Queensland Government

Queensland Health

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File Ref: C-ECTF-22/6995

Mr James Downie
Chief Executive Officer
Independent Hospital Pricing Authority
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DARLINGHURST NSW 1300

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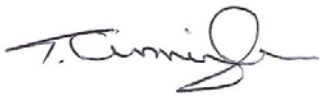
Dear Mr Downie

Thank you for your letter dated 11 April 2022, regarding the Round 25 National Hospital Cost Data Collection (NHCDC) Data Quality Statement.

I am pleased to provide (enclosed) the Data Quality Statement for the Queensland submission to the Round 25 of the NHCDC.

Should you have any questions with regarding to this statement, please contact Ms Liz Lea, Director Funding and Costing, on telephone (07) 3708 5914 or email liz.lea@health.qld.gov.au.

Yours sincerely



Toni Cunningham for Melissa Carter
Acting Deputy Director-General
Healthcare Purchasing and System Performance
08 / 06 / 2022

Encl.

NHCDC Round 25 Data Quality

Healthcare Purchasing and System Performance

National Hospital Cost Data Collection Round 25

Data Quality Statement - Queensland

1. Overview of Costing Environment

Queensland comprises sixteen Hospital and Health Services (HHS) plus the Mater Public Hospitals (Brisbane), each providing health services to the community in admitted and non-admitted settings (acute, sub-acute, non-acute, emergency, facility-based outpatient ambulatory clinics and community-based heath intervention and support services).

Each HHS and the Mater Public Hospitals undertake costing of their services and provide cost data to the Department which is then submitted to the National Hospital Data Collection (NHCDC). The NHCDC is the primary data collection used to develop the National Efficient Price (NEP). To ensure accurate information is submitted to the NHCDC and subsequently available for the NEP determination, there are validation and quality assurance processes conducted during the NHCDC Data transformation process undertaken prior to the submission of data to the Independent Hospital Pricing Authority (IHPA).

The following describes the costing processes and data quality issues that have been identified in the NHCDC Round 25 (2020-2021) data for Queensland.

1.1 Processing the cost data

Of the sixteen HHSs plus the Mater Public Hospitals (Brisbane), four of the HHSs are in rural and remote areas and the costing process is undertaken on behalf of these HHSs by the costing team within the Department of Health (the Department). The remaining HHSs plus the Mater Public Hospitals (Brisbane) have their own costing teams that undertake the costing.

1.2 Costing frequency

The frequency HHSs do the costing ranges from daily to annually, with the majority costing on a monthly basis. Once the costing process is finalised for the reference year, the data is extracted from each site costing database and submitted to the Department. The Department then undertakes the final data transformation processes, validation and reconciliation to the general ledger prior to submission of the NHCDC.

1.3 Costing systems

For the period covered in this report (2020-2021), there were two costing systems in use across the Queensland: CostPro and Power Performance Manager.

1.4 Jurisdiction training and support

Each HHS is a statutory body governed by a Hospital and Health Board. Each has experienced costing practitioners with the necessary expertise to undertake the costing and to manage and train new costing practitioners in costing methodology and the technical skills required to operate the costing system. There is a costing team within the Department that works closely with each HHS providing technical advice and expertise regarding clinical costing issues as required. The Department costing team makes clinical costing resource material available including account to costing category guidelines, standards and audit tools. A standing monthly meeting is held to discuss, as a State, any matter arising or lessons learnt as part of the processes for counting, costing and classification of hospital activity data.

1.5 Costing improvements

Queensland HHSs continually monitor the implementation of new clinical data collection systems to assess whether they can be utilised for clinical costing, and they also work collaboratively with data managers to improve existing systems to attain minimum requirements for costing.

The most significant changes in feeder systems during 2020-2021 included:

- the introduction of Oral Health activity data for costing,
- improved identification of Pharmaceutical Benefits Scheme (PBS) drugs, using a flag from the feeder system to identify when a dispensed drug has been approved for PBS reimbursement,
- improved identification of Organ Donation activity, and
- capturing and costing Coronavirus (COVID-19) Vaccination data.

