Data dictionary

Renal Health Clinical Network (RHCN)
Key Performance Indicator (KPI) project
June 2013
Data dictionary

Renal Health Clinical Network
KPI project
## Contents

- Introduction 1
- Format for each KPI 1
- KPI 1 - Proportion of new, planned patients that have received CKD education before starting dialysis 2
- KPI 2 - Proportion of new, planned haemodialysis (HD) patients that successfully use a vascular access at first HD treatment 2
- KPI 3 - Proportion of dialysis patients that are dialysing at home: both incident and prevalent rates 3
- KPI 4 – Peritonitis rates of each hub service. 5
- KPI 5 – Proportion of new live donor transplants that are preemptive 6
- KPI 6 – Proportion of new ESKD patients ≤ 65 yo who have had a transplant or are on an active list within 3 or 6 months of requiring RRT 8
Introduction

This document provides the specifications for each data item collected by renal services on the six renal key performance indicators (KPIs).

The Renal Health Clinical Network (RHCN) established a Renal KPI working party in May 2011. The selection for the working group was through an Expression of Interest process and aimed for a group to include a broad cross section of health professionals from a variety of health services, spanning the Chronic Kidney Disease (CKD) continuum. We had representation from the CKD, facility haemodialysis, home dialysis and transplantation services; and from both regional and metropolitan services. The group is chaired by Professor David Power from Austin Health.

The group initially met monthly and agreed upon the 6 KPIs which were then presented to the Renal Health Clinical Network (RHCN) leadership group. Each of these indicators had clear definitions, parameters and, after much discussion, targets were set. The RHCN leadership group endorsed the indicators and there was an agreement for the identified data to be presented and discussed at the quarterly RHCN meetings.

Formal permission was sought from each of the health service CEOs to participate in the bench-marking program. Health services enter their data via an on line website at the end of each month. The Department are responsible for overseeing data entry and collating reports every quarter. The Renal KPI working group are responsible for analysing the data at the end of the quarter and ensuring that the indicators remain accurate, meaningful and relevant.

Format for each KPI

Format

Information about each data item is presented in the following structured format:

Data Item Name

Definition A statement that expresses the essential nature of the KPI data item and its differentiation from all other data items

Inclusions / Exclusions All caveats that define each KPI data item. This includes definitions on what are the inclusions and exclusions

Data submission What data is submitted and the format required to be sent to the department through its online form on the renal website. Also the frequency of the data submission

Data reporting How the KPI data will be reported back to health services after it is collated and represented against the proposed targets

Target What is the agreed proposed target with each KPI
KPI 1 - Proportion of new, planned (i.e. early referral) patients that have received CKD education before starting dialysis

Definition
- Chronic Kidney Disease (CKD) education is defined as either attending a CKD session or a one-on-one session with a member of the CKD team (not a nephrologist consultation only)
- This education session is to be documented in the patients medical record
- In future, consideration will be given to developing a common list of topics addressed in these ‘education sessions’
- ‘New’ patients are defined as new ESKD patients (i.e. not those returning to dialysis with a failed transplant)
- ‘Planned’ patients are those that were referred to a nephrologist more than 3 months before requiring renal replacement therapy (RRT). This is consistent with the ANZDATA definition.

Inclusion / Exclusions
- Exclusions
  - Late referrals (patients commencing dialysis within 3 months of first renal consultation)
  - Patients with a failed transplant and re-commencing RRT are not considered a ‘new’ ESKD patient

Data submission
- Numerator: all new planned patients each month that have received CKD education before starting dialysis
- Denominator: all new planned patients each month that have started dialysis
- This data is reported monthly via the on-line portal

Data reporting
- Data presented as 2 separate graphs in each reporting quarter
- Graph 1 – Bar graph showing total yearly numbers of both new patients and of those who received education prior to commencement of dialysis for each hub renal service.
- Graph 2 – Bar graph showing the percentage of total new patients that received education prior to commencement of dialysis over the previous 12 months for each hub renal service.

