Catheter Reduction Toolkit

Developed by the Forum of ESRD Networks’ Medical Advisory Council (MAC)

The Forum MAC has developed a series of QAPI toolkits to assist dialysis facilities in meeting the requirements of the Conditions of Coverage.

Tell us what you think!
Please take a moment to complete a short questionnaire about this Toolkit. We appreciate your insight and suggestions to make our resources better.

https://www.surveymonkey.com/r/ForumResEval
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Note: Some tools contained in this toolkit were originally created by the Fistula First project and ESRD Networks. The catheter worksheet and instructions (p. 28 - 32) were developed by the Network of New England, Inc.

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This Toolkit is a guide, created by experienced professionals using the available evidence, produced by the Medical Advisory Council (MAC) of the Forum of ESRD Networks. The details of the sections may change as technology and regulations change, and the MAC anticipates revisions and additions to the Toolkit over time. The Toolkit is meant as a resource and should not be referenced as a regulatory statement. As with other MAC Toolkits (Medical Director, QAPI, Medication Reconciliation, Vaccination and Assurance of Diabetes Care Coordination) this document is meant to help guide medical directors in meeting their obligations.
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CATHETER REDUCTION QUALITY ASSESSMENT and PERFORMANCE IMPROVEMENT (QAPI)

INTRODUCTION

The goal of this toolkit is to suggest quality improvement approaches that a facility can use to ensure care coordination for patients.

Coordination of care for serious, chronic diseases is a challenge for patients and providers. In the absence of coordination, tests may be duplicated, important problems may be overlooked, medications with significant adverse interactions may be prescribed, and patient safety is threatened. We hope that this toolkit will assist the facility in improving patient care and safety by using quality improvement processes.

Chronic Venous Catheter (CVC) use, in particular, is associated with increased infectious complications and mortality. While there are some situations in which a catheter may be the appropriate access (e.g., the need for emergency dialysis and the inability to establish an internal access), the use of a catheter should be avoided when an AVF is feasible. K-DOQI Guidelines specify that less than 10% of chronic maintenance hemodialysis patients should be maintained on catheters (continuously for 90 days or longer) as their permanent chronic dialysis access. While the K-DOQI prescribed AVF rates have not been reached, nationally, the use of AVFs has been increasing, while AVG usage has declined. Catheter usage, on the other hand, remains high. According to the 2007 Clinical Performance Measures (CPM) Project, CVCs in use in prevalent hemodialysis patients ≥ 90 days with no other access was 17.7% in the US. There has been growing recognition of the impact of AVFs that fail to mature requiring interventions leading to decreased cumulative survival along with the impact of increased costs due to the number of interventions required to maintain patency.

HOW TO USE THIS TOOLKIT

The enclosed Toolkit will assist the facility to design a QAPI (Quality Assessment and Performance Improvement) project (also known as CQI, or Continuous Quality Improvement) with the goal of improving care for ESRD patients. QAPI is a major focus of responsibility for the dialysis unit and the unit’s Medical Director as outlined in the Conditions for Coverage of October 2008. According to the new ESRD Conditions for Coverage (494.110) “The dialysis facility must develop, implement, maintain and evaluate an effective, data driven, quality assessment and performance improvement program with participation by the professional members of the interdisciplinary team (IDT). The dialysis facility must maintain and demonstrate evidence of its quality improvement and performance improvement program for review by CMS”.

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It is recognized that there are many different practice patterns, resources and non-facility factors that contribute to the complexity of any process of care in the dialysis facility. This Toolkit can help the facility understand and improve its own particular processes. It is not meant to provide formulas for a facility to adopt; each facility will need to determine its own goals, challenges and solutions.

We start with a generic description of QAPI, then provide narrowly focused examples along with background information, flowsheets, references, etc.; facilities should feel free to redefine and expand the scope of their projects as they identify additional opportunities for improvement. We also included reference materials that outline the duties of the major facility personnel. Note that the Medical Director is charged with the leadership role in quality improvement, and that all personnel have important roles and responsibilities.

Any materials can be downloaded, revised, printed and distributed without restriction to meet the needs of the facility.

QUALITY IMPROVEMENT

There is no one right way to do quality improvement; the important thing is to identify and describe the problem(s), analyze the causes, determine what resources are available, brainstorm and prioritize solutions, implement a plan, then determine whether improvement occurred, quantitate it, and analyze the findings. There are numerous templates that can be utilized. So called “rapid cycle change” seeks to simplify and accelerate the process, and asks three questions: What are we trying to accomplish, what changes will bring about an improvement, and how will we know a change is an improvement? It forgoes complex flow charts and step by step instructions in favor of small scale changes that can be tested, revised and staged.

We have outlined the basic processes of a QAPI project below in narrative form. The facility should use its internal, interdisciplinary resources to “fill in the blanks” to design its own project. Importantly, the facility should feel free to start with a small piece of the identified problem, work through the QAPI process, then use the information and experience gained to tackle the next project.

**Problem:** Define the problem that needs to be addressed. It could be an outcome or a process.

**Goal:** State what you would like to see instead. **Important:** You can do this in stages. You do not have to address all aspects of the problem or even all patients in the first project.

**GET STARTED**

**First,** decide what data you need from patient charts, facility logs, etc.
Next, decide which persons at your facility should be included in the team effort. The team should be interdisciplinary, tailored to the problem.

To get started, consider what the root causes and barriers prevent your facility from performing optimally. These may be personnel factors, patient factors, equipment or physical plant issues, lack of processes or faulty processes, language barriers, financial or reimbursement problems, etc.

Decide on an “AIM” Statement; what are you trying to accomplish? Establish goals. For example, you may aim for 90% success in reaching an identified clinical goal, or may want to see a particular clinical process performed the same way 100% of the time.

How will you measure improvement? This may require chart audits, review of logs, observation of practices in the facility, questionnaires or other means of assessing improvement.

Measurement: decide on a numerator and an appropriate denominator.

Brainstorm potential solutions based on barriers / root cause prioritized by your QI team. You can prioritize the root causes as well as the solutions. Prioritization will help you determine which root causes are most critical and significant. Potential solutions can be prioritized by how “doable” they are, as well as by their anticipated impact. Not all root causes or solutions need to be addressed in every QAPI project.

PLAN: Plan a specific intervention(s). Keep it simple and focused; do not over-reach. Your initial project may be quite limited; you may learn more than you think. You can use what you learn to determine what the next project should be.

Designate personnel and resources for each intervention.

Consider whether to target a specific subgroup for initial intervention.

Determine a timeline; when and how will you collect your follow-up information?

DO: Implement your intervention. Each intervention should have a timeframe and designated personnel.

Collect your follow-up data at the agreed-upon timeline.

Tabulate and/or graph your data, using numerators and denominators where appropriate. Calculate percent changes. Document.
**STUDY:** Examine your results and re-evaluate with your team. Is the process working? If not, why not? What is working well? If necessary, re-evaluate the root causes/barriers as well as your interventions.