To further improve the accuracy of COVID-19 costing there has been a full alignment of COVID-19 episodes in the NHCDC with the IHPA Activity Based Funding (ABF) activity data collections. The use of jurisdictional audit tools has ensured that all activity has been captured and costed in line with individual HHS business strategies. HHS staff have also provided details of COVID-19 related expenditure and claims made under the National Partnership on COVID-19 Response (NPCR) for reconciliation with annual cost data submitted to the Department.

There have been improvements in the general ledger with the inclusion of new staff types for Clinical Assistants and Aboriginal and Torres Strait Islander Health Workers which were previously reported as part of the operational stream. These splits have allowed for a more accurate costing of the direct clinical services and the clinical support services provided by these workforce streams where clinical activity feeder data identifies these as service providers. There has also been an improved identification of the NPCR State Public Health Payment (SPHP) for COVID-19 excluded costs in the general ledger by utilising internal order numbers and specified material groups in the general/costing ledger to accurately assign costs to the services provided in the response.

The second year (2020-2021) of the implementation of the state-wide costing solution has provided further opportunities to review and modify episode matching rules to better align ancillary feeder system data where point of order data was not available in the legacy feeder system.

2. Submitted Cost Data

The jurisdiction data on 408 facilities which have been costed at patient or service level in the 2020-2021 fiscal year included 10,924,500 episodes at a total cost of $13.3 billion. This included several facilities that

are out of scope of the NHCDC for which cost data are held by the Department, and additional costs that were unable to be matched to the submitted activity dataset. These exclusions accounted for 5.83 per cent of costs ($823 million) and 25.08 per cent of episodes (3,657,801). 358 facilities were submitted as part of the NHCDC in Round 25.

2.1 Submitted Facilities

There were 358 facilities reported in Round 25, a net increase of 119 facilities over Round 24. Table 1 shows the changes between Rounds by funding type. The increase in reported ABF facilities is due to:

- the inclusion of the Surgical Treatment and Rehabilitation Service (open February 2021); and
- classification changes for facilities previously not reported in the ABF activity data collections. With the transition from non-admitted aggregate to patient-level Non-Admitted reporting from 1 July 2022, the classification for a number of undeclared services has been updated to ensure patient-level data aligns with previously supplied aggregate volumes.

Table 1: Count of facilities by funding type and facility type submitted

Funding Type	Round 24	Round 25	Variance	Percent Change
BLOCK	70	74	4	5.71%
NONABF	121	170	49	40.5%
ABF	38	77	39	102.63%
ABF CONTRACTED	10	37	27	270.00%
State Total	***239***	***358***	***119***	***49.79%***

Table 2 shows the change in episodes and cost submitted to the NHCDC between Rounds. It shows an increase of approximately 11.7 per cent in episodes and 5.02 per cent in costs across the submitted hospitals.

Table 2: Episodes and costs submitted to NHCDC

NHCDC Round	Episodes	Total Cost ($M)	EB Not recognised in R25 ($M)
24	9,780,266	$12,660	
25	10,924,500	$13,295	$201.3
Variance	***1,144,234***	***$635***	***$836.3***
Percentage Change	***11.70%***	***5.02%***	***6.61%***

$201.3 million in salaries and wages increases planned as part of Enterprise Bargaining (EB) Agreements were deferred in 2020-2021, with deferral until 2021-2022 financial year. It is estimated that 87.53 per cent of this amount would have been included in the NHCDC submission if not deferred.

2.2 Costing movements between Rounds

COVID-19

COVID-19 continues to have an impact and non-patient costs associated with the NPCR SPHP have been excluded from 2020-2021 NHCDC submitted costs.

Table 3 shows the changes between Rounds by activity type.