Target
- Target: 80% of new, planned patients that start dialysis have attended a CKD education session

KPI 2 - Proportion of new, planned haemodialysis (HD) patients that successfully use a vascular access at first treatment

Definition
- ‘New’ patients are defined as new ESKD patients (i.e. not those returning to dialysis with a failed transplant or transferring from Peritoneal Dialysis (PD)) where chronic maintenance HD is the first form of RRT
- ‘Planned’ patients are those that were referred to a nephrologist more than 3 months before requiring RRT. This is consistent with the ANZDATA definition.
• Vascular access is defined as either an arteo-venous fistula (AVF) or an arteo-venous graft (AVG).
• “Successfully use a vascular access at first treatment” is defined as successful use of an access i.e. where insertion of a temporary access was not required

Inclusion / Exclusions
• Exclusions
  o Late referrals (patients commencing dialysis within 3 months of first renal consultation)
  o Patients with a failed transplant or transferring from PD are not considered a ‘new’ HD patient

Data submission
• Numerator: number of new, planned patients each month starting HD using an AVF/AVG
• Denominator: total number of new, planned patients each month starting HD
• This data is reported monthly via the on-line portal

Data reporting
• Due to small numbers associated with this KPI the monthly data will also be reported as 12 month averages.
• Data presented as 2 separate graphs in each reporting quarter
• Graph 1 – Bar graph showing yearly total numbers of both new HD patients and the number that used vascular access at first treatment in the previous 12 months for each hub renal service.
• Graph 2 – Bar graph showing the percentage of total patients that used vascular access at first treatment of all new HD patients. Only the average percentage of the previous 12 months will be reported for each hub renal service.

Target
• Target: 70% of new, planned HD patients use a vascular access at first treatment

KPI 3 - Proportion of dialysis patients that are dialysing at home: both incident and prevalent rates

Incidence

Definition
• Proportion of new patients that are dialysing at home after 6 months of starting dialysis
• Home dialysis includes nocturnal and conventional haemodialysis (HD), automated peritoneal dialysis (APD) and continuous ambulatory peritoneal dialysis (CAPD)

Inclusion / Exclusions
• Inclusions:
Incidence calculation is retrospective (i.e. calculated on the previous 6 months to the reporting month – May 2012 covers patients starting dialysis in November 2011, April 2012 covers patients commencing dialysis in October 2011, etc).

- New patients that die or leave dialysis within 6 months of starting dialysis
- Patients commencing home dialysis but returning back to facility dialysis within 6 months of starting month.
- All patients that are successfully on home dialysis during any of the 7 months (includes the starting month) are included

**Exclusions:**
- Patients that are training for home i.e. the patient must be fully established at home to be included

**Data submission**
- Numerator: number patients on home dialysis within 6 months of starting dialysis
- Denominator: number patients that started dialysis 6 months prior to the reporting month
- Example: In July 2011, 12 new patients started dialysis. By the end of January 2012 (i.e. 6 months after the commencement month), 5 of these patients had recorded at least one month of home dialysis regardless if they are still dialysing at home in January. The incidence calculation for January 2012 is 5/12 = 45%

**Data reporting**
- As incidence can be highly variable (due to relatively small patient numbers) from month to month, a 6 month moving average technique is adopted to smooth out the data
- Incidence is reported as a time series over 12 months to show trend information
- Graphically each monthly incidence value (i.e. each point on the graph) is represented as a 6 month moving average. This is simply the average of itself and the previous 5 months incidence values for both the numerator and denominator
- Example:
  - June 2012 value = (Jun12 + May12 + Apr12 + Mar12 + Feb12 + Jan12) / 6
  - May 2012 value = (May12 + Apr12 + Mar12 + Feb12 + Jan12 + Dec11) / 6
- Data presented as 2 separate graphs in each reporting quarter
- Graph 1 – Line graph showing monthly incidence values over the previous 12 months of the reporting period (i.e. Quarter 2 (Apr – June 2012) will have the 12 month trend from July 2011 to June 2012. As explained above a 6 month moving average is adopted to each point on the graph. Each hub service is represented as one line on the graph
- Graph 2 – Bar graph showing the average percentage of home and facility dialysis for all hub renal services over the previous 12 months of the reporting period as per graph 1. All twelve months in that reporting quarter will be included in the calculation of the percentage rate
- Graph 4 to 11 – Line graphs for each hub renal service showing monthly incidence and prevalence values over the previous 12 months of the reporting period
- This data is sourced from the Victorian Dialysis Registry and there is no requirement to submit data via the on-line portal

