Data Dictionary

Victorian Renal Clinical Network
KPI Project
KPI 1 – Proportion of new, planned (i.e. early referral) patients that have received CKD education before starting dialysis ......................................................................................................................................................6
KPI 2 – The proportion of new, planned RRT patients (excluding pre-emptive live donor transplants within 2 weeks of transplant) who successfully use an arteriovenous fistula or graft access at first HD treatment .............................................................................................................................................8
KPI 3 – Proportion of dialysis patients that are dialysing at home: both incident and prevalent rates .........................................................................................................................................................9
KPI 4 – Peritonitis rates of each hub service ........................................................................................................................................................................11
KPI 5 – Proportion of new live donor transplants that are pre-emptive ........................................................................................................................................12
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 ..................................................................................................................................................13
Introduction

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

The Victorian Renal Clinical Network (VRCN) established a Renal KPI working group in May 2011. The working group membership is selected through an Expression of Interest process and aim to include representation from a broad cross section of health professionals from a variety of health services, spanning the Chronic Kidney Disease (CKD) continuum. The group has representation from the CKD, facility haemodialysis, home dialysis and transplantation services; and from both regional and metropolitan services.

The group meet five times per year and agree upon any changes to the six KPIs which are then presented to the VRCN Leadership Group. Each of these indicators have clear definitions, parameters and, targets set. The VRCN Leadership Group endorse changes to the indicators and there is agreement for the identified data to be presented and discussed at the quarterly VRCN 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 online website at the end of each month. The Department is responsible for overseeing data entry and collating reports every quarter. The Renal KPI working group is 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

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

<table>
<thead>
<tr>
<th><strong>Data Item Name</strong></th>
<th><strong>Definition</strong></th>
<th>A statement that expresses the essential nature of the KPI data item and its differentiation from all other data items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inclusions / Exclusions</strong></td>
<td></td>
<td>All caveats that define each KPI data item. This includes definitions on what are the inclusions and exclusions</td>
</tr>
<tr>
<td><strong>Data submission</strong></td>
<td></td>
<td>What data are 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</td>
</tr>
<tr>
<td><strong>Data reporting</strong></td>
<td></td>
<td>How the KPI data will be reported back to health services after it is collated and represented against the proposed targets</td>
</tr>
<tr>
<td><strong>Target</strong></td>
<td></td>
<td>What is the agreed proposed target with each KPI</td>
</tr>
</tbody>
</table>
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 patient’s 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 kidney transplant)
- ‘Planned’ patients are those that were referred and have had their initial consultation with a nephrologist at their hub within 3 years but prior to 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 with a nephrologist at their hub service)
- 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
- Data are 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 percentage of total new patients that received education prior to commencement of dialysis, averaged over the previous 12 months for each hub renal service.
- Graph 2 – 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 3 – Bar graph showing the percentage of total new patients that received education prior to commencement of dialysis, calculated as 12 month averages for each of the previous three (3) years for each hub renal service.

Target

- Target: 80% of new, planned patients that start dialysis have attended a CKD education session
KPI 2 – The proportion of new, planned RRT patients (excluding pre-emptive live donor transplants within 2 weeks of transplant) who successfully use an arteriovenous fistula or graft access at first HD 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 and have had their initial consultation with a nephrologist at their hub within 3 years but prior to 3 months before requiring renal replacement therapy (RRT). This is consistent with the ANZDATA definition.
- Vascular access is defined as either an arterio-venous fistula (AVF) or an arterio-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
  - Late referrals (patients commencing dialysis within three (3) months of first renal consultation with a nephrologist at their hub service)
  - Patients with a failed kidney 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
- Data are 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 three (3) separate graphs in each reporting quarter
- Graph 1 – Bar graph showing the percentage of total patients that used vascular access at first treatment of all new HD patients, averaged over the previous 12 months for each hub renal service.
- Graph 2 – 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 3 – Bar graph showing the percentage of total patients that used vascular access at first treatment of all new HD patients, calculated as 12 month averages for each of the previous three (3) years 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 six (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 six (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 six (6) months of starting dialysis
  - Patients commencing home dialysis but returning back to facility dialysis within six (6) months of starting month.
  - All patients that are successfully on home dialysis during any of the seven (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 six (6) months of starting dialysis
- Denominator: number patients that started dialysis six (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), five (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 six (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 six (6) month moving average. This is simply the average of itself and the previous five (5) months incidence values for both the numerator and denominator
- **Example:**
  - June 2015 value = (Jun15 + May15 + Apr15 + Mar15 + Feb15 + Jan15) / 6
  - May 2015 value = (May15 + Apr15 + Mar15 + Feb15 + Jan15 + Dec14) / 6
- Data presented as 4 separate graphs in each reporting quarter
• Graph 1 – (Incidence) Bar graph showing the percentage of patients that dialysed at home within the first six (6) months of starting dialysis, averaged over the previous 12 months for each hub renal service.

