The additional non-admitted mental health activity submitted for round 24 was a result of an additional 14 mental health establishments. Non-admitted mental health activity is submitted at the AMHCC phase level as opposed to the service event level.

The total cost submitted in round 24 was $15,987.7m. This is an increase of $899.3m (5.9%) on the round 23 submission of $15,094.4m. The average raw cost for acute admitted patient episodes increased by 5.7%, by 8.3% for sub-acute admitted episodes and by 8.2% for emergency department episodes.

There are three key reasons for this overall increase in total cost:

- the increased average raw cost for acute and subacute admitted episodes and the emergency department episodes, despite the decrease in activity, accounts for $273.3m (30.6%) of the increase in total cost
- the increase in activity and the increase in average raw cost for non-admitted patient episodes contributes a further $319.3m (35.7%) of the increase in the total cost
- the increase in non-admitted mental health activity, primarily due to the inclusion of additional non-admitted mental health establishments in the round 24 NHCDC submission, accounts for another $313.2m (35.1%) of the increase in total cost.

2.3 Are there any significant factors which influence the jurisdiction's Round 24 cost data (i.e. jurisdiction wide admission policies, etc). If so, what is the impact on costed output?

The COVID-19 pandemic significantly influenced the round 24 cost data, with all products having a higher average cost in the last three months in comparison with the first nine months of the financial year. Hospital case mix changed due to the various pandemic management strategies, such as the cessation of dental services and elective surgery in March and the rapid uptake of Telehealth service delivery in the outpatient setting. The contracting of services such as renal dialysis in March and elective surgery in June to private hospitals has resulted in changes to line item and cost bucket profiles as the expense was reflected as goods and services accounts.

There were no jurisdiction wide policy changes that impacted the costed output.

2.4 At a jurisdiction level, did you experience any challenges with costing of specific products in Round 24?
(e.g. Mental health phase of care / other) please describe these challenges and the impact of this)

Two challenges relating to the reporting of product costs as opposed to the allocation of costs to products are noted by NSW for round 24:

- Ongoing discussions late into November 2020 with the National Health Funding Body, IHPA and jurisdictions regarding the approved NPCR State Public Health Payment items and whether COVID-19 testing was a 30 series Tier 2 or a 20 or 40 series Tier 2 was most problematic, as the final decision was not made until after the DNR had been submitted by Districts and Networks to ABM. Given the lack of a timely decision, NSW determined that all costs – staff, goods and services and pathology cost, be allocated to COVID-19 non-admitted service events for the DNR submission. When the determination was made, all line items except COVID-19 pathology cost were removed from the COVID-19 non-admitted service events prior to the NHCDC submission.
- Application of non-admitted mental health phase of care grouping rules for the AMHCC resulted in a number of patients with costed services from more than one District that link to a single phase. The strict application of the rule that a patient can only have one phase of care at a time means that organisational boundaries (District identifiers) are excluded from the phase grouping process. The grouping of records into LHN groupings for submission therefore resulted in a phase identifier being reported in more than one LHD, which is currently treated as a critical error in the NHCDC submission.

2.5 Describe the quality assurance tests undertaken on the patient cost data.

Multiple quality assurance tests are undertaken at various phases of the patient cost data preparation process:

- numerous checks are performed when activity data is extracted from the various source systems. These tests primarily examine variables that are critical to the cost allocation process, such as duration of care or treatment. Many of these tests are included in the State-wide tools that are used to ensure consistent patient cost data is produced
- numerous tests examining both the compliance with key costing business rules and the plausibility of cost results are performed in the costing application DNR module. A number of these tests are fatal and must be addressed before a valid patient DNR cost file is produced
- the NSW DNR submission process includes a draft submission period to enable Districts and Networks to compare their cost results with peers as sometimes issues with cost results are not obvious until they are benchmarked with other facilities
- all draft DNR submissions are subjected to a series of cost result tests applied by the ABM Group. The outcome of these tests is made available to all costing officers via a Reasonableness and Quality Application (RQ App).

