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Method Paper

Number of Services by GPs providing Primary Care Services - method for counting the number of services using MBS data

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1 Introduction

The new 'Number of Services by GPs' is a workforce specific method to better reflect the type and volume of primary care work done by Australia's GP Workforce. The method enables workforce planners and other users to accurately target those practitioners whose majority of services over the year were delivered within a GP's scope of practice.

The new method captures as much of the type and volume of work done by GPs by expanding the Derived Major Speciality (DMS) and removing the focus on non-referred attendances. The expanded DMS is the 'Main' Derived Major Specialty (MDMS) - see section 2.5 for more information on the MDMS.

The 'Number of Services by GPs' primary care services provided by the GP Workforce during the year are determined by the:

- MBS items within a GP's scope of practice as agreed by Commonwealth Medical Advisors and GPs
- Services provided during the year based on the date of service (DOS).
- Services processed (DOP) in the year or within three months of the end of the year.

The new data method provides additional information that was not contained in the definition of the GP-type services previously published in Medicare GP statistics.

2 Number of Services by GPs

2.1 Definition

The total number of services (Number of services by GPs) as determined by the primary care MBS items claimed by the 'Main' DMS GP Workforce.[*]

2.2 Services within Broad Type of Service (BTOS) item groups

Table 1 presents a comparison between:
1. the 'Non-Referred Attendance services' previously published in Medicare GP statistics which included services within Broad Type of Service (BTOS) item groups A, B and M that were claimed by providers with a DMS of GP, and
2. the 'Number of Services by GPs' as determined by the primary care MBS items claimed by providers with a 'Main' DMS of GP. The primary care MBS items are not limited by particular BTOS item group(s).

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[*] Where primary care MBS items are as agreed by Commonwealth Medical Advisors and GPs.

Table 1: Comparing the scope of GP services included by previous and new data method(s)

Broad Types of Service	Item(s) within BTOS group included?	
	Previous data method	New data method
Total Non-Referred Attendances (A, B, M)	Yes	Yes
E Anaesthetics	No	Yes ‡
I Assistance at Operations	No	Yes ‡
G Diagnostic Imaging	No	Yes ‡
D Obstetrics	No	Yes ‡
H Operations	No	Yes ‡
P Other Allied Health	No	No
L Other MBS services	No	Yes
F Pathology Tests	No	Yes
O Practice Nurse	No	No
K Radiotherapy and Therapeutic Nuclear Medicine	No	Yes
C Specialist attendances	No	Yes

‡ Some items have been restricted to rural and remote areas (and excluded from metropolitan areas). This extends to select I Assistance at Operations, G Diagnostic Imaging, H Operations, E Anaesthetics, and D Obstetrics items.

2.3 Overview

The method reviews a GP's services over a whole year to determine if they are predominately working as a GP during the reference period. The method uses MBS claims data, and a provider's DMS, and builds on this concept by creating a provider's MDMS to more precisely define "who is working as a GP". The purpose of this is not to override any existing methodology, but to provide supplementary information not contained within the definition of the GP headcount previously published in Medicare GP statistics.

The expanded definition enables workforce planners and other users to accurately target those practitioners whose majority of services over the year are delivered within a GP's scope of practice. Hence the method excludes specialist practitioners who, under the DMS definition, may be identified as a "GP" for one quarter of the year despite working the majority of the year as a specialist.

Some primary care MBS items claimed by the GP Workforce are restricted to rural and remote areas (Modified Monash categories 3-7) reflecting that GP activity can vary across metropolitan, regional, rural and remote areas. The primary care MBS item restrictions impact Broad Types of Service: I Assistance at Operations, G Diagnostic Imaging, H Operations, E Anaesthetics, and D Obstetrics.

2.4 Key data variables

The method uses several elements from the MBS dataset to count when, where, and by what type of practitioner GP primary care services are being delivered. The key variables include:

- Primary care MBS items within a GP's scope of practice as agreed by Commonwealth Medical Advisors and GPs

- A unique identifier (UID) which is a combination of the *service provider number* and *prescriber number* to uniquely identify GPs who work across multiple regions.

- 'Main' Derived Major Speciality (MDMS) based on a review of a GP's services over a year to determine if they are predominately working as a GP. More information in section 2.3.

- Date of Service (DOS) which is a link to activity data ie. the date on which the provider performed the service, and

- Date of Processing (DOP) which is the date on which Medicare processed the payment of a claim for Medicare benefits. The DOP may be used for data validation and monitoring the lag of recording of services when compared to DOS.

2.5 Methodology used to identify the GP workforce using Main Derived Medical Specialty (MDMS)

The DMS is provided quarterly and a provider may have more than one DMS in a given year. Hence the DMS considers only those services provided in a single quarter. From a workforce planning perspective, all services provided over the entire year are of interest as this better reflects the size of Australia's GP Workforce and the type and volume of its primary care workload. Therefore, the "Main Derived Medical Specialty (MDMS)" was developed and implemented as part of the new data method(s).

Each provider may have more than one registered speciality with Medicare. The DMS provides a single specialty, derived to represent the major/highest qualification and/or major activity of a provider during the observed period according to key service groups (which are based on items that would be claimed by Specialists and GPs). In that regard, a Provider is allocated to a derived medical specialty based on their major MBS billing patterns and specialty qualifications.

Two layers of DMS granularity are utilised including:

1. Layer 1 – classifies Providers as "Specialist", "GP", "Allied Health" or "Dentist".
2. Layer 2 – classifies GPs as "VRGP", "NONVRGP", "GP Trainee" or "Unclassified".