**Document** your progress and findings and revisions in goals and interventions as appropriate.

**ACT:** If you have not met your goals, begin again with your new plan. If you met your goals, consider whether to expand to another aspect of the problem.

**DO NOT HESITATE TO INVOLVE YOUR ESRD NETWORK AND MEDICAL REVIEW BOARD QI RESOURCES.** The outline above is intentionally simplified. Your Network Quality Improvement Director will have expertise as well as additional resources and references for you. The Forum of ESRD Networks will soon have a toolkit available that will explain in greater detail the theory and techniques of QAPI (Quality Assessment and Performance Improvement). But you don't need to wait for this to get started on your own projects!
PDSA CYCLE

1-Plan a change or a test aimed at improvement

2-Carry it out  
(Preferably on a small scale)

Begin a new PDSA Cycle!

<table>
<thead>
<tr>
<th>QI PROJECT PHASES</th>
<th>ACTIVITIES</th>
<th>KEEP IN MIND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Make a plan for the change, collect baseline data, plan to carry out the cycle (who, what, where, when)</td>
<td>Brainstorming, motivating</td>
</tr>
<tr>
<td>Do</td>
<td>Carry out the plan, document problems and unexpected observations, continue to monitor data</td>
<td>Flowchart, run chart</td>
</tr>
<tr>
<td>Study</td>
<td>Complete the analysis of the data, compare data to predictions, summarize what was learned</td>
<td>Fishbone diagram, Pareto chart, control chart, histogram</td>
</tr>
<tr>
<td>Act</td>
<td>What changes are to be made? Develop ongoing evaluation/monitoring, next cycle?</td>
<td>Flowchart, brainstorming</td>
</tr>
</tbody>
</table>
### PDSA WORKSHEET
(Adapted from the Institute for Healthcare Improvement © 2004)

**CYCLE #:**

<table>
<thead>
<tr>
<th>ACT</th>
<th>PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>STU</td>
<td>DO</td>
</tr>
</tbody>
</table>

**Task:**

**Project:**

**Contact:**

**BACKGROUND:**

**PLAN:**
What is the objective of this improvement cycle?

Predictions (what do we want to have happen):

Plan for change or test: who, what, when, where

Plan for collection of data: who, what, when, where, how will we collect it?

**DO:**
Was the cycle carried out as planned? What did we observe that was not a part of our plan?

**STUDY:**
How did or didn't the results of this cycle agree with the predictions that we made earlier?

List what new knowledge we gained by this cycle:

**ACT:**
List actions we will take as a result of this cycle:

Plan for the next cycle:
ASSESSING CURRENT FACILITY PRACTICE AND OPPORTUNITIES FOR IMPROVEMENT
ASSESSING CURRENT FACILITY PRACTICE AND OPPORTUNITIES FOR IMPROVEMENT

The following forms are provided to assist in evaluating your current facility outcomes and to help guide the QAPI process and identify areas for intervention. Please select the tools you feel are most appropriate.

1. QUALITY ASSESSMENT PERFORMANCE IMPROVEMENT (QAPI) INSTRUCTION SET

1. **Problem/Process to improve**: Catheter usage
2. **Measures to be addressed**: % patients in facility with a CVC
3. **Baseline**: ___% - CVC usage
4. **Reassess baseline**: on a monthly basis
5. **Root Cause(s)**: State the underlying root cause(s) for the difference between the desired level of performance and the facility’s actual performance
6. **Reassess root cause(s): on a monthly basis**
7. **Interventions**: For each root cause, describe the specific actions your facility will take to achieve improvement in the measure. Actions may include modifying specific protocols, processes and procedures as needed to obtain a change
8. **Goal**: Describe in measurable terms, the goal to be achieved for the associated measure
9. **Time Frame**: Provide the time frame for the implementation of all improvement action(s) listed
10. **Monitoring & Evaluation**: Describe the evaluation process that your facility will use to ensure that measure performance improvement is achieved and monitor process monthly
2. QAPI - QUALITY IMPROVEMENT PROJECT – WORKSHEET

1. What seems to be the problem? What do I want to improve? What am I trying to accomplish?

2. Write the problem statement.

3. Do I have a baseline data? Yes ☐ No ☐ if not, what data can be collect, by whom, when and how?
4. What performance improvement tools can I use?

5. What are my performance goals?

6. What are my performance measures?

7. How will I know that a change is an improvement?
8. How will I evaluate and monitor progress and how often?

9. Who should be on the team for this QI project?

10. What will be my next steps?
3. QUALITY ASSESSMENT PROCESS IMPROVEMENT – QAPI EXAMPLE

The blue wording is provided as an example only. Please use this sheet and fill in your own facility’s information as appropriate.

Opportunity (Problem/Aim) Statement

A. An opportunity exists to improve – **Catheter reduction.**
   * (Name the process)

B. beginning with July 2011 and ending with December 2011.
   * (Timeline starts) * (Timeline ends)

C. This effort should improve the morbidity and mortality rate
   * (Outcomes)

D. for the **Beach Dialysis Center**
   * (Facility name)

E. The process is important to work on now because: the facility catheter rate has increased 30% over the last month. The number of hospitalizations related to catheter usage has doubled. The DFR reports received from the Network also state that this facility has maintained a high SMR (>1.5) for the last 3 years.
## 4. QAPI – KEEPING TRACK OF ACCOUNTABILITY

**FACILITY NAME:**

**DATE:**

**QI PROJECT NAME:**

<table>
<thead>
<tr>
<th>PROJECT NAME</th>
<th>PROJECT LEADER</th>
<th>REPORT TO</th>
<th>WHEN</th>
<th>BASELINE</th>
<th>IMPROVEMENT</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project A</td>
<td>Empower staff</td>
<td><em>Emphasize accountability</em></td>
<td>Date</td>
<td><em>Focus on interventions</em></td>
<td>Increase motivation</td>
<td>Complete, follow up etc</td>
</tr>
<tr>
<td>CVC reduction</td>
<td>Vascular Access (VA) Manager</td>
<td>Meet VA Manager once a week</td>
<td>Date of meetings</td>
<td>Referrals Reschedule appointment for permanent access Etc.</td>
<td>Facility reduced CVC usage by 1% this month</td>
<td>Review VA report monthly</td>
</tr>
</tbody>
</table>

Note: This tool may be used in conjunction with an action plan and/or quality improvement plan.
CATHETER REDUCTION PROGRAM
The **KEY COMPONENTS** of a catheter reduction program include a standard process to provide:

1. Systematic identification of catheter patients
2. Education of catheter patients about advantages, options and process of obtaining an alternative access
3. Evaluation of catheter patients for alternative access and/or PD therapy
   a. Vessel mapping
   b. Surgical evaluation
4. Obtaining alternative access placement
5. Evaluation of maturing accesses
6. Prompt referral for imaging and/or correction of identified problems for non-maturing access
   a. Image AVF if not maturing after 4 weeks
   b. Image AVG if not usable after 4 weeks
7. Prompt removal of catheter when alternative access is usable

Each of these steps needs to be coordinated into a standard structure to help insure that the process moves expeditiously (see attached flow charts). This is crucial because the longer a catheter remains in a patient, the longer they are exposed to an increased risk of infection, hospitalization and/or death. Ideally a CVC insertion can be averted if permanent VA placement is provided in a timely manner prior to imminent need for dialysis (see next page, nephrologist barriers). This process is multidisciplinary by definition. It is important to include nursing, social workers, interventionalists and surgeons in the planning, execution and evaluation of the catheter reduction program.