Table 3: Average cost for COVID-19 episodes by activity type (all hospitals)

Activity Type	Round 24*	Round 25	Variance	Percent Change
Acute admitted	$14,854	$20,241	$5,387	36.27%
Non-Admitted Consultations	$372	$335	-$37	-9.95%
Non-Admitted Vaccinations	Not applicable	$101	$101	101%
Emergency Department	$1,498	$382	-$1,116	-74.50%

** Round 24 data sourced from NHCDC Public Sector R24 Report*

2.3 Factors influencing submission

Unlinked Activity

Pathology, imaging, and pharmacy records that are not able to be matched or linked to an Episode through the data matching process are currently out-of-scope for the NHCDC. These records occur for several reasons including: external referrals, legacy clinical systems with no date of order fields (but date of test is collected), planned pre-admission and pre-return presentation tests that occur prior to the episode matching window and multiple Patient Master Index (PMI) accounts.

Table 4 shows the volume of unlinked activity records and the percentage these are of all costed episodes by HHS.

Table 4: Unlinked activity

LHN Code	HHS	Unlinked Records	Percent Unlinked Records
312	Cairns and Hinterland	103,807	9.61%
313	Townsville	88,303	9.00%
314	Mackay	34,080	5.32%
315	North West	22,772	9.21%
316	Central QLD	94,550	13.05%
317	Central West	11,706	15.52%
318	Wide Bay	46,468	7.17%
319	Sunshine Coast	122,217	9.69%
320	Metro North	338,366	10.11%
322	Metro South	107,512	3.98%
323	Gold Coast	61,283	4.47%
324	West Moreton	17,991	3.22%
325	Darling Downs	37,594	6.41%
326	South West	33,695	16.70%
327	Torres and Cape	59,901	16.20%
328	Mater Public Hospitals (Brisbane)	2,267	0.40%
State Total		***1,182,512***	***7.50%***

Virtual Patients

There are many situations where expenditure is attributed to a virtual patient record, these include:

- Business services and defined accounts that are considered out of scope for the NHCDC, these are mapped to direct departments and are costed at service level using a virtual patient.
- Cost centres for Clinical Education and Research are mapped to direct departments and are costed at service level using virtual patients.
- COVID-19 response costs in cost centres, internal order numbers, accounts or material groups attributable to the NPCR SPHP, that are out of scope for NHCDC, and for which there is no patient level feeder data, were mapped to direct departments and are costed at service level using virtual patients.

All virtual patient data is excluded from the NHCDC as no activity has been reported for these cost records. It is recommended that future consideration is given to a supplementary NHCDC activity file for virtual activity is provided to enable full ledger reconciliation.

Patient Travel

Patient travel costs in Queensland are significant but are not fully reflected in the NHCDC submission. This is due to the absence of some patient level feeder data available for costing. Where patient level feeder data is not available, these services are costed against a virtual patient. The costs are reported against system-generated virtual patients and are excluded from the NHCDC.

Table 5 shows a comparison between patient travel costs included and excluded in the NHCDC, by facility type.

Table 5: Linked and unlinked patient travel costs by facility type

Facility Type	Included ($M)	Excluded ($M)	Total ($M)
ABF	$28.52	$56.43	$84.95
ABF CONTRACTED	$0.60	$0.74	$1.33
BLOCK	$10.10	$15.95	$26.05
NONABF	$3.35	$11.06	$14.42
NONABF CONTRACTED	$0.00	$0.03	$0.03
State Total	***$42.57***	***$84.21***	***$126.78***

2.4 Challenges costing specific products

Mental Health

Mental Health (MH) cost data is initially matched to activity records in the Mental Health Care Episode dataset and subsequently to a phase of care in the Mental Health Care Phase level dataset. Matched episodes with one or more phase record/s have been submitted at phase level and matched episodes without a phase record are submitted at episode level.

Not all clinical activity undertaken by the MH teams meets the Mental Health National Best Endeavours Data Set submission requirements, however all activity is costed. The episodes not submitted as part of the activity submission cannot be matched and therefore submitted as part of the NHCDC. A number of costing teams also did not cost ambulatory MH services during the reference year. These issues have had a significant impact on the number of episodes and costs submitted for ambulatory mental health services.

With the proposed introduction of pricing for ambulatory MH services, the state is investigating this as a priority and will provide separate advice to IHPA in relation to this matter.

