Australian Government
Department of Health

Method Paper

Number of GPs providing Primary Care Services - Health Workforce method for counting the GP population using MBS data

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1 Introduction

The new 'Number of GPs' is a workforce specific method of counting those GPs delivering primary care services in Australia. The new data method of counting GPs is based on a more refined definition of who is working as a GP over the entire year.

The method uses several elements from the Medicare Benefits Schedule (MBS) dataset to count when, where, and by what type of practitioner GP primary care services are being delivered - including:

- MBS items within a GP's scope of practice as agreed by Commonwealth Medical Advisors and GPs
- A review of a GP's services over a whole year to determine if they are predominately working as a GP
- A unique identifier to enable distinct counts of GPs.

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

2 Number of GPs (headcount)

2.1 Definition/calculation

The number of GPs refers to the providers predominately working as a GP during the reporting period. The method uses MBS claims data and a Provider's Derived Major Speciality (DMS) and builds on this concept by creating a provider's Main Derived Major Speciality (MDMS) to more precisely define "who is working as a GP". The purpose of developing and implementing a workforce specific methodology was 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 previous method of counting GPs focused entirely on the NRA BTOS (Non-referred attendances – Broad Type of Service) categories A, B & M combined with the DMS to determine the GP headcount.

The previous measure did not provide the level of detail required for workforce planning which seeks to explore the entirety of GP activity over the year. In addition, the method is based on a more refined definition of who is working as a GP over the entire year. The method excludes specialists who happen to have claimed a large number of level A and/or level B consults in a given quarter and as a result are classified under the DMS as a "GP" for one quarter of the year despite working the majority of year as a specialist.

The remainder of this paper explores these issues in greater detail and examines the need for the new method to align with other workforce planning methodologies.

2.2 Main area of work

From a workforce planning perspective, main area of work is important. The National Health Workforce data set and Australia's Future Health Workforce (AFHW) reports are all based on the main area of work of a medical practitioner. As a result, workforce specific measures developed and implemented as part of the new data method(s) also consider the 'Main' DMS of a practitioner.

2.3 Methodology used to uniquely identify a Provider

The identifier for a Provider within the MBS dataset is the Provider Number, also known as Servicing Provider (SPR) code. If a Provider works in a number of locations, such as a Locum, then they will run out of alpha-numeric characters which constitute the SPR Practice (SPRPRAC) number and a new SPR is allocated. This creates difficulty from a workforce planning perspective, in terms of counting the main area in which a provider works.

Prescriber Numbers are considered to be "more unique" than Provider Numbers and therefore provide a more accurate Provider headcount. It is also notable that other Provider's details, such as the Category/Specialty/RSP code are exactly the same for all SPRs that have the same Prescriber Number.

2.4 Issues with Prescriber numbers

There is an issue with using Prescriber Number as a unique identifier since a small number of providers were found to have multiple prescriber numbers.

Based on discussions with Department of Human Services (DHS) and our Provider Benefits Integrity Division (PBID), the two main reasons for Providers having more than one Prescriber Number allocated include:

1. A Provider working on two non-complimentary health professions: e.g. Medical Practitioner + Allied Health (mainly dentists) get a Prescriber Number allocated for each of these non-complimentary professions. These professions have different prescribing rights and as such require that the practitioner is issued two separate Prescriber Numbers.

2. DHS not linking Providers who have been issued several provider numbers under multiple stems and incorrectly issuing an additional Prescriber Number with the new stem. Whenever this occurrence is identified, DHS rectifies this situation by deactivating one of the Prescriber Numbers.

The first issue does not impact the new method(s) since it includes only the GP Workforce for the initial release and each of the professions will be included independently for the future releases. We will address the second issue with DHS on a case by case basis.

Analysis of the MBS data subset for the GP workforce showed that very few Providers had multiple Prescriber Numbers. This analysis was done by matching the Providers on their full name, sex, year of birth and year of basic qualification. Further investigations from the Provider Benefits Integrity Division (PBID) reduced this to only one provider having two prescriber numbers. PBID included prescriber's birth year for matching the providers.

Using the Prescriber Number eliminates most of the duplication of the SPR numbers, however the problem is that there are some Providers having a 'null' Prescriber Number, reflected as '000000'. The reasons for this are not exactly known but it is suspected this relates to more experienced Providers who have not updated their details with DHS.

There were 66 out of 38,970 providers who have a prescriber number of '000000' which is an error rate of just .17%.

The proposed method to deal with this problem is to construct a Unique ID (UID) which is a combination of the Prescriber Number and Service Provider Number. When a Provider has a null Prescriber Number the UID will consist of the SPR with a leading '1' and when the Prescriber Number is valid the UID will consist of the Prescriber Number with a leading '2'.

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 will be 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 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 [1]

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

[1] There is currently ongoing analysis around primary care services within a GPs scope of practice being provided by specialists.

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 are 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-specialty 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 GP population

Providers with an MDMS 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 be mapped, modified, joined, filtered, and aggregated etc. to produce the final desired output.

For counting the number of GPs this includes distinct counts of the UID by Main DMS as per the workforce planning requirements.