3. <u>Adherence to the Australian Hospital Patient Costing Standards</u>

Address the following:

3.1 Describe the level of compliance against the Australian Hospital Patient Costing Standards – at the hospital and jurisdiction level.
(e.g. version of AHPCS used; local costing rules applied)

Compliance with the AHPCS for the round 24 (2019-20) NHCDC submission has improved since the round 23 (2018-19) NHCDC submission. Standard 1.3 Identify Relevant Expenses – Offsets and Recoveries is now reported as fully compliant following a State-wide review.

NSW Health is fully compliant with the following AHPCS Version 4.0 standards:

Standard 1.1 - Identify Relevant Expenses – General

Standard 1.3 – Identify Relevant Expenses – Offsets and Recoveries

Standard 2.1 - Create the Cost Ledger - Cost Ledger Framework

Standard 3.1 - Create Final Cost Centres - Allocation of Expenses in Production Cost Centres

Standard 4.1 - Identify Products - Product Types

Standard 4.2 - Identify Products - Information Requirements

Standard 5.1 - Assign Expenses to Products - Final Products

Standard 5.2 - Assign Expenses to Products - Intermediate Products

Standard 5.3 - Assign Expenses to Products- Work in Progress

3.2 State any exceptions to AHPCS and explanations.

NSW Health is partially compliant with the following AHPCS Version 4.0 standards, the reason for which is articulated below:

Standard 1.2 - Identify Relevant Expenses -Third Party Expenses - Most third-party expenses are included in the cost ledger for the NHCDC. However, expenses such as pathology costs for private and compensable patients that are held centrally are not distributed to Districts and Networks for inclusion in the DNR cost ledgers. Medical expenses for private patients recorded in trust accounts or non-operation accounts are also not included in the cost ledger.

Standard 2.2 - Create the Cost Ledger - Matching Cost Objects and Expenses – While the range and extent of service data expands with each DNR submission, not all Districts and Networks have the same levels of service data to match expense with the relevant cost objects.

Standard 3.2 - Create Final Cost Centres - Allocation of Expenses in Overhead Cost Centres - In some cases the preferred overhead allocation statistic detailed in the CAG is not used for the allocation of overhead expense as the allocation statistic data is not readily available.

Standard 6.1 - Review and Reconcile - Data Quality Framework – While NSW has a comprehensive data quality framework in place as described earlier, a systematic review of Product Areas that do not have service data has not been recently undertaken. This review will be undertaken progressively from 2021.

Standard 6.2- Review and Reconcile - Reconciliation to Source Data – While an extensive expense and activity reconciliation process is embedded in the DNR submission process, further reconciliation of patient activity to the source systems is required.

3.3 Provide details of any specific areas of deviation from the AHPCS and describe the alternative treatment used.
(e.g. a*reas of common challenge which may warrant explanation of treatment may include capital & depreciation, Teaching and training, Research, posthumous organ donation, allocation of medical costs for private and public patients, mental health, ICU, blood products, PTS, WIP)*.

NSW notes some deviation from Costing Guideline 1 – Critical Care. Many critical care services in NSW hospitals have critical care and step-down beds in the one ward. Examples of this include ICU/HDU or CICU/CCU wards. Typically, these services have one cost centre and one ward set up in the Patient Administration System (PAS) with two or more bed types to distinguish the ICU (CICU) hours/bed days separately to the HDU (CCU) hours/bed days. The bed type is used to calculate ICU hours.

The final cost allocation reflects appropriate nursing ratios such as 1:2 for ICU/HDU patients. In some instances where a patient only has HDU hours, the cost will be reported under the Critical Care cost centre as the cost centre maps to Critical Care, even though there are no reported ICU hours. Additionally, only facilities with Level 3 ICUs map their cost centre to Critical Care, even though locally they may use the ICU bed type.