Palliative care costing

Palliative care patients are costed in the costing system at intermediate product level. This allows for the costing of all services at multiple levels based on the date of service for each intermediate product. Costing episodes with one or more phases of care have the costs within the phase summed between phase start date and phase end date after episode matching and these records are reported at Phase level. Where there has not been a specific phase reported or where there is a single phase for the full episode of care these patient costs have been submitted at episode level.

Non-Admitted activity reporting and encounter costing

The counting rules for ABF purposes involving multiple health care providers stipulates that irrespective of whether the patient was seen jointly or separately by multiple providers, only one non-admitted patient service event may be counted for a patient at a clinic on a given calendar day (noting that for counting purposes multidisciplinary group sessions with three or more practitioners are identified as such).

Sites using the state-wide costing system, have incorporated business rules as part of the episode matching process to align outputs with the counting rules. These sites do not require any rollup of outpatient data. For the remaining sites the data is specific to the service and reports for each separate service event. To be consistent with the ABF counting rules the costs of patients with multiple clinic records on the same day are rolled up into a single clinic visit. There are instances where a Non-Admitted activity service event has been recorded during an inpatient stay due to the patient being seen in that setting and the activity recorded in enterprise systems. Where this has occurred, the costs associated with the Non-Admitted activity has been matched with the inpatient service event.

Organ Procurement

Queensland public hospitals that utilise the Hospital Based Corporate Information System (HBCIS) do not register patients as organ procurements. Organ procurement data is collected by DonateLife Queensland which is then submitted electronically and retrospectively added to the Admitted Patient Collection (APC). This process had previously restricted Queensland from supplying organ procurement episodes in the NHCDC, but this has been resolved in 2020-2021, and activity and costing data has been incorporated into the Round 25 submission.

2.5 Quality Assurance

Salaries and Wages for all staff appear lower due to the deferment of Enterprise Bargaining wage increases implemented as part of the COVID-19 response. This has resulted in $201.3M in Labour costs not being transacted in 2020-2021 and therefore not included in the NHCDC Round 25 submitted costs. It should be noted that the Round 26 NHCDC Submission for 2021-2022 will be higher as this expense has been incurred in that financial year.

Initial quality control is carried out at the HHS level, each HHS has its own quality assurance processes in place to assess the suitability of the data for inclusion in NHCDC. Once the HHS has finalised the costing for the period and data quality issues addressed, they advise the Department that the data is ready to be extracted, in the case of the state-wide system, or formally submit the data to the Department for collation into the NHCDC.

Further checks are then carried out regarding the internal consistency of the data and mapping of the data to the NHCDC costing framework which include:

- Orphaned cost and encounter records
- Unmapped departments
- Unmapped items
- Invalid / missing product codes
- Low-cost encounters
- Negative costs
- Linking to activity data sets
- Date / time validations
- Validations on demographic information
- Validations on morbidity information

A financial reconciliation is undertaken, and the data transformed into the NHCDC data specification format. This information is provided to each HHS for confirmation of results prior to submission to the IHPA.

A five-year cost summary report is compiled which allows HHSs to compare their data with the consolidated Queensland results and with other HHSs, at various levels of aggregation, e.g. HHS, facility, product, cost bucket.

It has been identified that Metro North HHS had not complied with the jurisdictional approach for account code designations and excluded some costs, however this had no impact on the submitted costs for the HHS as these costs would have been excluded from the Round 25 submission. The Department is working with the HHS to ensure compliance with the jurisdictional approach for future submissions.

It has been identified that Children's Health Queensland excluded high costs associated with the provision of chimeric antigen receptor T cell (CAR-T) therapy in their costing approach, which has been addressed by the Department to ensure these high costs for treatment have been captured. The Department is working with the HHS to ensure these costs are captured for future submissions.

Cost C Exclusions

The majority of exclusions prior to the final jurisdiction submission are associated with matching cost records to the activity records submitted to IHPA. This can be at phase level or episode level.