Successful programs have utilized a number of **BEST PRACTICES** to help expedite catheter prevention, conversion and removal.

- Early referral by the nephrologist for permanent vascular access placement prior to the need for dialysis.
- Routine CKD education: Standard CKD and vascular access education with coordinated referral from the physician’s office for all patients based on a physician determined GFR threshold (<25 ML/min).
  o Metric: % of patients qualified patients who received education
- Automatic education and referral for vascular mapping and surgical evaluation upon admission of catheter patient to the dialysis facility except for patients with documented medical exclusion
  o Metric: % of new patients presenting with catheter access
  o Metric: % of new patients presenting with catheter access who receive an alternative access
  o Metric: Time until placement of alternative access
  o Metric: Time until catheter removal
• Imaging and correction of identified problems if AVF not developing by 4 weeks or AVG not usable > 4 weeks after placement
• Inclusion of surgeons and interventional nephrologists/radiologists in data review and CQI team

SAMPLE BARRIERS AND INTERVENTIONS

<table>
<thead>
<tr>
<th>Patient Barriers</th>
<th>Interventions</th>
<th>Who is responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient does not want alternative access</td>
<td>Identify and address reason</td>
<td>Nephrologist, RN, Dialysis tech</td>
</tr>
<tr>
<td></td>
<td>o Fear of needles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Financial constraints</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Cosmetic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Waiting for transplant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Fear of surgery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Educate patient and family</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discuss potential risks of catheters</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nephrologist Barriers</th>
<th>Interventions</th>
<th>Who is responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nephrologist not evaluating and/or</td>
<td>Discuss patient at care management meeting</td>
<td>Care team, RN, Dialysis tech</td>
</tr>
<tr>
<td>referring patient</td>
<td>Adopt catheter reduction program with entire medical department</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Review patient individually with nephrologist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care team, RN, Dialysis tech, Medical director, administrator</td>
<td></td>
</tr>
<tr>
<td>Nephrologist not taking responsibility</td>
<td>Discuss patient at care management meeting</td>
<td>Care team, RN, Dialysis tech</td>
</tr>
<tr>
<td>for patients access management</td>
<td>Review patient individually with nephrologist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medical director, administrator</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facility Barriers</th>
<th>Interventions</th>
<th>Who is responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of systematic catheter</td>
<td>Develop and institute CQI program</td>
<td>Medical director, CQI team</td>
</tr>
<tr>
<td>reduction program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of standard processes and forms</td>
<td>Develop and institute CQI program</td>
<td>Medical director, CQI team</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>External Barriers</th>
<th>Interventions</th>
<th>Who is responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital discharging patients with</td>
<td>Work with hospital to include them in the VA CQI program</td>
<td>Medical director</td>
</tr>
<tr>
<td>catheters and no access plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-cooperative surgeons</td>
<td>Include surgeons in CQI process</td>
<td>Medical director, nephrologist</td>
</tr>
<tr>
<td></td>
<td>Consider referral to regional center</td>
<td>Nephrologist</td>
</tr>
</tbody>
</table>

The integration of these activities is illustrated in the process flow charts/algorithms contained in the next section of the toolkit. A series of data and data collection tools is also provided in the section following the flow charts. It is often helpful to begin by answering the questions on
the “Definition of Terms on this Data Collection Tool” (on page 29 of this document). This tool may help provide more insight into the areas that you wish to initially address.
CATHETER REDUCTION PROGRAM: Flow chart - Summary

The intent of the following flow charts is to provide an overview of the recommended steps to address catheter reduction in the facility:

- The first flow chart (Catheter Reduction Program) is a general overview addressing both active patients with catheters only and catheters with AVF or AVG.
- The second flow chart (Catheter Reduction Program: Patient with catheter only) indicates a breakdown of the steps related to patients with catheters only.
- The third flow chart (Catheter Reduction Program: Patient with Catheter and AVF or AVG) indicates a breakdown of the steps related to patients with catheters and AVF or AVG.
- Note for all flowcharts: There currently is insufficient published data to permit a full understanding of the proper role of the HeRo™ catheter.

Flow chart 2: Patients with catheter only

1. From the total number of patients in the facility with catheters only, identify all patients that are possible candidates for an alternative access, (i.e. AVF, AVG, PD catheter or HeRo™). These patients should have no documented reason for medical exclusion.

2. Physician initiates evaluation within < 4 weeks. If no documentation of physician evaluation, refer to QI and/or medical director for appropriate follow-up.

3. Patient evaluated for alternative access (i.e. AVF, AVG, PD catheter or HeRo™).

4. If patient is a candidate for alternative access, ensure access placement is scheduled and completed.

5. If patient is not a candidate for alternative access, (medical exclusion for alternative access placement identified) please document the medical exclusion and the reason for exclusion in the medical record. Appropriate documentation by the physician and/or surgeon is required to be included in the medical record.

6. If the patient refuses alternative access placement, ask the patient why they don’t wish to have a permanent vascular access placed. If appropriate, provide patient an access educational program including further discussion with their physician.

7. If the patient continues to refuse alternative access, please document this in the medical record.

8. If the patient accepts an alternative access placement, the physician needs to ensure actions, regarding the access placement, are scheduled, evaluated and followed up.
9. If the physician does not take timely action regarding the assessment for an alternative access placement, the medical director should be notified.

**Flow chart 3: Patients with catheter and AVF or patients with catheters and AVG**

1. From the total number of patients, identify all patients with, catheters in place who also have a maturing AVF or AVG.

2. Please have the physician review the status of all AVF created greater than 4 weeks, or, AVG created greater than 4 weeks previously,

3. If the AVG or AVF is in use, place an order for catheter removal.

4. For those AVF or AVG that are not in use, refer the patients for imaging, surgical review and repair.

5. Once access intervention completed, follow patient until AVF or AVG is in use and catheter is removed.

6. If AVF or AVG is not salvageable, assess for an alternative access such as and AVF, AVG, HeRo™ or placement of PD catheter.

