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Impact of state-wide Smoking Cessation Clinical Pathway on clinical coding of tobacco use

Statistical Service Branch, Queensland Health

For further information contact:

Statistical Services Branch
Queensland Health
GPO Box 48
Brisbane Queensland 4001 Australia

Tel (+61) 07 3708 5702
hlthstat@health.qld.gov.au

www.health.qld.gov.au

Contributors: Chris Moser

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What is the purpose of this statbite report? The establishment in 2014/2015 of a new state-wide public health initiative and associated Quality Improvement Payment (QIP) has impacted the rates and range of tobacco use ICD-10-AM diagnosis codes within the morbidity data.

What are the implications for users of the data?
When analysing data relating to tobacco use diagnosis codes, consideration should be given to the impact of this change.

In 2014/2015 a new public health initiative was implemented to reduce tobacco smoking rates in Queensland.

An evidence based smoking cessation clinical pathway was developed and established by the Statewide Clinical Network. The pathway comprised assessment, advice and assistance to support a smoker to stop smoking. The pathway included nicotine replacement therapy information, information on how to seek Quitline counselling with clinician referral options for patients, free nicotine replacement therapy for hospital inpatients paid for by the Department of Health, and online intervention training to help up-skill staff.

The clinical pathway was supported by a Quality Improvement Payment (QIP) as part of the Healthcare Purchasing Framework. The aim of the payment was to increase the number of public hospital inpatients offered the Smoking Cessation Clinical Pathway. The scope for the QIP was all in-scope adult acute admission episodes in Queensland Hospital and Health Services (HHS) (both Activity Based Funding and block funded facilities) including Mater and excluding Children's Health Queensland HHS.

The initial in-scope patients were:

- aged 18 years and over
- admitted with care type 01 Acute care
- had a length of stay of 2 or more overnights (midnight inclusive).

Episodes of care where the discharge status was death and auto-coded episodes of care were excluded.

The QIP identified four tobacco use related ICD-10-AM diagnosis codes that facilitated the calculation of the QIP numerator and denominator. This was also supported by a "mandatory" data element 'Smoking status' which was included in HBCIS and assisted in capturing if a patient had been reported as a smoker by hospital staff. The response of "Reported as a current smoker within the last 30 days" in the 'Smoking Status' was cross-checked against morbidity data to confirm that one of the following ICD-10-AM diagnosis codes had been assigned:

- Z72.0 *Tobacco use current*
- F17.1 *Mental and behavioural disorders due to use of tobacco, harmful use*
- F17.2 *Mental and behavioural disorders due to use of tobacco, dependence syndrome*.

Diagnosis code Z86.43 *Personal history of tobacco use disorder* was used to identify patients with a history of smoking of 30 days or more in combination with the HBCIS data element value "Reported not a smoker".

Targets relating to a minimum threshold for reporting of smoking status had to be met and completion of a smoking cessation clinical pathway was required in order for a HHS to receive the QIP payment. Further information about the targets and payment is available in the Healthcare Purchasing Framework 2014-15 Specification Sheet.

The data collection process was supported by data validations implemented by the Statistical Services Branch that facilitated data quality by ensuring that the four identified diagnosis codes were not assigned together as they are mutually exclusive.

In 2015/2016 the scope of the initiative was widened to include the new care type 12 Mental Health. In-scope patients became:

- aged 18 years old and over
- admitted with care type 01 Acute care or 12 Mental health care
- had a length of stay of 2 or more overnights (midnight inclusive).

Episodes of care where the discharge status was death and auto-coded episodes of care were excluded.

Further information about the 2015/2016 QIP is available within the Healthcare Purchasing Framework 2015-16 Specification Sheet.

The impact of the Smoking Cessation initiative on the coded data has resulted in a significant increase in the reporting of tobacco use diagnosis codes as shown in Table 1.

