

KPI's, benchmarking and Q&S indicators

Christopher Pearce

Chair, Digital Health Committee, ACRRM

President, Australasian College of Health Informatics

Director of Research, Outcome Health



When do KPI's become carrots rather than sticks?

QOF

PIP

10 commandments

- Those who generate the data should be able to use the data

Diagnosis

Patient Count (click to view list) ↗

5,219 5,219
Active

PATIENT FILTERS

Patient Status

RACGP Active

Most Seen Clinician

DIAGNOSIS FILTERS

Diagnosis Active

Month-Year

Financial Year

Year

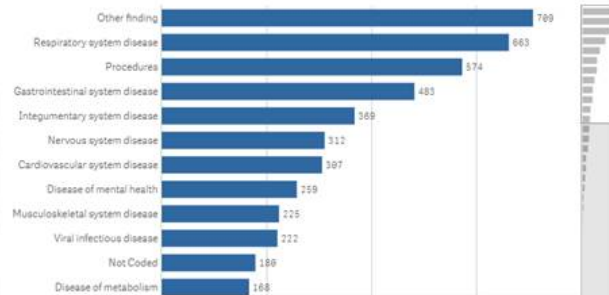
PROVIDER FILTERS

Provider

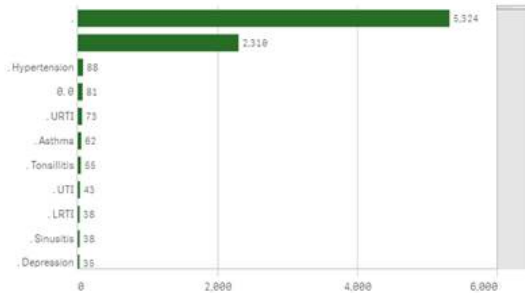
Activity Provider Status

Activity Provider Type

DIAGNOSIS GROUPING (click here to search)

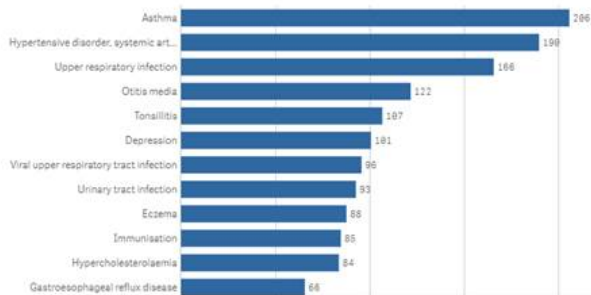


REASON FOR PRESCRIPTION (click here to search)

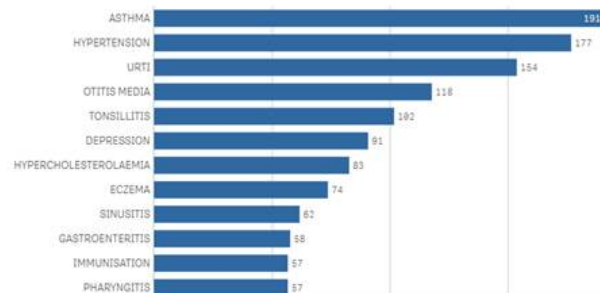


POLAR

SNOMED DIAGNOSIS (click here to search)



GP DIAGNOSIS (click here to search)



Medications



Patient Count (click to view list) [↗](#)

672 672
Active

PATIENT FILTERS

Patient Status

RACGP Active

Most Seen Clinician

MEDICATIONS FILTERS

Current Medications

Month-Year

Financial Year

Year

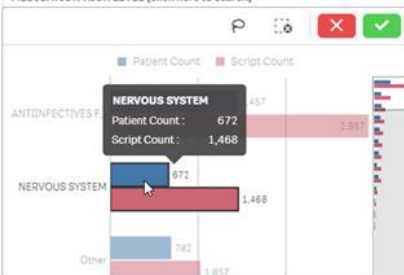
PROVIDER FILTERS

Provider

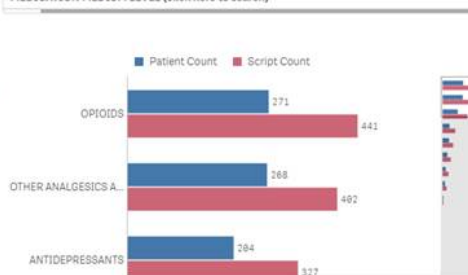
Activity Provider Status

Activity Provider Type

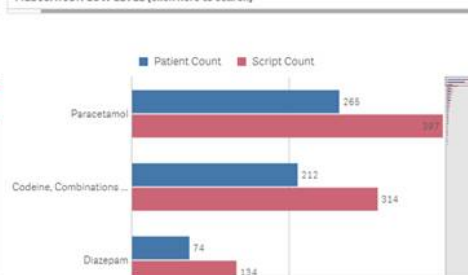
MEDICATION HIGH LEVEL (click here to search)