7. For patients deemed eligible for alternative access, physician needs to ensure actions are taken regarding scheduled placement, evaluation and follow up.

8. If any medical exclusion for alternative access placement is identified, appropriate documentation by the physician and/or surgeon is required in the medical record.

9. If the patient refuses alternative access placement, provide patient an access educational program including further discussion with their physician.

10. If the patient continues to refuse alternative access, please document the reasons for continued refusals in the medical record (see sample Refusal Form, page 46).

11. The physician also needs to identify the patients refusing alternative access placement, and ensure their enrollment in an access educational program. Reasons for continued refusals should be documented in the medical record.
Catheter Reduction Program: Patient with catheter Only

August 2011

Patient with Catheter Only

Yes

Potential candidate for alternative access

Yes

Physician action < 4 weeks

Yes

QI follow-up

No

Physician action < 4 weeks

Evaluation planned or in progress

Yes

Yes

No

No

Physician review

Yes

AVF, AVG, PD or Hero Candidate

Yes

AVF, AVG, PD or Hero placed

No

No

Yes

Yes

QI follow-up

Access Placement or evaluation scheduled

Access Placement or evaluation scheduled

Refer to Medical director

Medical follow-up

Patient access education program

Yes

No

Refuses AVF, AVG or PD

Yes

No

Document medical exclusion

No

PD Candidate

Yes

No

Patient refusing w/u, PD or access placement

Yes

No
Catheter Reduction Program: Patient with Catheter and AVF or AVG

August 2011

- Patient with Catheter + AVF or AVG
  - AVF > 8 weeks or AVG > 4 weeks
    - Yes
      - Physician review on rounds
    - No
      - QI follow-up
  - No
    - Referred for imaging, surgical review, and repair
      - Needs alternative access
        - Yes
          - AVF, AVG, PD or Hero placed
            - No
              - Patient refuses AVF or AVG use
                - No
                  - Medical follow-up
                    - No
                      - Refer to Medical director
                        - Yes
                          - Medical follow-up
                            - No
                              - Referred for imaging, surgical review, and repair
                                - Yes
                                  - Patient refuses AVF or AVG use
                                    - No
                                      - Medical follow-up
                                        - No
                                          - Refer to Medical director
                                            - Yes
                                              - Document medical exclusion
                                                - No
                                                  - Refer to Medical director
                                                    - Yes
                                                      - Access placement or evaluation scheduled
                                                        - Yes
                                                          - Medical follow-up
                                                            - No
                                                              - Refer to Medical director
                                                                - No
                                                                  - Document medical exclusion
                                                                    - Yes
                                                                      - Medical follow-up
                                                                        - No
                                                                          - Refer to Medical director
                                                                            - No
                                                                              - Document medical exclusion
                                                                                - Yes
                                                                                  - Medical follow-up
                                                                                      - No
                                                                                         - Refer to Medical director
                                                                                           - No
                                                                                             - Document medical exclusion
                                                                                               - Yes
                                                                                                - Medical follow-up
                                                                                                    - No
                                                                                                      - Refer to Medical director
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                                                                                                          - Document medical exclusion
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                                                                                                               - Medical follow-up
                                                                                                                  - No
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                                                                                                                                                                                                                                                                                                                                                       - No
                                                                                                                                                                                                                                                                                                                                                                                   - Refer to Medical director
                                                                                                                                                                                                                                                                                                                                                                                                         - No
                                                                                                                                                                                                                                                                                                                                                                                                       - Document medical exclusion
                                                                                                                                                                                                                                                                                                                                                                                                            - Yes
DATA and DATA COLLECTION TOOLS
DATA AND DATA COLLECTION TOOLS: GENERAL INFORMATION

The following section provides sample data collection tools. It is not intended or necessary that you use all the tools provided. Most programs will select one or two of the data collection tools and adapt it for use in their QIPI program. This will typically include one tool that addresses individual patients’ clinical interventions and a second tool that provides aggregate, facility wide outcome data. The following is a listing of the sample tools provided in this section. Some are very simple and some are more complex. Please select and adapt the tools that are most appropriate for your facility QIPI goals, intervention targets and approach.

Patient specific outcome tools
   1. Catheter reduction worksheet
   2. Interactive tool CVC reduction

Facility aggregate outcomes
   1. Monthly Catheter tracking tool
   2. On Goal Report Catheter Reduction Tool
| Enter total # of hemodialysis patients here (include all access types): | B-1 | B-2 | C-1 | C-2 | D-1 | D-2 | D-2a | D-3 | D-4 | D-5 | D-6 | D-7 | D-8 | D-9 | E-1A | E-1B | E-2 | E-3 | E-4 |
| Patient ID - Please complete each line for all patients listed that you report with a catheter and add any that are not listed. | Yes | No | Yes | No | < 90 days | ≥ 90 days | Complication of permanent access (e.g., clotted graft) | Patient schedule for living transplant | Patient refused permanent access placement | Patient refused permanent access due to medical condition | Patient has access, but it was not followed | Patient has access, but it was not followed | Patient refused for HERO and refused | Patient referred for HERO and refused | Access surgery scheduled | PD Catheter scheduled | Patient did not keep surgical appt's | Patient refused permanent access placement | Patient determined patient not suitable for permanent access at this time | Patient's appointment for permanent access scheduled for future. Enter date below |

**Answer the remaining questions for all of your hemodialysis patients who were dialyzing by catheter access monthly**

If catheter ≥ 90 days, WHY?

(check the one that best describes this patient's situation)

If E-4 = yes, what was the outcome?

(check the one that best describes this patient's situation)
Directions for Completing the Data Collection Tool
Definition of Terms on this Data Collection Tool

Facility-specific evaluation of existing VA program

1. Does this facility have a vascular access management program?
   Does your facility have a formalized program specifically addressing vascular access issues? This would assume that there is a protocol regarding how assessments would take place, who perform them, patient education, etc. Considering this definition, if your facility has a VA management program, please answer yes.

2. If yes, is it written?
   Is the vascular access management program you have at your facility in a written format and formally adopted by your Governing Body? If so, please answer yes.

3. Do you use an access team or an access coordinator?
   Does your facility have one designated person, or a team of persons, who educates the patients regarding their options for vascular access (VA), refer to surgeons for placement of permanent VA, coordinate appointments and follow-up regarding care of the new VA? If so, please answer yes.

4. Do you routinely evaluate all vascular accesses on admission?
   When a patient enters your clinic for the first time, do you have a process by which the vascular access is assessed using a tool or algorithm? If you have a process for systematically assessing all patients' vascular accesses, please answer yes.

5. Do you routinely have an access plan for all patients?
   Does each patient have a written vascular access plan that describes the current vascular access type(s), date of creation, surgeon's name (if applicable), a listing of complications or special circumstances, and sequential listing of all vascular accesses that the patient has had? If your facility has this practice, please answer yes.
   If you have a written program, please submit a copy.
   If your facility has a written vascular access management program, please submit a copy of it to the network office with this completed form.