Table 1: Frequency of assignment of smoking cessation clinical pathway tobacco use diagnosis codes for admitted episodes of care, acute care and mental health care type, public hospitals Queensland, 2010/2011 and 2020/2021 year to date (as at 26 January 2021)

Year	F17.1 Mental and behavioural disorders due to use of tobacco harmful use	F17.2 Mental and behavioural disorders due to use of tobacco dependence syndrome	Z72.0 Tobacco use current	Z86.43 Personal history of tobacco use disorder	Total
2010/2011	1,526	550	111,555	92,995	206,626
2011/2012	1,891	3,085	115,729	102,242	222,947
2012/2013	2,491	5,453	120,660	110,578	239,182
2013/2014	2,607	7,046	123,461	117,625	250,739
2014/2015*	3,249	14,059	130,422	136,520	284,227
2015/2016	4,133	29,069	122,324	138,961	294,487
2016/2017	4,700	40,643	117,814	138,673	301,830
2017/2018	5,495	47,193	115,745	138,540	306,973
2018/2019†	6,145	51,857	122,921	143,994	324,917
2019/2020	5,240	54,663	117,676	130,688	308,267
2020/2021 YTD	2,658	26,297	57,417	60,721	147,093

* Introduction of QIP

† Change from QIP to Purchasing Initiative

While the increase in code assignment has primarily impacted the identified four tobacco use diagnosis codes, there has been a slight increase in reporting of other tobacco use diagnosis codes, predominantly F17.3 *Mental and behavioural disorders due to use of tobacco, withdrawal state* (Table 2).

Table 2: Frequency of assignment of other tobacco use diagnosis codes for admitted episodes of care, acute care and mental health care type, public hospitals Queensland, 2010/2011 and 2020/2021 year to date (as at 26 January 2021)

Year	F17.3 Mental and behavioural disorders due to use of tobacco, withdrawal state with delirium	F17.4-9 Mental and behavioural disorders due to use of tobacco	Total
2010/2011	56	9	65
2011/2012	123	3	126
2012/2013	195	7	202
2013/2014	152	9	161
2014/2015*	150	10	160
2015/2016	235	18	253
2016/2017	245	7	252
2017/2018	268	14	282
2018/2019†	331	17	348
2019/2020	313	13	326
2020/2021 YTD	149	7	156

* Introduction of QIP

† Change from QIP to Purchasing Initiative

The thresholds for an HHS to be able to access the QIP have also increased over time. Further information relating to this is available in the Specification Sheets.

From 2018/2019 the scope of the initiative has been further amended to include additional care types and most same-day episodes of care where discharge was on or after October 2018. In-scope patients are aged 18 years excluding the following:

- Care type 08 Border
- episodes of care where the discharge status was death
- same-day episodes of care where the principal diagnosis is either Z51.1 *Pharmacotherapy session for neoplasm*, Z49.1 *Extracorporeal dialysis for extracorporeal dialysis* or Z49.2 *Other dialysis*
- auto-coded episodes of care
- Children's Health Queensland Ellen Barren Family Centre.

From 2019/2020 the initiative moved from receiving funding as a QIP to a Purchasing Incentive (PI). The scope remained as all in-scope public hospital inpatient admission episodes in all Health and Hospital Services (HHSs) including Mater Public hospitals and excluding Children's Health Queensland. The purchasing adjustment was set at a fixed price of $37 per in-scope episode of care where the patient has been reported as a smoker; and a clinician has completed page one of the Smoking Cessation Clinical Pathway (SCCP) form.

In-scope patients are aged 18 years excluding the following:

- Care type 08 Border; or
- episodes of care where the mode of separation is 05 Died in hospital; or
- same-day episodes of care where the principal diagnosis is either Z51.1 *Pharmacotherapy session for neoplasm*, Z49.1 *Extracorporeal dialysis for extracorporeal dialysis* or Z49.2 *Other dialysis;* or
- auto-coded episodes of care; or
- Children's Health Queensland.

For 2020/2021, the PI continues with the same specifications as for 2019/2020 with exception of the removal of the exception of auto-coded episodes of care.

Conclusion

The implementation of the state-wide Smoking Cessation Clinical Pathway, associated Quality Improvement Payments and Purchasing incentives has impacted the rate of assignment of tobacco use diagnosis codes.

Therefore, when analysing data relating to tobacco use diagnosis codes, consideration should be given to the impact of these changes.

It is recommended that anyone intending to analyse this data should contact the Statistical Services Branch for further information via DQSTD@health.qld.gov.au.