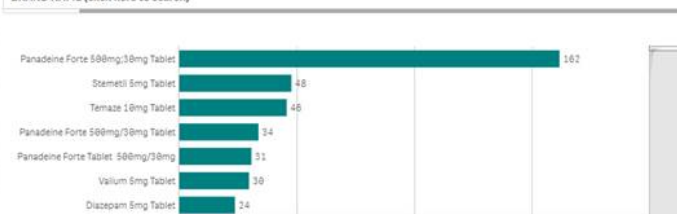
MEDICATION MEDIUM LEVEL (click here to search)



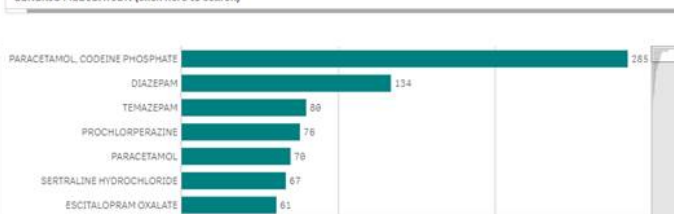
MEDICATION LOW LEVEL (click here to search)



BRAND NAME (click here to search)



GENERIC MEDICATION (click here to search)



Brand Name	Generic	Script Count	Patient Count	Script Strength	Script Frequency	Script Dose	Script Reason
Totals		1,468	672				
Panadeine Forte 500mg/30mg Tablet	PARACETAMOL_CODEINE PHOSPHATE	24	22	500mg,30mg	Four times a day	2	-
Temaze 10mg Tablet	TEMAZEPAM	18	17	10mg	Before bed	1	-
Stemetil 5mg Tablet	PROCHLORPERAZINE	18	14	5mg	Three times a day	1	-
Vallium Tablet 5MG	DIAZEPAM	14	1	5MG	Three times a day	1	Anxiety
Diazepam Injection 10mg/2mL	DIAZEPAM	13	1	10mg/2mL	Not Specified		EPILEPSY

Pathology

Patient Count (click to view list) ↗

304 ³⁰⁴
Active

PATIENT FILTERS

Patient Status

RACGP Active

Most Seen Clinician

PATHOLOGY FILTERS

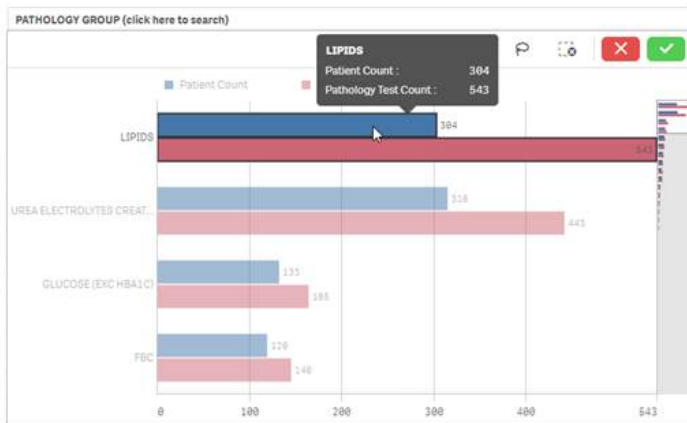
Month-Year

Financial Year

Year

Month

Day of Week



PATHOLOGY RESULTS

Pathology groups are mapped to LOINC codes. Results with no LOINC codes are still displayed in the table below