Section A
Enter Total # Hemodialysis patients here:
Please enter the total number of hemodialysis patients dialyzing at your facility as of the date listed on the top margin. Please do not count any peritoneal patients who are dialyzing on hemo as a backup. Please do not count any "transient" patients (< 14 treatments with you). Please enter data for "seasonal" patients (with you more than 13 treatments, but not more than 6 months). We are trying to capture the total number of your regular hemo population at this point in time.

Patient ID
Please complete each line for all patients listed that you reported with a catheter on the 2nd Quarter Clinical Indicator Project. Add any patients with catheters that are not listed.
Is this catheter a new sub-cutaneous type device?

Is the catheter used on this patient considered a new "subcutaneous device" such as a LifeSite (by Vasca) or a Dialock System (by BioLink), or potentially a similar device by another company? If so, please answer yes.

Section B

Was this patient assessed with a vascular access (VA) management tool?

B1 For this catheter patient, was a vascular access management tool (e.g., algorithm, etc.) used in the assessment? If yes, place checkmark in the block.

B2 If no vascular access management tool (e.g., algorithm, etc.) was used in the assessment of this patient's access, place a checkmark in the block marked "No".

Did Patient have a vascular access plan?

Does a written vascular access plan for this patient exist? If so, please answer yes. If you have no patient-specific written vascular access plan, please answer no.

Section C

How long has [this] catheter been used?

C1 < 90 days If the patient has been dialyzing continuously by catheter for 89 days or less, please place a check mark in this block.

C2 >= 90 days If the patient has been dialyzing continuously by catheter for 90 days or more, please place a check mark in this block.

Section D

If Catheter >= 90 days, WHY?

D1 Permanent access placed & maturing The permanent access refers to an AV-fistula or AV-graft placed in the patient's body, but not yet ready to cannulate for use during hemodialysis.

D2 Complication of permanent access (i.e., clotted graft) Refers to a temporary complication or interruption in the use of the primary access due to clotting, infection, or revision of the AV-fistula or AV-graft. The patient has a functioning AV-fistula or AV-graft previously placed; catheter use is expected to be short (< 90 days). Please do not count peritoneal patients temporarily on hemodialysis back-up.

D2a Patient is scheduled for a living donor transplant Check this box only if a living donor transplant is planned for this patient and will take place soon such that surgery for a more permanent access type was not appropriate.

D3 All other sites exhausted Refers to a patient who has a documented assessment of access placement by a surgeon, and is then determined ineligible for any further vascular access types but a catheter, based on the patient's medical condition.

D4 Patient was referred to a Surgeon.
The Nephrologist has written an order and the patient has been referred to a Surgeon for assessment (e.g., venography, etc.) and placement of a permanent internal vascular access (i.e., AV-fistula or AV-graft).

D5 Patient refused placement of permanent access
The patient refuses to consent to the procedure for placement of an AV-fistula or AV-graft.

D5a Permanent access not feasible at this time due to severe vasculitis
The patient has severe vasculitis that prevents surgery for access within the next 30 days.

D5b Permanent access not feasible at this time due to dermatologic conditions
Dermatologic conditions involving extremities precludes graft/fistula placement within next 30 days (i.e., scleroderma, calciphylaxis, etc.)

D5c Cardiac Stress
This patient is unable to tolerate increased cardiac output by a graft/fistula due to cardiac condition (i.e., severe coronary artery failure).

D5d Severe peripheral vascular disease
This patient has severe peripheral vascular disease, which precludes graft/fistula placement.

D6 Permanent access not feasible at this time
This patient is not a surgical candidate (medically) at this time and is projected to have no improvement in condition for at least the next 30 days. This should be documented in medical record.

D7 Patient has an access plan, but it was not followed
The nephrology team at the dialysis unit did generate a plan of action to address elimination of a catheter access and placement of a permanent vascular access (AV-fistula or AV-graft), but the plan was not followed.

D7a Patient had NO access plan
Please mark this column if there was NO access plan in place for this patient.

D8 Other (CHECK HERE & EXPLAIN REASONS ON REVERSE SIDE).
This block is reserved for patients who do not meet any of the other categories. Some reasons for falling into this category may include (but not limited to) insurance failure to approve surgical referral, age of the patient < 12 years, awaiting peritoneal dialysis training, awaiting transplant with next 30 days. Any patient listed in this category must have a detailed explanation provided on the reverse side of the data collection sheet.

Section E
If D4 = yes [i.e., patient has been referred to a Surgeon], what was the outcome?

E1 Access surgery scheduled
The patient was evaluated by a vascular surgeon, a planned date of surgery to create a permanent vascular access (AV-fistula or AV-graft) has been identified and coordinated.

E2 Patient did not keep surgical appointment
The patient did not appear for evaluation by the surgeon (i.e., the patient was a "no show" for the surgeon).

E3 Patient refused placement of permanent access
The patient has been educated about the benefits of a permanent vascular access by the surgeon, but refuses to consent to the procedure for placement of an AV-fistula or AV-graft.

**E4 Surgeon determined patient not suitable candidate for permanent access at this time**

Over the course of the evaluation, the Surgeon determined the patient not suitable for permanent vascular access at this time. There should be a written document from the surgeon's office to this effect. The delay may be due to an acute episode (i.e., current infection) or an acute episode of a chronic problem (i.e., management of chronic congestive heart failure is undergoing revision), or some other specified problem. The patient may be eligible for a permanent vascular access at a later time.

**E5 Patient appointment scheduled in the future**

As of December 1, 2001, had an appointment been made for the patient that had not come to pass at the time of data collection? If yes, enter appointment date.
### Facility: ABC Dialysis Center

Highlighted are calculated cells-Do not enter data into highlighted cells

<table>
<thead>
<tr>
<th>#</th>
<th>Patient Name (admitted with CVC Only)</th>
<th>Admit Date</th>
<th>Date Permanent Access within 90 days</th>
<th>Date Permanent Access Placed</th>
<th>Variance (+ or - 90 days)</th>
<th>Comments</th>
</tr>
</thead>
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<tr>
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</table>
## Monthly Catheter Tracking Tool

**Facility:**

Data should reflect the facility’s ending census on the last day of the month.