4. Governance and use of cost data

Address the following:

4.1 How is public hospital patient cost data used at the hospital/district or network and jurisdiction level?

Patient costing data is used extensively across all levels of the NSW Health system for a range of purposes such as:

- development of the NSW State Efficient Price for the annual budget, activity-based funding (ABF), ABF block, State-only block components
- informing the distribution of local budgets to hospitals within a District/Network
- development of the NSW Funding Model for small rural hospitals
- development of NSW Funding Model adjustors for high cost procedures such as peritonectomies
- informing service contract negotiations with external providers
- NSW Treasury outcome budgeting reporting
- reporting to external bodies such as the Australian Institute of Health and Welfare and the Productivity Commission
- monthly financial performance reporting.

Patient costing data is loaded into the ABM Portal to enable:

- development of State-wide and local clinical service plans and business cases
- clinical variation analysis and benchmarking activities at a hospital, specialty, product, diagnosis or procedure code level
- development of roadmap or clinical re-design strategies to address length of stay and average cost performance and to improve models of care service delivery.

4.2 Do the LHNs or Jurisdiction submit patient cost data to any other jurisdictional or national collections? If so, provide details.

Some Districts/Networks participate in independent and specialty/service-based benchmarking consortia.

4.3 In terms of costing practices, what is the level of consistency and standardisation across the jurisdiction? *(e.g. local forums; guidelines)*

Multiple strategies are in place to support consistent and standardised costing practices across NSW, including:

- ongoing refinement of Volumes 2 and 3 of the NSW CAG which details all NSW business rules and technical specifications for the DNR respectively. These documents include prescribed costing system setup and cost allocation methods. This publication was first published in 2012-13
- distribution of costing resources and tools through a web-based portal to ensure convenient access by costing practitioners
- ongoing maintenance and refinement of standard data extract and transformation tools for episode data from State-wide and local data warehouses and State-wide clinical information systems
- ongoing maintenance and refinement of standard data extract and transformation tools for operating theatre, pharmacy, medical imaging, pathology, blood products, emergency and non-emergency patient transport services
- a draft DNR submission period that enables the identification, investigation and where necessary the correction of cost results prior to finalisation of the DNR submission
- teleconferences conducted by the ABM Group with each District and Network Chief Executive to review costing results prior to finalisation of DNR submissions
- implementation of a mandatory DNR Audit Program by District and Network internal audit teams. Audit tests are refined each year by the ABM Group in consultation with CSUG and internal auditors. All Districts and Networks are required to submit an Attestation Certificate and Audit Report detailing audit findings.

4.4 What is the process for review and approval the data before submission to NHCDC?

The process for review and approval of the NHCDC submission includes the following:

- review by the ABM Costing Team of the NHCDC Data Request Specification and update of any mapping requirements to transform DNR data to NHCDC submission data
- District and Network Audit Attestation Certificates and Audit Reports reviewed by the ABM Group
- results of costing data and ABF activity data linkage are reviewed
- Data Validation and Quality Assurance reports provided by IHPA are reviewed and actioned as required
- activity and cost reconciliation summary prepared for review and approval by the Executive Director, ABM.

Declaration

All data provided by NSW Health to round 24 (2019-20) of the National Hospital Cost Data Collection (NHCDC) submitted to the Independent Hospital Pricing Authority has been prepared in adherence with the Australian Hospital Patient Costing Standards (AHPCS) Version 4.0, as described in Section 3 of this statement.

Data provided to this submission has been reviewed for adherence to the AHPCS Version 4.0 and is complete and free of known material errors.

Section 3 provides details of any qualifications to our adherence to the AHPCS Version 4.0.

Assurance is given that to the best of my knowledge, data provided are suitable to be used for the primary purpose of the NHCDC, which includes development of the National Efficient Price.

Signed:

Elizabeth Koff
Secretary, NSW Health
4/7/21