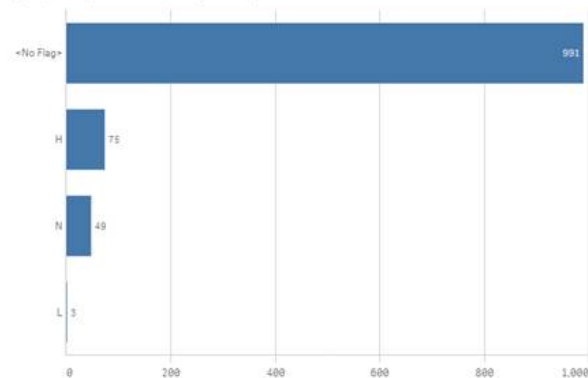
Patient Name	Pathology Date	Pathology Result Group	Pathology Test Name	Pathology Result Name	Pathology Result Value	Units	Pathology Result Abnormal
Abbott, Peter	01/04/2008	LIPIDS	VARICELLA ZOSTER MASTER	CHOL	4	mmol/L	<No Flag>
Abbott, Peter	01/04/2008	LIPIDS	VARICELLA ZOSTER MASTER	LDL	2.4	mmol/L	<No Flag>
Abernathy, Evalyn	20/04/2016	LIPIDS	FAECES1	LDL	1.7	mmol/L	<No Flag>
Abshire, Jennie	23/08/2011	LIPIDS	SE-CHEMISTRY VIRTUAL	TRIG	0.9	mmol/L	<No Flag>
Abshire, Jennie	23/08/2011	LIPIDS	SE-CHEMISTRY VIRTUAL	HDL	1.8	mmol/L	<No Flag>
Abshire, Johnathon	10/06/2015	LIPIDS	C. TRACHOMATIS PCR	Cholesterol :	5.0	mmol/L	<No Flag>
Abshire, Johnathon	10/06/2015	LIPIDS	C. TRACHOMATIS PCR	Triglyceride :	0.7	mmol/L	<No Flag>
Abshire, Kory	19/05/2015	LIPIDS	MICROBIOLOGY FREE TEXT	HDL	2.45	mmol/L	<No Flag>

Logical Observation Identifiers Names and Codes (LOINC) is a database and universal standard for identifying medical laboratory observations.



PATHOLOGY RESULTS FLAGS

Result flags as provided by the individual pathology laboratory



Summary

Patient Count (click to view list) ↗

5,219 5,219
Active

PATIENT FILTERS

Patient Status

RAC ... [X] [✓]

Most [Search]

- Active [✓]
- Deceased
- Inactive

ACTI

Acti

Last

Day

Mon

...

PROVIDER FILTERS

Provider

...

Last Data Import: 10/06/2017
Last Report Refresh: 12/10/2017 3:25:21 PM



5,219
PATIENTS



20,091
ACTIVITIES



10,330
SCRIPTS



23,680
TESTS

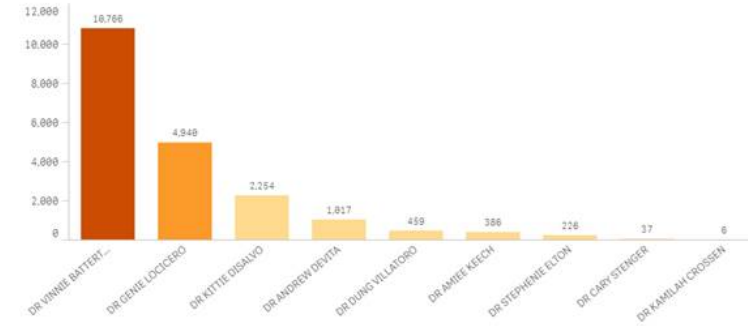


3,678
IMMUNS

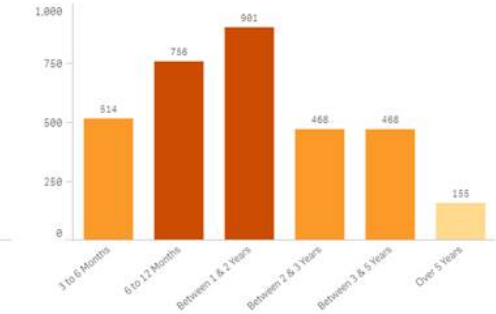


15,540
MBS ITEMS

ACTIVITIES BY PROVIDER



PATIENT BY LAST ACTIVITY



ACTIVITY BY DAY AND HOUR

Activity Hour	Activity WeekDay						
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
12:00 AM - 01:00 AM	1	-	-	-	2	1	9
01:00 AM - 02:00 AM	-	-	-	1	-	-	13
02:00 AM - 03:00 AM	-	1	-	1	-	-	1
03:00 AM - 04:00 AM	-	-	-	-	-	1	-
05:00 AM - 06:00 AM	-	-	-	-	1	-	-
06:00 AM - 07:00 AM	-	-	-	-	1	-	-
07:00 AM - 08:00 AM	1	2	5	8	1	-	1
08:00 AM - 09:00 AM	137	128	151	125	149	42	7
09:00 AM - 10:00 AM	415	382	414	410	386	192	22
10:00 AM - 11:00 AM	402	445	413	424	366	182	68
11:00 AM - 12:00 PM	417	392	402	395	392	164	59
12:00 PM - 01:00 PM	408	354	377	379	397	120	55
01:00 PM - 02:00 PM	248	271	246	266	224	93	34
02:00 PM - 03:00 PM	407	388	376	403	357	67	46



Diabetes Quality Improvement (BETA)



Patient Count (click to view list) ↗

25²⁵
Active

PATIENT FILTERS

Patient Status

RACGP Active

Most Seen Clinician

Current Medications

Latest HbA1c Value

DIAGNOSIS FILTERS

Diagnosis Active

Month-Year

Financial Year

PATHOLOGY FILTERS

Month-Year

The Diabetes page allows you to review diabetes free-texted diagnoses that have not been mapped to SNOMED. This page has been designed to support the implementation of the Diabetes Quality Improvement (DQI) program to standardise diagnosis coding within General Practice.