<table>
<thead>
<tr>
<th>Year</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How many chronic non-transient, in-center hemodialysis patients did you have on the last day of the month?</td>
<td>100</td>
<td>90</td>
<td>98</td>
<td>90</td>
<td>100</td>
<td>100</td>
<td>98</td>
<td>90</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>2. Of the patients in question #1 above, how many were using a catheter only for vascular access?</td>
<td>35</td>
<td>30</td>
<td>32</td>
<td>25</td>
<td>14</td>
<td>35</td>
<td>30</td>
<td>32</td>
<td>25</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>3. Of the patients in question #2 above, how many have been using a catheter for 90 or more days?</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>4. Of the patients in question #3 above, how many have been referred for mapping and permanent access?</td>
<td>10</td>
<td>12</td>
<td>11</td>
<td>4</td>
<td>7</td>
<td>9</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5. Of the patients in question #4 above, how many have been scheduled for AVF/AVG placement?</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
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</tr>
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</table>

**Total percentage of catheter only:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>35.0%</td>
<td>30.3%</td>
<td>32.7%</td>
<td>27.8%</td>
<td>14.0%</td>
<td>35.0%</td>
<td>30.3%</td>
<td>32.7%</td>
<td>27.8%</td>
<td>14.0%</td>
<td>14.0%</td>
<td>14.0%</td>
<td>14.0%</td>
</tr>
</tbody>
</table>

**Percentage of catheter >= 90 days:**

<table>
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<tr>
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<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.0%</td>
<td>25.0%</td>
<td>25.0%</td>
<td>25.0%</td>
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</table>

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## CATHETER REDUCTION TOOLKIT

Revised August 2011

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### ON GOAL REPORT CATHETER REDUCTION TOOL

#### Is Your Facility On Goal For Catheter Reduction?

<table>
<thead>
<tr>
<th>Facility: ABC Dialysis</th>
<th>Provider # 102345</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month / Year: Jan 2008</td>
<td></td>
</tr>
</tbody>
</table>

#### Is Your Facility On Goal For Catheters < 90 Days

**Enter Numbers in Yellow Highlighted Areas Only**

<table>
<thead>
<tr>
<th>Number of Patients in Your Facility</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Patients With Catheters &gt; 90 Days</td>
<td>25</td>
</tr>
<tr>
<td>Percentage of Patients with Catheter &gt; 90 Days</td>
<td>50%</td>
</tr>
<tr>
<td>To Reach KDOQI Goal of 10%, You Need to Decrease This Many Catheters</td>
<td>20</td>
</tr>
<tr>
<td>Total number of Catheters removed this month</td>
<td>5</td>
</tr>
</tbody>
</table>

**Suggestions To Do List:**

- Evaluate Root Causes Regarding Catheter Use
- Evaluate All Catheter Patients For an AVF
- Refer Eligible Patients to Nephrologist or "Champion Surgeon"
- Review Permanent vascular access referral process with your Medical Director
- Review your vascular access tracking tool for access maturation

---

**For electronic copy of Catheter Reduction Tool**

contact ________________________

---

This tool was developed for tracking catheter reduction on a monthly basis. Data is entered onto a worksheet for each month. As data is entered for each month, the graph will automatically populate to display trended results.

1. Enter Facility Name and Provider for each month.
2. The month and year are already populated for each tab.
Enter the facility data into the yellow highlighted areas.

The percentage of patients with catheter > 90 days will automatically populate.

The number of catheters to reduce to reach 10% will automatically populate.

Enter the total number of catheters that were removed during the month.

The graph will automatically populate the monthly results. (the graph displays 2008 dates-a revised tool will become available for use in 2009).

The "Suggestions To Do List" section provides some examples. Text can be deleted and facility specific "To Do Lists" can be entered into this section.
REFERRAL LETTERS
REFERRAL LETTER TO A SURGEON

Date

Dear Dr_____________.

I am referring (patient name) to you today for permanent hemodialysis vascular access creation. As per K-DOQI guidelines, I would prefer, if at all possible, that the patient have a native AV Fistula. This is the ideal vascular access for long-term hemodialysis.

Please evaluate the patient for an arteriovenous fistula and for pre-operative vein mapping. If you need any assistance in getting a referral for the procedure or for the mapping, please let us know.

If for some reason after evaluating and examining this patient you feel that an AVF cannot be created, please contact me by phone at (number) to discuss the situation before any access surgery has been scheduled.

Similarly, I do not wish the patient to have a central venous catheter without having a discussion with you about it first as there are many contraindications and complications associated with this type of access.

If the patient is a good candidate for an AVF, please contact (name) at my office at (phone) with the surgery details (date, time, etc.).

Should you have any additional questions, please do not hesitate to contact me.

Sincerely,

Nephrologist Name

This educational item was produced through the AV Fistula First Breakthrough Initiative Coalition, sponsored by the Centers for Medicare and Medicaid Services (CMS), Department of Health and Human Services (DHHS), CMS contract no: HHSM-500-2006-018C. The content of this publication does not necessarily reflect the views or policies of the DHHS, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government. The author(s) assume full responsibility for the accuracy and completeness of the ideas presented, and welcome any comments and experiences with this product.
REFERRAL LETTER – ALTERNATIVE ACCESS

Date:

Name: ------------------------------- (Surgeon or Interventional Nephrologist)
Address: -------------------------------

RE: Referral for evaluation of an alternative access

Dear Dr. ---------------:

I am referring the following patient for evaluation for placement of an alternative (permanent) vascular access (i.e.: AVF, AVG, HeRo™).

Patient name: -------------------------------

Dialysis facility ------------------------------- (facility name)

My preference is for the patient to receive an__________________ (i.e.: AVF, AVG, HeRo).

A fistulagram (or state other study) was performed on (date) at (place) and is available for your review.

Enclosed you will find additional clinical information to help you evaluate and treat this patient (i.e.: progress note, medication list, labs etc).

As you know, dialysis catheters markedly increase the risk of patient morbidity and mortality. Please contact me you have any questions regarding this referral or if you do not feel the patient is a candidate for AVF placement. I can be reached at (    ) --------------- (physician phone number).

Sincerely,

------------------------------------------

Physician name and address
REFERRAL LETTER – NON-MATURING FISTULAE

Date:

Name: ----------------------------------------- (Surgeon or Interventional Nephrologist)

Address: -----------------------------------------

RE: Referral for evaluation of non-maturing fistulae

Dear Dr. ---------------:

I am referring the following patient for evaluation with possible revision of a non-maturing fistulae which was placed on ____________.

Patient name: -----------------------------------------

Dialysis facility ----------------------------------------- (facility name).

A fistulagram (or state other study) was performed on (date) at (place) and is available for your review.

Enclosed you will find some information regarding this patient (i.e.: progress note, medication list, labs etc).

As you know, dialysis catheters markedly increase the risk of patient morbidity and mortality. Please contact me you have any questions regarding this referral or if you do not feel the patient is a candidate for AVF salvage. I can be reached at ( ) --------------- (physician phone number).

Sincerely,

------------------------------------------

Physician name and address
REFERRAL LETTER – PD CATHETER

Date:

Name: ------------------------------------------------- (Surgeon or Interventional Nephrologist)

Address: -----------------------------------------------

RE: Referral for evaluation of a peritoneal dialysis (PD) catheter

Dear Dr. --------------------:

I am referring the following patient for evaluation and placement of a peritoneal dialysis catheter.