**Target**
- 35% of dialysis patients are on home dialysis within 6 months of starting dialysis by end of 2012-13
- This target is to increase by 2.5% per annum.
Prevalence

Definition
- Proportion of total dialysis patients that are dialysing at home includes patients on HD, APD and CAPD

Data submission
- Numerator: number of patients on home dialysis
- Denominator: number patients on all maintenance dialysis

Data reporting
- Prevalence is more stable and hence its monthly values are reported as actuals and not averages
- Prevalence is reported as a time series over 12 months to show trend information
- Graph 3 – Line graph representing the proportion of prevalent home dialysis patients per hub renal service for each month over the past 12 months
- Graph 4 to 11 – Line graphs for each hub renal service showing monthly incidence and prevalence values over the previous 12 months of the reporting period
- This data is sourced from the Victorian Dialysis Registry and there is no requirement to submit data via the on-line portal

Target
- 35% of dialysis patients are on home dialysis

KPI 4 – Peritonitis rates of each hub service.

Definition
- Peritonitis rate is calculated as number of episodes of peritonitis (i.e. total number of peritonitis episodes experienced by all patients), divided into the months of exposure to (PD) and expressed as interval in months between episodes (e.g. 1 per 20 patient-months)

Inclusion / Exclusions
- Inclusions:
  - Relapsing peritonitis should be counted as a single episode
  - Recurrent and repeat episodes should be counted
- Exclusions
  - Peritonitis episodes where a patient has a catheter insitu however has not commenced PD therapy
Data submission

- Numerator: total number of patient months on PD. Note the patient months can be reported as a decimal or proportion of the months. Therefore the number of days the patient is dialysing for during the month is reported as a proportion of that month.
- Denominator: number of peritonitis episodes in all PD patients during that month
- Patient months on PD (i.e. denominator) should not be cumulative. It is simply the number of patient months totalled for that reporting month
- This data is reported monthly via the on-line portal

Data reporting

- Due to small numbers and high variation between months associated with this indicator the monthly data will be reported as yearly totals
- Data is presented as one graph in each reporting quarter
- Graph 1 – Bar graph showing peritonitis rate at each hub renal service for the previous 12 months.

Target

- 1 peritonitis episode per 18 months
- It is expected that this target is to be revised upwards once we have consulted with members of the ANZDATA PD working party

KPI 5 – Proportion of new live donor transplants that are pre-emptive

Definition

- Pre-emptive transplant is defined as patients who are transplanted requiring no or <2 weeks of dialysis
- This indicator is for new ESKD patients only i.e. not those patients that have a failed transplant

Data submission

- Numerator: number of new pre-emptive live donor transplants per month
- Denominator: number of new live donor transplants per month

Inclusions / Exclusions

- Exclusions:
  - If a patient has a failed transplant and re-commences RRT, they are not considered as a new ESKD patient and should be excluded from the data for this KPI
  - Any patient that has a combined solid organ transplant (i.e. kidney / liver) is excluded from this data

Data reporting

- Data presented as 2 separate graphs in each reporting quarter
- Graph 1 – Bar graph showing both the yearly number of live donor transplants and those that were pre-emptive in the previous 12 months for each hub renal service.
- Graph 2 - Bar graph showing the yearly percentage of pre-emptive transplants as a percentage of all live donor transplants of the past 12 month’s data for each hub renal service.
• This data is reported monthly via the on-line portal

Target
• 20% of live donor transplants are pre emptive
KPI 6 – Proportion of new ESKD patients ≤ 65 yo who have had a transplant or are on an active list within 3 or 6 months of requiring RRT

Definition
- Requiring RRT is defined as the point at which either transplantation or dialysis is required to sustain life
- Patients that have a failed renal transplant and now require RRT should not be considered as a new ESKD patient, and therefore excluded from this data
- Active is defined as:
  - Either active mode on the NOMS list or
  - Referred to Monash Medical Centre for the combined kidney pancreas transplant program
- The monthly data values for this KPI are reported retrospectively. In any month work back to either 3 or 6 months previously and count all the ≤65yo patients that first required RRT in that month. Then of that total, count the number of patients that were either transplanted or placed on an active list within 3 or 6 months of requiring RRT.
- In essence the calculations for this KPI give the patients an extra month to achieve active or transplanted status. This is to counter any effect of patients that may commence RRT late in the starting month.
- The reporting months are outlined in the table below:

<table>
<thead>
<tr>
<th>Reporting Month</th>
<th>Jan-12</th>
<th>Feb-12</th>
<th>Mar-12</th>
<th>Apr-12</th>
<th>May-12</th>
<th>Jun-12</th>
<th>Jul-12</th>
<th>Aug-12</th>
<th>Sep-12</th>
<th>Oct-12</th>
<th>Nov-12</th>
<th>Dec-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) 3 month KPI - Report on new RRT starts from</td>
<td>Oct-11</td>
<td>Nov-11</td>
<td>Dec-11</td>
<td>Jan-12</td>
<td>Feb-12</td>
<td>Mar-12</td>
<td>Apr-12</td>
<td>May-12</td>
<td>Jun-12</td>
<td>Jul-12</td>
<td>Aug-12</td>
<td>Sep-12</td>
</tr>
<tr>
<td>(ii) 6 month KPI - Report on new RRT starts from</td>
<td>Jul-11</td>
<td>Aug-11</td>
<td>Sep-11</td>
<td>Oct-11</td>
<td>Nov-11</td>
<td>Dec-11</td>
<td>Jan-12</td>
<td>Feb-12</td>
<td>Mar-12</td>
<td>Apr-12</td>
<td>May-12</td>
<td>Jun-12</td>
</tr>
</tbody>
</table>

Table1: The corresponding data for each reporting month for KPI 6

For example in calculating the KPI for April 2012
- (i) 3 months
  - Count the number of patients ≤ 65 y.o. that required RRT in January 2012 = 8
  - Of those patients, count the number that are now transplanted or active = 3
  - April 2012 KPI (3 months after requiring RRT) = 3/8 = 37.5%
- (ii) 6 months
  - Count the number of patients ≤ 65 y.o. that required RRT in October 2011 = 5
  - Of those patients, count the number that are now transplanted or active = 4
  - April 2012 KPI (6 months after requiring RRT) = 4/5 = 80.0%
- Note that the 3 and 6 months time periods should be considered as separate KPIs

Inclusion / Exclusions
- Inclusions
  - If the patient is added to the active list and then subsequently is removed then include as an active list count
  - Preemptive transplant patients are included in the count of all transplant patients
  - If a patient dies during the 3 or 6 month period after commencing RRT they are still to be included in the data
• Exclusions
  o If the patient has a failed transplant and recommences RRT then they are not considered as a ESKD patient and should be excluded from this data
  o Any patient that has a combined solid organ transplant (i.e. kidney / liver) is excluded from this data

Data submission

i. 3 months
  o Numerator 1: number patients ≤ 65yo who have had a transplant or are ‘active’ within 3 months of requiring RRT
  o Denominator 1: total number of patients ≤65yo who began RRT 3 months prior

ii. 6 months
  o Numerator 2: number patients ≤ 65yo who have had a transplant or are ‘active’ within 6 months of requiring RRT
  o Denominator 2: total number of patients ≤65yo who began RRT 6 months prior

• This data is reported monthly via the on-line portal

Data reporting
• Data presented as 3 separate graphs in each reporting quarter
  • Graph 1 – Bar graph showing the yearly number of patients ≤ 65 yo that are either transplanted or active within 3 months of commencement of RRT and the total number of patients ≤ 65 yo that commenced RRT 3 months prior of the previous 12 months for each hub renal service.
  • Graph 2 – Bar graph showing the yearly number of patients ≤ 65 yo that are either transplanted or active within 6 months of commencement of RRT and the total number of patients ≤ 65 yo that commenced RRT 6 months prior of the previous 12 months for each hub renal service.
  • Graph 3 – Bar graph showing the percentage of new patients that are either transplanted or active within 3 or 6 months of commencement of RRT of the previous 12 months for each hub renal service.

Targets
• 30% of new ESKD patients ≤ 65yo have been transplanted or active 3 months after requiring RRT
• 50% of new ESKD patients ≤ 65yo have been transplanted or active 6 months after requiring RRT