SNOMED TEXT- DIABETES RELATED

GP diagnoses mapped to SNOMED text categories

Diabetes Related ... ▾

	Patient Count
Totals	86
Diabetes Education	3
Diabetes mellitus (unknown type)	25
Diabetes mellitus type 1	6
Diabetes mellitus type 2	41
Diabetic retinopathy	1
Fasting Blood Glucose Measurement	11
Gestational Diabetes Mellitus	4
Suspected diabetes mellitus	1

GP DIAGNOSIS- DIABETES RELATED

Diagnosis as recorded in the clinic

Diabetes Related ... ▾

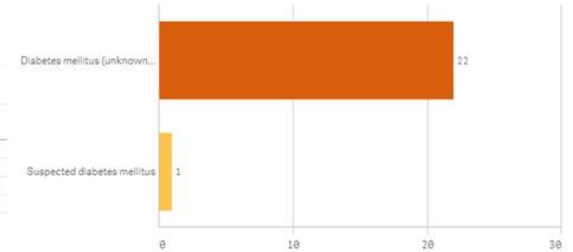
	Patient Count
Totals	20
Diabetes	16
Diabetes Mellitus	3
Check Up, Diabetes	1

DIABETES PATIENTS

Diabetes Patients	Last Diabetes	SNOMED Text (All)	GP Diagnosis (All)	Hba1c Results (All)	Medication Level Medium (All)
Kunze, Rodrigo	Diabetes mellitus (unknown type)	Diabetes mellitus (unknown type)	Niddm		Ace Inhibitors, Plain, Ace Inhibitors, Plain, Antithrombotic Agents, Bacterial Vaccines, Blood Glucose Lowering ...
Hirthe, Dejuan	Diabetes mellitus (unknown type)	Diabetes mellitus (unknown type)	Diabetes Mellitus		Antifungals For Topical Use, Beta-Lactam Antibacterials, Penicillins, Blood Glucose Lowering ...
Lesch, Fieta	Diabetes mellitus (unknown type)	Diabetes mellitus (unknown type)	Diabetes		Antiinflammatory And Antirheumatic Products, Non-Steroids, Opioids, Other Analgesics And Antipyretics
Yundt, Alda	Diabetes mellitus (unknown type)	Diabetes mellitus (unknown type), Diabetes mellitus	Diabetes, Diabetes, Diabetes		Antigout

CODED DIABETES STATUS

Please select a bar to review the patients for that diabetes grouping



NON DIAGNOSED DIABETES PATIENTS



These patients have been flagged as possibly having diabetes due to being on a diabetes related medication or having an abnormal Hba1c result



Clinical Indicators - Beta (please read disclaimer information)

Active Patient Count **157**
This is the count of diabetic patients who HAVE NOT had Diabetes cycle of care in last 12 months.

(Excluded Patients: 101)

Excluded patients have already completed items selected in the Exclusion filters.
This shows how many diabetic patients HAVE had a Diabetes Cycle of Care in last 12 months

Patients with diagnosis co-morbidities can be found by combining the diagnosis filters (i.e. 'SNOMED' filter for first condition and 'AND SNOMED' filter for the second).

Patients using multiple medications can be found by combining the medications filters (i.e. 'Medication' filter for first medication and 'AND Medication' filter for the second).

Shows the filters you applied

Current Filters

SNOMED Text: Diabetes mellitus (unknown type), Diabetes mellitus type 1, Diabetes mellitus type 2, Diabetes mellitus(unknown type), Diabetes Related Disorder

MBS Item No Exclusive: 2517, 2521

Services Date Range Exclusive: Last 12 Months

Filters can be selected in multiple dropdown boxes. Filters act as an OR within a dropdown box (i.e. 'SNOMED' > Asthma OR COPD) and as an AND between boxes (i.e. 'SNOMED' > COPD and 'AND 'SNOMED' > Asthma). 'Active Diagnosis' and 'Current Medication' filters only shows patients with an active diagnosis or current medication in the clinical software.