Patient name: ---------------------------------------------------------------

Dialysis facility ------------------------------------------------- (facility name).

Enclosed you will find some information regarding this patient (i.e.: progress note, medication list, labs etc).

As you know, dialysis catheters markedly increase the risk of patient morbidity and mortality. Please contact me you have any questions regarding this referral or if you do not feel the patient is a candidate for PD catheter placement, I can be reached at (    ) ------------------ (physician phone number).

Sincerely,

Physician name and address
# Hemodialysis Access Referral: Existing Access

**Date:** __/__/__

**Referred to:**
- [ ] Interventional radiologist/nephrologist
- [ ] Surgeon

**Dr.** ____________________________  **Phone #:** ____________________________  **Fax #:** ____________________________

## Hemodialysis Unit Contacts

**Referring Nephrologist:** ____________________________  **Phone #:** ____________________________  **Fax #:** ____________________________

**Referring Dialysis Unit:** ____________________________  **Contact Person:** ____________________________  **Phone #:** ____________________________  **Fax #:** ____________________________

## Patient Demographics

**Patient’s Name:** ____________________________  **SS#:** ____________________________  **DOB:** __/__/__  **Address:** ____________________________  **City:** ____________________________  **State:** ____________________________  **Zip:** ____________________________  **Patient’s Phone:** ____________________________  **Emergency Contact:** ____________________________  **Phone:** ____________________________  **Insurance:** ____________________________  **Phone:** ____________________________

## Reason for Referral and Procedure Requested

**Reason:** ____________________________  **Procedure/evaluation requested:** ____________________________

**Desired Access:** ____________________________  **Date of scheduled procedure (if known):** __/__/__  **Location:** ____________________________

## Current Access

**Type:**
- [ ] Fistula
- [ ] Graft
- [ ] Catheter
- [ ] Port

**Side:**
- [ ] Left
- [ ] Right

**Extremity:**
- [ ] Arm
- [ ] Leg

**Location:**
- [ ] Upper
- [ ] Lower
- [ ] U
- [ ] Other

**Access Insertion Date:** __/__/__  **Surgeon:** ____________________________  **Hospital:** ____________________________

**Most Recent Access Blood Flow Rates/Pressures:**
- [ ] Most recent Blood Flow Rate _______ cc/min.
- [ ] Most recent Static Venous Pressure (SVP) _______ mm Hg
- [ ] Most recent Dynamic Venous Pressure _______ mm Hg
- [ ] Most recent Arterial Pressure _______ mm Hg

**Recent Surgical/Radiologic Interventions to Access:**

1. ____________________________  **Date:** __/__/__  **Physician:** ____________________________

2. ____________________________  **Date:** __/__/__  **Physician:** ____________________________

**Recent Access Problems/Complication:**
- [ ] Difficult cannulation
- [ ] Hematoma/infiltration
- [ ] Infected Access
- [ ] Change in arm or thigh
- [ ] Pseudaneurysm
- [ ] Prolonged bleeding during/after dialysis
- [ ] Possible Steal Syndrome
- [ ] Problems with arterial flow

### Synopsis of Medical History

<table>
<thead>
<tr>
<th>Seafood or Dye Allergies *</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

*If yes, fistulogram may be contraindicated → contact Nephrologist*

<table>
<thead>
<tr>
<th>Diabetes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Peripheral Vascular Disease</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>History of Clotted Access</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Anticoagulation Medicines - If yes / specific medicine(s) below</th>
</tr>
</thead>
</table>

- [ ] Coumadin
- [ ] Ticlid
- [ ] ASA
- [ ] Flaxix
- [ ] Other:
  - ____________________________

<table>
<thead>
<tr>
<th>Recent PT/PTT - If yes, results:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent CBC</td>
</tr>
<tr>
<td>Recent Chest X-ray</td>
</tr>
<tr>
<td>Recent EKG</td>
</tr>
</tbody>
</table>

**Other pertinent medical history:** ____________________________

## Dialysis Treatment Information

**Patient’s Dialysis Schedule:**
- [ ] M-W-F
- [ ] T-Th-S

**Date of Last Dialysis:** __/__/__  **Time:** __am / __pm / __ midnight / __ pm / __ midnight / last time patient ate or drank:** ____________________________

**Weight today:** ____________________________  **Estimated Dry Weight:** ____________________________

**Stat K+ drawn at:** __ am/pm on __/__/__  **Transportation Service:** ____________________________  **Phone:** ____________________________

**Comments:** ____________________________
VASCULAR ACCESS DIAGRAM – FAX to Dialysis Facility and/or Nephrologist

Patient Name: ____________________________

Date of Procedure: ________________________

Diagram Completed by: [ ] Surgeon [ ] Interventional Radiologist [ ] Interventional Nephrologist

Name (Surgeon or Interventionalist): ____________________________

FAX to: [ ] Nephrologist Name: ____________________________

Fax #: ____________________________

Procedure(s): (Check all that apply)

SURGERY
[ ] New Access
[ ] Thrombectomy
[ ] Revision
[ ] Other—specify: ____________________________

INTERVENTIONAL (Endovascular)
[ ] Thrombolytic Therapy
[ ] Thrombectomy
[ ] PTA
[ ] Stent
[ ] Catheter insertion or revision
[ ] Diagnostic Fistulogram only
[ ] Other—specify: ____________________________

Access Type

- AV Graft
- AV Fistula
- Port device
- Central venous Catheter
- If new catheter, priming volume: ____________________________

Configuration

- Graft (if applicable)
- Loop
- Straight
- Curved
- Fistula Construction (if applicable)
- Radio-cephalic
- Brachio-cephalic
- Transposed

Location

- Right
- Left
- Forearm
- Upper arm
- Leg/Thigh
- Other—specify: ____________________________

NOTE: Please show Configuration of access, Vessels Involved, and Direction of Access Flow

NOTES:

- Were diagnostic evaluations performed prior to procedure? If yes, describe: ____________________________

- Brief description of procedure (If preferred access not placed, explain reason): ____________________________

- Procedure findings (if relevant): ____________________________

- Was procedure successful? Yes [ ] No [ ] (circle one)

- Recommendations/Comments: ____________________________

- Additional care information/instructions: ____________________________

- Special cannulation instructions: ____________________________

- Patient follow-up:
  1. Patient to schedule appointment with Surgeon/Nephrologist (circle one) in ___ days/weeks (circle one).
  2. Patient appointment has been scheduled (date) with Dr.