3. Adherence to National Costing Standards

Guidance for preparing cost data are published in the Queensland Clinical Costing Guidelines (QCCG). It is a supplementary document to the Australian Hospital Patient Costing Standards (AHPCS) and is a guide to the HHS costing teams in the application of the AHPCS within the technical environment of the feeder data and costing systems used within Queensland Health. These guidelines are applied by each HHS in the preparation of their costing data and therefore are compliant with AHPCS Version 4.1 with the caveats supplied in 3.1.

The IHPA and the Administrator of National Health Funding Pool are required to carry out a number of functions to implement the financial arrangements as specified in the NPCR and in response, IHPA released the *COVID-19 Response Costing and pricing guidelines Version 0.4* which specifies IHPA's process for costing and pricing of activity for the duration of the NPCR.

Survey documents received from HHSs indicate that continued disruption to hospital activity, models of care, procurement of services and products, Queensland costing practitioners found accurately costing

2020-2021 challenging however all sites ensured adherence with AHPCS Version 4.1 and the majority worked commendably towards compliance with the *COVID-19 Response Costing and pricing guidelines Version 0.4.* Specific information regarding the application and compliance with the *COVID-19 Response Costing and pricing guidelines Version 0.4* is included in section 2.2.

4. Governance and use of cost data

4.1 Use of Cost Data

Within the Department, the consolidated patient costed data are used for a variety of purposes including:

- Health service planning
- Queensland funding models and localisations
- Research
- Benchmarking
- Informing the determination of appropriate funding levels for specified services, for example in business cases for change.

4.2 Contributions to jurisdictional and other national collections

As well as extensive use with the Department and HHSs, the HHSs may provide data to other national collections including subscription based external benchmarking organisations including Health Roundtable and Women's and Children's Healthcare Australasia.

4.3 Costing practice consistency

A governance process has been adopted to ensure decisions associated with costing are undertaken in a collaborative manner between the HHS and corporate units. This allows for ongoing benchmarking and variance analysis to occur, whilst maintaining a robust costing system with outputs that meet HHS, State and National reporting requirements. Central to this is the HHS Costing and Funding Network and Clinical Costing Working Group which meet monthly to discuss costing issues as they arise.

4.4 Review and approval

Queensland Health is required under the National Health Reform Agreement to provide an attestation as to the completeness and quality of the costing and activity data provided to the Commonwealth for the NHCDC. Specifically, a Statement of Assurance from jurisdictions (under Clause I40) and the Commonwealth (under Clause I41) will include commentary on:

- steps taken to promote completeness and accuracy of activity data (for example, audit tools or programs, third-party reviews, stakeholder engagement strategies).
- efforts applied to ensure the classification of activity was in accordance with the current year's standards, data plans and determinations.
- variations in activity volumes and movements between activity-based funding and block funding; and
- other information that may be relevant to users of the data, as determined by the signing officer.

To meet the requirement, a Statement of Assurance for NHCDC Round 25 (2020-2021), a Costing Survey spreadsheet which describes current clinical costing processes, feeder systems used by the HHS for

costing and any changes to costing methodologies since the previous collection is sent to HHSs. The Statement of Assurance has three components:

- HHS Reconciliation Summary
- Costing Methodology Questions
- Standards Compliance Questions

The survey is completed by the HHS Clinical Costing Manager, endorsed by the Chief Finance Officer. Then a financial reconciliation is undertaken. All data is validated by the Department and the HHS prior to submission to the IHPA.

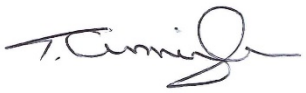
Declaration

All data provided by Queensland Health to Round 25 (2020-2021) of the NHCDC submitted to the Independent Hospital Pricing Authority has been prepared in adherence with the Australian Hospital Patient Costing Standards (AHPCS) Version 4.1 and the State has worked on a best efforts compliance with the *COVID-19 Response Costing and pricing guidelines Version 0.4.*

Section 3 provides details of any qualifications to our adherence to the AHPCS Version 4.1 and the *COVID-19 Response Costing and pricing guidelines Version 0.4*.

Assurance is given that to the best of my knowledge the data provided meets the requirements of the NHCDC as best as possible considering the constraints and challenges outlined in this statement.

Signed:



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