Inclusion Filters

This section filters for what HAS happened to the identified patient group.

Select patients who have a diabetes diagnosis according to SNOMED categories

Demographics & Lifestyle	Clinical Indicators <small>Uses the last recorded measurement</small>	Diagnosis	Medications	Tests & Imaging <small>Date range only for Path/Rad</small>	MBS Items <small>Date range for MBS items</small>	Immunisations <small>Date range for Immunisation Type</small>
Gender	Systolic Blood Pressure	Active Diagnosis	Current Medication	Date Range	Date Range	Date Range
Age Band	Cholesterol	SNOMED	Medication Group	Pathology Group	MBS Item No	Immunisation Type
Pension Status	eGFR	AND SNOMED	AND Medication Gr...	Pathology Test Name		
Smoking Status	HBA1C	GP Diagnosis	Medication	Radiology		
Alcohol Consumption	BMI	AND GP Diagnosis	AND Medication			
ATSI Status	K-10					

Exclusion Filters

This section filters for what has NOT happened to the identified patient group.

If you are using the Pathology/Radiology, MBS Items, or Immunisations you must first select a date range (within each Date Range box you can choose all options).

Select date range in last 12 months

Diagnosis	Medications	Tests & Imaging	MBS Items	Immunisations
SNOMED Text	Medication Group	Date Range	Date Range	Date Range
GP Diagnosis	Medication	Pathology Group	MBS Item No	Immunisation Type
		Pathology Test Name		
		Radiology		

Select diabetes cycle of care MBS items.

Clinical Highlights

Active Patient Count ↗

29

Clinical Highlight	Patient Count
CARDIAC - Cardiovascular diagnosis with no BP recorded	61
CARDIAC - Patients on a lipid modifying agent for primary prevention (no past AMI/coronary event/CVA/PVD)	0
CARDIAC - Patients with a diagnosis of Atrial Fibrillation / Flutter who are NOT currently taking an anticoagulant / antithrombotic)	105
CARDIAC - Systolic BP greater than or equal to 145, not taking Blood Pressure Meds	461
CARDIAC - Systolic BP greater than or equal to 188, not taking Blood Pressure Meds	29
CARDIAC/DIABETES - Patients taking a lipid modifying agent with Diabetes diagnosis	0
CARDIAC/NEURO - Diagnosis of CVA or TIA taking antithrombotic medication	0
DIABETES - Diabetes diagnosis with cycle of care in last 12 months	56
DIABETES - Diabetes diagnosis with poor glucose control	7
DIABETES - With no HBA1C or other Glucose Test recorded in last 12 months	159
DIABETES - With no HBA1C recorded in last 12 months	159
GASTROINTESTINAL - Diagnosis of Arthritis, taking an Anti-Inflammatory drug, NOT currently taking a drug for Peptic Ulcer or GOR	0
MENTAL HEALTH - Children Under 15 taking an Anti-Psychotic medication	0
MENTAL HEALTH - Diagnosis of depression NOT taking Anti-Depressants	277

Health Care Homes Cost Analysis

This page has been created to assist practices in comparing their potential 'Health Care Home' MBS versus current MBS items. These measures are calculated by taking all patients with one or more of the following 'Chronic Disease Item numbers' in a financial year: GDMF, TCA, Asthma or Diabetes Cycle of Care or a Mental Health Treatment Plan (Full list of item numbers at the bottom of this page). All MBS claims for those patients (not just chronic disease items) are then selected and calculated as 'Average Revenue for Chronic Disease Patients'. This figure should be compared against the HCH payment model to be offered by the Commonwealth (Figures to the right in Blue). To use this page, start by clicking on **one financial year** in the graph below to calculate average revenue (selecting multiple financial years will show patient numbers when calculating the averages as the same patient can appear with chronic disease item numbers in multiple years). You can also filter by 'Frequent Patients' (meaning those with the most MBS items claimed) or Snomed Diagnosis. To check the data, a list of 'MBS Items Claimed' in the period selected is available below.