The DMS is based on date of service (DOS) and is administered by MBD and used as a basis for the previously published Medicare GP statistics. To solve the problems encountered with the DMS, the "Main Derived Medical Specialty (MDMS)" was created which allows GPs to be counted individually according to a review of a GP's services over a whole year to determine if they are predominately working as a GP.

For example, if a Provider delivered 5,000 services as a DMS specialist and 1,100 services as DMS GP then the Main DMS would classify the Provider as a Specialist for the year, and not as a GP. This would mean that the Specialist would be counted as a Specialist and not a GP, while any specific primary care services provided would still count, they would be denoted as being not provided by a GP.[†]

The Medicare data for the new method(s) are currently restricted to Providers whose Main DMS are VR GP, Non-VRGP or GP Trainee.

[†] There is ongoing analysis around this issue and it is likely that these services will continue to be included by the new data method(s).

2.6 Methodology used

The primary care services provided by the GP workforce during the year are determined by:
- Primary care services provided by the MDMS GP Workforce
- Services provided during the year based on the date of service (DoS).
- Services processed (DoP) in the year or within three months of the end of the year.

The reason for applying the filter on the date of processing is to enhance the completeness of the data by taking into account the issue of processing lag. More than 98% of claims are processed within three months of the DoS as per the statistics published by MBD.

The services provided by GPs within a geographical region are based on the current Provider address and includes services provided to patients residing outside the region.

3 Process steps

Step 1 – Determine reference period

The reference period is defined as any Medicare service provided during the year, including a three month date of processing window following the end of the year (any claims for services during the year and processed within the window will be included).

Step 2 – Determine provider population who delivered ANY services in the reference period

All providers, who provide at least 1 Medicare service (of any type – including all MBS items) within the reference period defined in step one are considered in scope. The services of providers are calculated and allocated to the quarterly DMS.

Step 3 – Determine Main Derived Major Speciality (MDMS) for the reference period population

Providers within the reference period are ranked from largest to smallest (in terms of number of services) and grouped by DMS. The DMS with the largest number of services is allocated as the MDMS for the reference period. MDMS is provided at the DMS sub-speciality level and includes information on procedural as well as NRA focused GPs. This result is stored in a Teradata table and is retained permanently.

Step 4 – Determine the GP population

All providers with a Main DMS of GP are included in the GP population. The GP population excludes any specialists who provide GP services.

Step 5 – Data manipulation and transformation

With the entire GP population identified alongside all MBS services provided by this population, data are transformed according to the requirements of the data method. For example, this includes but is not limited to defining how individual fields are to mapped, modified, joined, filtered, and aggregated to produce the final output. For aggregating the number of services by GPs this includes:

- Mapping primary care MBS items within a GP's scope of practice as agreed by Commonwealth Medical Advisors and GPs, and
- Mapping primary care MBS items restricted to rural and remote areas (Modified Monash categories 3-7).

The data is available along with the UID to allow for the total number of services by GPs to be summed by MDMS as per workforce planning requirements.

4 New methods provide more detailed data

The new methods are different from other methods previously used by the Department and consider a broader range of primary care MBS items providing more detailed data to measure GP activity over the entire year.

The methods enable workforce planners and other users to accurately target those practitioners whose majority of services over the year were delivered within a GP's scope of practice. It does not include specialists who are classified under the DMS as a "GP" for one quarter of the year despite working the majority of the year as a specialist.

Previous methods relied on GP Medicare billing to estimate the availability of GPs in different areas. These calculations were not designed to consider several factors such as; fly-in, fly-out service models, time taken providing clinical services not billable to Medicare, and non-clinical duties that affect how much time a given number of GPs will have to provide clinical services.

All future reporting on health workforce statistics relating to GPs will use the new methods to ensure ongoing data consistency.

Comparison	Previous method(s)	New method(s)	Reason
Unique identifier	SPR	UID	UID is more unique than SPR and is more applicable to main area of work for workforce planning purposes
Services included	By BTOS : A Non-referred attendances GP/VRP GP, B Non-referred attendances – Enhances Primary care, and M Non-referred attendances - Other	All primary care MBS items claimed by the Main DMS GP Workforce. The primary care MBS items are as agreed by Commonwealth Medical Advisors and GPs.	Workforce planning requires a 'main' area of work to align with other workforce planning methods. The new data method(s) examine all MBS items claimed by practitioners over a year to determine if they are predominately working as a GP.
Headcount	The GP Workforce was identified by the quarterly DMS which derives the most appropriate specialty in each period to identify GPs for reporting purposes. While each service provider has a single DMS over a given quarter, a provider's DMS can alternate from one quarter to the next. The target population are DMS GPs.	The GP Workforce are identified by a review of services over a whole year to determine their Main Derived Major Speciality (MDMS). The target population are MDMS GPs.	To include all general practitioners whose main area of work is in general practice. The previous method looks at DMS which applies across one quarter of the year, while the MDMS looks across the entire year. The previous method may include specialists who are not predominately working as a general practitioner (in both its headcount and services count).

Comparison	Previous method(s)	New method(s)	Reason
Workload	Full Service Equivalent (FSE) was used to measure workforce activity based on Medicare claims. The FSE relied on GP Medicare billings to estimate the availability of GPs in different areas. An FSE of 1 was approximately equivalent to a workload of 7.5 hours per day, five days per week.	GP Full Time Equivalent (GPFTE) calculates workforce activity based on the primary care MBS services claimed and accounts for the influence of both rurality and demographic characteristics (e.g age and sex) on the duration of attendances: including billable time, non-billable time, and non-clinical time. A GPFTE of 1 represents a 40 hour week over 46 weeks of the year.	The previous method was not designed to consider several factors such as; fly-in, fly-out service models, time taken providing clinical services not billable to Medicare, and non-clinical duties that affect how much time a given number of GPs will have to provide clinical services.