• Graph 2 – (Incidence) Bar graph showing the percentage of patients that dialysed at home within the first six (6) months of starting dialysis, calculated as 12 month averages for each of the previous (3) years for each hub renal service.

• Data are 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 six (6) months of starting dialysis

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 – (Prevalence) Bar graph showing the percentage of patients that are on home dialysis averaged over the previous 12 months for each hub renal service.

• Graph 4 – (Prevalence) Bar graph showing the percentage of patients that are on home dialysis, calculated as 12 month averages for each of the previous three (3) years for each hub renal service.

• Data are 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:
  o Relapsing peritonitis should be counted as a single episode
  o Recurrent and repeat episodes should be counted
  o Peritonitis count should only commence from first day of training (i.e. when “fluid is in the belly”)

• Exclusions
  o Peritonitis episodes where a patient has a catheter in situ 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 averaged over the previous 12 months for each hub renal service.
• Graph 2 – Bar graph showing peritonitis rate calculated as 12 month averages for each of the previous three (3) years for each hub renal services.

Target

• One (1) peritonitis episode per 35 months
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 kidney 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:
  o 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
  o Any patient that has a combined solid organ transplant (i.e. kidney / liver) is excluded from this data

Data reporting

• Data presented as three (3) separate graphs in each reporting quarter
• Graph 1 - Bar graph showing the percentage of all live donor transplants that were pre-emptive, averaged over the previous 12 month’s data for each hub renal service.
• Graph 2 – 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 3 – Bar graph showing the percentage of all live donor transplants that were pre-emptive, calculated as 12 month averages for each of the previous three (3) years for each hub renal service.
• Data are reported monthly via the on-line portal

Target

• 40% 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 kidney 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 three (3) or six (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 three (3) or six (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:

|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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

For example in calculating the KPI for April 2017
- (i) Three (3) months
  - Count the number of patients ≤ 65 y.o. that required RRT in January 2017 = 8
  - Of those patients, count the number that are now transplanted or active = 3
  - April 2017 KPI (3 months after requiring RRT) = 3/8 = 37.5%
- (ii) Six (6) months
  - Count the number of patients ≤ 65 y.o. that required RRT in October 2016 = 5
  - Of those patients, count the number that are now transplanted or active = 4
  - April 201 KPI (6 months after requiring RRT) = 4/5 = 80.0%
- Note that the three (3) and six (6) month KPIs should be considered as separate.
Inclusions

- If the patient is added to the active list and then subsequently is removed then include as an active list count
- Pre-emptive transplant patients are included in the count of all transplant patients
- If a patient dies during the three (3) or six (6) month period after commencing RRT they are still to be included in the data

Exclusions

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

Data submission

- (i) Three (3) months
  - Numerator 1: number patients ≤ 65yo who have had a transplant or are ‘active’ within three (3) months of requiring RRT
  - Denominator 1: total number of patients ≤ 65yo who began RRT three (3) months prior
- (ii.) Six (6) months
  - Numerator 2: number patients ≤ 65yo who have had a transplant or are ‘active’ within six (6) months of requiring RRT
  - Denominator 2: total number of patients ≤ 65yo who began RRT six (6) months prior
- Data are reported monthly via the on-line portal

Data reporting

- Data presented as five (5) separate graphs in each reporting quarter
- Graph 1 – Bar graph showing the percentage of new patients that are either transplanted or active within three (3) or six (6) months of commencement of RRT for 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 three (3) months of commencement of RRT, and the total number of patients ≤ 65 yo that commenced RRT three (3) months prior of the previous 12 months for each hub renal service.
- Graph 3 – Bar graph showing the yearly number of patients ≤ 65 yo that are either transplanted or active within six (6) months of commencement of RRT, and the total number of patients ≤ 65 yo that commenced RRT six (6) months prior of the previous 12 months for each hub renal service.
- Graph 4 – Bar graph showing the percentage of new patients that are either transplanted or active within three (3) months of commencement of RRT calculated as 12 month averages for each of the previous three (3) years for each hub renal service.
- Graph 5 – Bar graph showing the percentage of new patients that are either transplanted or active within six (6) months of commencement of RRT calculated as 12 month averages for each of the previous three (3) years for each hub renal service.
Targets

- 30% of new ESKD patients ≤ 65yo have been transplanted or active three (3) months after requiring RRT
- 50% of new ESKD patients ≤ 65yo have been transplanted or active six (6) months after requiring RRT