Total Average Cost

Choose ONE Financial Year only



MBS Items Claimed

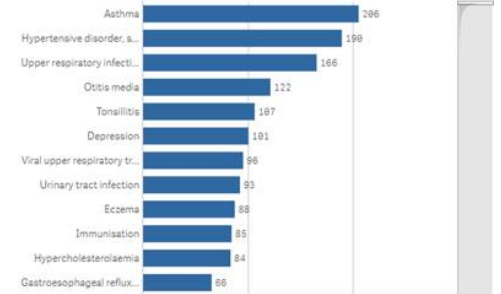
Service Financial Year	MBS Item	MBS Item Current Rebate*	MBS CD Service Count	MBS CD Items	MBS CD Patients	MBS CD Revenue
			1,560	240	141	\$72,207
2016/17	3	16.95	5	0	5	\$85
2016/17	23	37.05	205	0	51	\$7,595
2016/17	36	71.7	45	0	23	\$3,226
2016/17	44	105.55	4	0	4	\$422
2016/17	53	21	4	0	2	\$84
2016/17	193	37.05	7	0	1	\$259
2016/17	197	71.7	3	0	1	\$215

*Derived or obsolete MBS item numbers will be shown as a \$0 value

Note: This information is intended to act as a guide for practices, we cannot account for individual practice circumstance and accept no liability for financial or business decisions made as a result of this information. Also note, final HCH tiers will be determined by an algorithm using a mix of a QAdmissions score and a Western HARP risk assessment score. The information on this page has been calculated using the following item numbers: 721, 723, 2700, 2701, 2715, 2717, 2517, 2521, 2525, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677.



SNOMED DIAGNOSIS (click here to search)



Proposed Commonwealth Funding
 HCH Tier 1 = \$591 per patient p.a
 HCH Tier 2 = \$1,267 per patient p.a
 HCH Tier 3 = \$1,795 per patient p.a

Chronic Disease Patient Count ↕

141

Total Revenue for all selected CD Patients

\$72,207

AVERAGE Revenue for all selected CD Patients

\$512

Frequent Patient List (Overall Service Provision)

Patient Name	MBS CD Revenue	MBS CD Service Count
Totals	\$72,207	1,622
Stokes, Roberta	\$4,054	132
Swanlawski, Adriana	\$2,395	38
Waters, Conner	\$2,359	62
Armstrong, Theresa	\$2,303	40
Hilpert, Joanny	\$2,075	28
Block, Mustafa	\$1,748	52
Bradtke, Timothy	\$1,386	18
Gorczyan, Clint	\$1,307	42

My Health Record (BETA)



Patient Count (click to view list) ↗

5,219 5,219
Active

Validated IHI's

844

My Health Record Registrations

8

Uploaded SHS

10

PATIENT FILTERS

Patient Status

RACGP Active

Most Seen Clinician

Patient Age

Gender

MY HEALTH RECORD FILTERS

PIP Quarter

Month-Year

Year

Month

Day of Week

PIP Quarter Legend

PIP Quarter	PIP Quarterly Period
Q1	Nov to Jan
Q2	Feb to Apr
Q3	May to Jul
Q4	Aug to Oct

A validated IHI must have a valid date recorded

Click to select patients with a Validated IHI

INDIVIDUAL HEALTH IDENTIFIERS



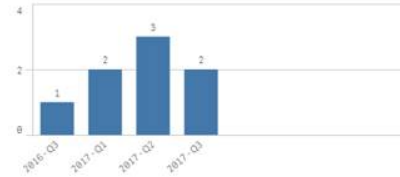
INDIVIDUAL HEALTH IDENTIFIERS

PIP Year	Q	PIP Quarter	Q	Validated IHI's
Totals				844
2017		2017 - Q3		101
2017		2017 - Q2		114
2017		2017 - Q1		139
2016		2016 - Q4		118
2016		2016 - Q3		87

A validated IHI must have a valid date recorded

Click to select patients with a My Health Record Registration

MY HEALTH RECORD REGISTRATIONS



The reporting period aligns with the first date that the MHR was created

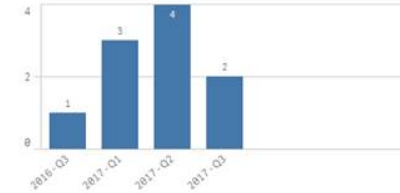
MY HEALTH RECORD REGISTRATIONS

PIP Year	Q	PIP Quarter	Q	My Health Record Registrations
Totals				8
2017		2017 - Q3		2
2017		2017 - Q2		3
2017		2017 - Q1		2
2016		2016 - Q3		1

The reporting period aligns with the first date that the MHR was created

Click to select patients with Uploaded Shared Health Summary activity

UPLOADED SHARED HEALTH SUMMARIES



UPLOADED SHARED HEALTH SUMMARIES

PIP Year	Q	PIP Quarter	Q	Uploaded SHS
Totals				10
2017		2017 - Q3		2
2017		2017 - Q2		4
2017		2017 - Q1		3
2016		2016 - Q3		1

