

EXPLANATORY STATEMENT

HEALTH INSURANCE (PROFESSIONAL SERVICES REVIEW - SAMPLING METHODOLOGY) DETERMINATION 2000 (NO. 1)

Health Insurance Act 1973

Part VAA of the *Health Insurance Act 1973* (the Act) provides for the establishment of the Professional Services Review (PSR) Scheme.

The Scheme involves a review by a committee of peers to determine whether a practitioner has inappropriately rendered or initiated services which attract a Medicare benefit, or has inappropriately prescribed under the Pharmaceutical Benefits Scheme, and a range of directions for those found to have practised inappropriately.

Section 106K of the Act provides for a PSR Committee to make findings in respect of the conduct of a person under review with regard only to a sample of services. Subsection 106K (3) of the Act provides that the Minister may make written determinations specifying the content and form of sampling methodologies that may be used by Committees.

The sampling determination seeks to address concerns raised by the Federal Court in the case of Anthony Adams v Steven Yun where a Committee was found to have not examined a sufficient number of services, nor to have related its conclusion of unacceptable conduct to some or all of the services.

This determination sets out a sampling methodology to allow a Committee to make a finding of inappropriate practice in relation to the provision of particular identifiable services, and to be able to extrapolate the results to a larger number of similar services within the referral period.

Subsection 106K(4) of the Act provides that a Committee may use a sampling methodology not specified in the determination if, and only if, the Committee has been advised by a statistician accredited by the Statistical Society of Australia Inc; that the sampling methodology is statistically valid.

PART 1 PRELIMINARY

Section 1 - Name of determination

Provides that the determination may be cited as the *Health Insurance (Professional Services Review - Sampling Methodology) Determination 2000 (No1)*.

Section 2 - Commencement

Provides for the determination to commence on gazettal.

Section 3 - Purpose

Provides that the determination specify the content and form of a sampling methodology that may be used by a Committee in making findings in respect of the conduct of a person under review.

Section 4 - Application

(1) Provides that the determination applies if a Committee decides to have regard only to a sample of the services included in a particular class of the referred services.

(2) Specifies that the methodology described in the determination can be applied to individual items and multiple item episodes in classes of services, and to individual items and multiple item episodes in classes of patients.

Section 5 - Definitions

Defines various terms used in the determination not defined elsewhere in the Act, and notes other terms already defined in subsection 3(1) and section 81 of the Act.

PART 2 SAMPLING METHODOLOGY

Section 6 - Preliminary random sample

Provides that a Committee must have regard to a random sample of services included in a particular class of referred services. This is known as the ***preliminary random sample***.

Section 7 - Appropriate sample size

(1) Requires that the ***preliminary random sample*** be of an appropriate size to allow statistical inference to be applied (with a 95% confidence interval of plus or minus 10%) to the class of referred services sampled, at a hypothesised incidence of inappropriate practice of 50% of services rendered or initiated (the incidence requiring the largest sample).

(2) To calculate the appropriate size of the ***preliminary random sample***, it should be at least:

$$\frac{N}{1+0.01(N-1)}$$

where:

N = Class size

(3) Specifies that if the sample size calculated using this formula is not a whole number, it must be rounded up to the next whole number. For example, if the class size is 500, the appropriate size of the preliminary random sample would be 83.5, and this would be rounded up to 84.

Section 8 - Exploratory sample

Requires that once the size of the preliminary random sample has been calculated, a Committee must:

- (a) examine a random sample, preferably of 30 or more randomly drawn services (but not less than 25 services) from the preliminary random sample, known as the ***exploratory sample***; and
- (b) determine whether or not each of the approximately 30 services in the ***exploratory sample*** constitutes inappropriate practice.

Section 9 - Percentage of inappropriate practice in exploratory sample

Specifies that after completing this exercise, the Committee must calculate the percentage of those services in the exploratory sample that constitutes inappropriate practice. If this is not a whole number, it must be rounded down to the nearest whole number.

Section 10 - If percentage of inappropriate practice in the exploratory sample is 20% or more

If the percentage of inappropriate practice in the exploratory sample is less than 20%, no further statistical inferences are to be made concerning the referral.

(1) If the percentage of inappropriate practice in the exploratory sample is found to be 20% or more, the Committee must examine a sufficient number of other services from the preliminary random sample in order to permit statistical inference to be applied to the class of services referred.

This is known as the ***final random sample***, and the following formulae is used to calculate the size of the sample:

$$\frac{N(4d(1-d)+0.01)}{4d(1-d)+0.01N}$$

where:

d=0. 0 1 x the percentage of inappropriate practice in the exploratory sample worked out under Section 9
N=class size.

For example, if the class size referred by the Health Insurance Commission is 500 services and the percentage of services that represents inappropriate practice in the exploratory sample is 33%, the size of the final random sample is 76 services.

Given the Committee has already considered, say 30 services (the exploratory sample), it would need to consider further services from the preliminary random sample - in the case of this example a further 46 services must be examined. If, only 28 services, say, had been examined in the exploratory sample, a further 48 services would need to be examined.

(2) If the size of the **final random sample** calculated using this formula works out to be less than the size of the exploratory sample already examined by the Committee, the size of the final random sample is taken, for section 11, to be the same size as the exploratory sample.

Section 11 - Percentage of inappropriate practice in final random sample

(1) Provides that the Committee must determine whether or not each of the services included in the final random sample constitutes inappropriate practice, and then calculate this as a percentage of services in the final random sample that constitutes inappropriate practice.

(2) Specifies that if the percentage is not a whole number, it must be rounded down to the nearest whole number.

(3) Requires that the percentage of services in the sample must then be reduced by 10 percentage points. The resulting percentage is taken to be the Committee's finding of the percentage of services in the class of referred services that constitutes inappropriate practice.

In the example that has been used (class size 500 and percentage of inappropriate practice in the final random sample =32%) it can be concluded that 22 % (ie 32% minus 10%) of the 500 services constituted inappropriate practice. In this way the practitioner is given the benefit of the doubt by taking the lower limit of the 95% confidence interval. This is the reason for reducing the percentage by 10 percentage points.

(4) States that in the event that the final random sample is found to include services that are not identifiable, the Committee's finding of the percentage of services in the class of referred services that constitutes inappropriate practice is the percentage constituting inappropriate practice:

- (a) in the final random sample reduced by the omission of non-identifiable services; and
- (b) reduced by the number of the percentage points worked out as follows:

$$100 \times \sqrt{\frac{4d(1-d)(N-s)}{N(s-1)}}$$

where:

d=0.01 x the percentage of inappropriate practice based on the reduced final random sample, expressed as a whole number (being, if necessary, rounded down to the nearest whole number).

N= class size.

s= size of the reduced final random sample.

A detailed example is provided to illustrate how the sampling methodology could be applied to a class size of 500 services.