Risk Factors



Patient Count (click to view list) ↗

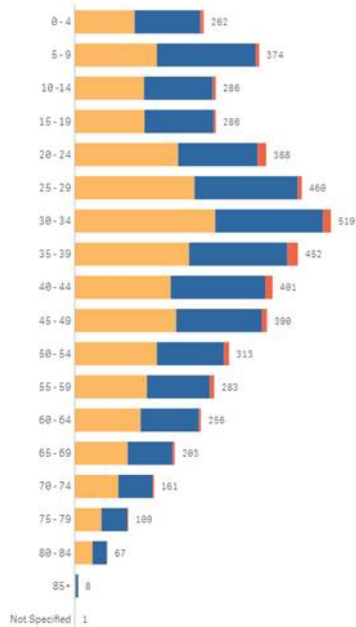
5,219 5,219
Active

PATIENT FILTERS

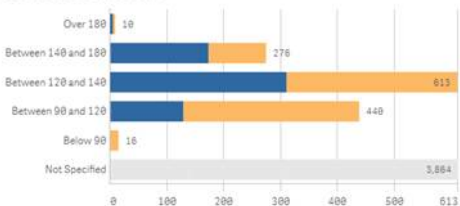
- Patient Status
- RACGP Active
- Most Seen Clinician
- Patient Age
- Gender

NOTE: Risk Factors are based on the last measurements only

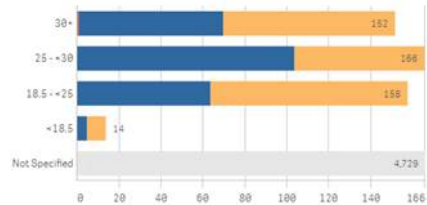
AGE GROUP



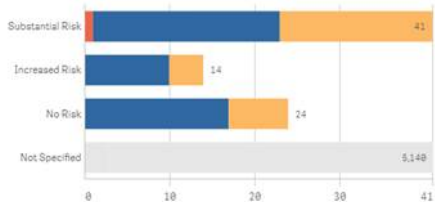
SYSTOLIC BLOOD PRESSURE



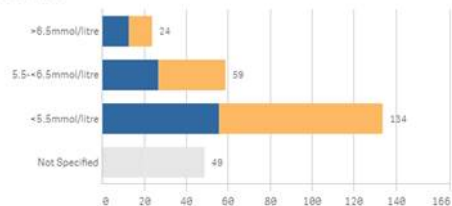
BMI



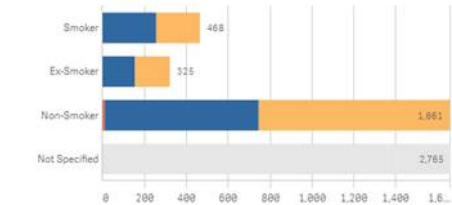
WAIST CIRCUMFERENCE



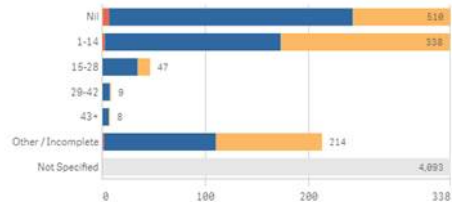
CHOLESTEROL



SMOKING STATUS



WEEKLY ALCOHOL CONSUMPTION



MBS Revenue



Patient Count (click to view list) [↗](#)

5,219 Active

PATIENT FILTERS

Patient Status

RACGP Active

Most Seen Clinician

Patient Age

Gender

SERVICE FILTERS

Month-Year

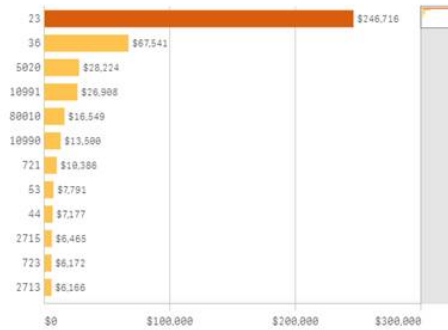
Financial Year

Year

Month

Day of Week

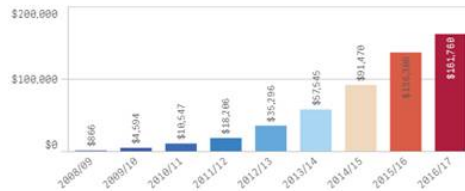
MBS ITEMS



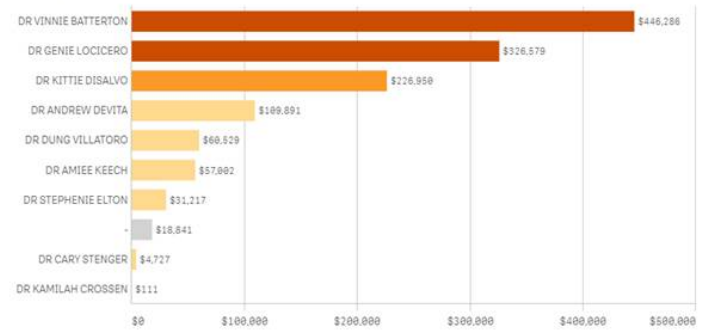
MBS Item Revenue

\$516,593

MBS ITEM REVENUE



MBS ITEMS CLAIMED BY PROVIDER



MBS ITEMS CLAIMED

Calculated at MBS items current rebate amount.

MBS Item	MBS Item Description	MBS Item Current Rebate*	Patient Count	Service Count	MBS Item Revenue
			2,466	14,578	\$516,593
23	Professional attendance by a general practitioner at consulting rooms (other than a service to which ...	37.05	1,802	6,659	\$246,716
10991	A medical service to which an item in this table (other than this item or item 10990) applies if: (a) the ...	16.85	519	2,480	\$26,908
10990	A medical service to which an item in this table (other than this item or item 10991) applies if: (a) the servic...	7.2	435	1,875	\$13,500
36	Professional attendance by a general practitioner at consulting rooms (other than a service to which ...	71.7	553	942	\$67,541
5020	Professional attendance by a general	49	344	576	\$28,224

*Derived or obsolete MBS item numbers will be shown as a \$0 value

Diabetes Cycle of Care

Patient Count (click to view list) ↗

5,219 5,219 Active

Info

The Diabetes Cycle of Care page allows practices to track the items relating to an annual diabetes cycle of care management for diabetic patients to claim the MBS rebate. Practices can select items as a group on the summary table, review which patients have 1 or more items to complete for their cycle and review individual patients needed activities on the status table. All tables relate to the previous 12 month period.

Click to select diabetes patients

PATIENT FILTERS

Patient Status

RACGP Active

Most Seen Clinician

Current Medications

DIAGNOSIS FILTERS

Diagnosis Active

Month-Year

Financial Year

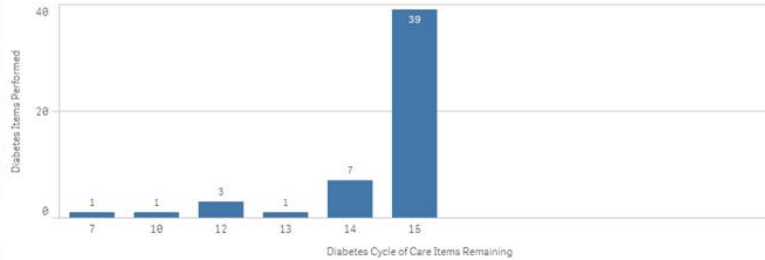
PATHOLOGY FILTERS

Month-Year

Financial Year

Year

DIABETES CYCLE OF CARE ITEMS TO COMPLETE



Items remaining represent how many missing items from a Patients complete Diabetes Cycle of Care

PATIENTS' DIABETES CYCLE OF CARE STATUS

C = Complete, NC = Not Complete

Diabetes Patients ▼

Diabetes Cycle of... ▼

	Blood Pressure*	Weight*	BMI*	Foot care*	Cholesterol	Triglycerides	HDL	HBA1c	Urine Microalbumin	eGFR	Meds review	Self-education	Diet	Exercise	Smoking
Ankundung, Hayley	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Armstrong, Theresia	C	C	NC	NC	C	C	C	NC	NC	C	C	NC	NC	NC	C
Bauch, Olga	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	C
Bayer, Ferne	C	C	C	NC	NC	C	NC	NC	NC	NC	NC	NC	C	NC	C
Black, Mustafa	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	C



DIABETES CYCLE OF CARE SUMMARY

Diabetes Cycle of Care Items	Diabetes Items Performed	Total Diabetes Patients	% of Diabetes Cohort
Totals	52	71	73%
Blood Pressure*	9	71	13%
Weight*	4	71	6%
BMI*	2	71	3%
Foot care*	0	71	0%
Cholesterol	2	71	3%
Triglycerides	3	71	4%
HDL	2	71	3%
HBA1c	0	71	0%
Urine Microalbumin	0	71	0%
eGFR	2	71	3%
Meds review	1	71	1%
Self-education	1	71	1%
Diet	2	71	3%
Exercise	1	71	1%
Smoking	52	71	73%



We're done

A/Prof Chris Pearce



drchrispearce@mac.com Twitter @ChrisMP