- Other Notes: ____________________________

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HEMODIALYSIS ACCESS REFERRAL: NEW ACCESS

Date: ____________________________

Referred to (Surgeon): ____________________________ Phone #: ____________________________ Fax #: ____________________________

Referred by (Nephrologist): ____________________________ Phone #: ____________________________ Fax #: ____________________________

PATIENT DEMOGRAPHICS

Patient’s Name: ____________________________ SS#: ____________________________ DOB: ______/____/____

Address: ____________________________ City: ____________________________ State: ______ Zip: ______

Patient’s Phone: ____________________________ Emergency Contact: ____________________________ Phone: ____________________________

Insurance: ____________________________ Phone: ____________________________

TO BE COMPLETED BY NEPHROLOGIST (attach med list / labs if applicable)

Our patient is being referred to you for access placement. The desired access for this patient is:

- [ ] fistula
- [ ] graft
- [ ] central cath
- [ ] other: ____________________________

STOP

In the event you are not planning to place the desired access, please call the referring physician prior to placing any other access.

Site preference: ____________________________ IF AV fistula: ____________________________ IF Catheter: ____________________________

- [ ] Right
- [ ] Left

- [ ] upper arm
- [ ] lower arm
- [ ] thigh
- [ ] chest
- [ ] other: ____________________________

- [ ] radial-cephalic
- [ ] brachial-cephalic
- [ ] transposed: Vein type: ____________________________

- [ ] U vein
- [ ] SC vein
- [ ] Femoral vein

- [ ] other: ____________________________

Diagnostic evals pre-referral: [ ] No

- [ ] Yes: date/result: ____________________________ (attach)

The anticipated dialysis start date is: ____________________________

Most recent GFR or serum creatinine: ____________________________ mg/dl Date: ____________________________

Most recent creatinine clearance: ____________________________ ml/min Date: ____________________________

Taking Coumadin or other Anti-Coagulant? [ ] Yes [ ] No

Allergy Alert:

If patient has any dye or seafood allergies, fistulagram may be contraindicated. Contact Nephrologist for orders re: patient’s plan of care.

Allergies: [ ] Yes [ ] No List all Allergies: ____________________________

Comments / Additional Information:

SURGEON:
- PLEASE FILL OUT THE “VASCULAR ACCESS DIAGRAM” AND FAX TO NEPHROLOGIST and/or DIALYSIS FACILITY

NEPHROLOGIST:
- PLEASE FAX THIS FORM, ALONG WITH THE COMPLETED “VASCULAR ACCESS DIAGRAM” TO THE DIALYSIS FACILITY.
# Vascular Access Diagram – Fax to Dialysis Facility and/or Nephrologist

**Patient Name:**

**Diagram Completed by:**
- Surgeon
- Interventional Radiologist
- Interventional Nephrologist

**Name (Surgeon or Interventionalist):**

**FAX to:**
- Nephrologist Name

**Facility Name:**

**Procedure Date:**

**Procedure(s): (Check All That Apply)**

- **SURGERY:**
  - New Access
  - Thrombectomy
  - Revision
  - Other—specify:

- **INTERVENTIONAL (Endovascular):**
  - Thrombolysis / Thrombectomy
  - PTA
  - Stent
  - Catheter insertion or revision
  - Diagnostic Fistulogram only
  - Other—specify:

**Access Type**

- AV Graft
- AV Fistula
- Port device
- Central venous Catheter
- If new catheter, priming volume:
  - **ml**
  - Cuffed
  - Non-cuffed

**Configuration**

- Graft (if applicable)
  - Loop
  - Straight
  - Curved
  - Fistula Construction (if applicable)
    - Radio-cephalic
    - Brachio-cephalic
    - Transposed
  - Type:
  - PTFE
  - Other—specify:

**Location**

- Right
- Left
- Forearm
- Upper arm
- Leg/Thigh
- Other—specify:

**Fistula Construction (if applicable)**

- Subclavian
- Internal Jugular
- Femoral

**Graft Material (if applicable)**

- Other—specify:

**NOTE:** Please show Configuration of access, Vessels Involved, and Direction of Access Flow

---

**NOTES:**

- Were diagnostic evaluations performed prior to procedure? If yes, describe:

- Brief description of procedure (if preferred access not placed, explain reason):

- Procedure findings (if relevant):

- Was procedure successful? Yes No (circle one)

- Recommendations/Comments:

- Additional care information/instructions:

- Special consultation instructions:

- Patient follow-up:
  1. Patient to schedule appointment with Surgeon/Nephrologist (circle one) in ___ days/weeks (circle one).
  2. Patient appointment has been scheduled ___ (date) with Dr. __________

- OTHER NOTES:

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REFUSAL FORM

I, _________________________________, the undersigned, do hereby attest to the following:

1. ____ I have been educated about the benefits of a permanent vascular access (fistula, graft) by the staff at _________________________________ on at least (3) separate occasions.

2. ____ I have been educated about the benefits of a permanent access by my nephrologist (Kidney doctor) on at least (3) occasions.

3. ____ I am aware that catheter access poses a greater risk of longer hospital stays, infection, and possibly death.

4. ____ I have been provided with documentation of the above stated facts.

5. ____ Nevertheless, I am rejecting the possibility of fistula or graft placement.

6. ____ It is my desire to retain my current catheter as my access of choice, despite the inherent risks.

7. ____ The main reason for my refusal is ________________________________.

Patient Signature/Date: __________________________________________________________

Caregiver Signature/Date: ________________________________________________________

Staff Witness/Date: _____________________________________________________________
RESOURCES

AND

REFERENCES
QUALITY ASSESSMENT AND PERFORMANCE IMPROVEMENT (QAPI)
FOR ESRD MEDICAL DIRECTORS

Medical Directors set the course for their dialysis center. Patients and staff members rely on the Medical Director to lead effectively. The Conditions for Coverage released on 4/15/08 by the Centers for Medicare & Medicaid Services (CMS) has updated the responsibilities of ESRD facility Medical Directors. As Pay for Performance (P4P) becomes a reality, it is increasingly important for facilities to achieve and sustain clinical performance targets in order to receive reimbursement. Medical Directors are encouraged to read carefully and become very familiar with the new Conditions.

The Medical Director has operational responsibility for the QAPI program and ensures that program data is used to develop actions to improve quality of care and must ensure that the facility’s QAPI program is effectively developed, implemented, maintained, and periodically evaluated. The dialysis facility must maintain and demonstrate evidence of its QAPI program for review by the Centers for Medicare & Medicaid Services (CMS).

This portion of the toolkit contains references that may help with the details of setting up a QAPI project; it is not intended to be complete or authoritative.

The table below contains a breakdown of some Medical Director QAPI and responsibilities.

<table>
<thead>
<tr>
<th>Patient Outcomes</th>
<th>Reuse &amp; Water Treatment</th>
<th>Patient Safety &amp; Satisfaction</th>
<th>Staff Training</th>
<th>Involuntary Discharge of Patients</th>
<th>Oversight of Attending Physicians</th>
<th>Biohazard &amp; Infection Control</th>
<th>Facility Policies &amp; Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequacy of dialysis</td>
<td>Reuse program</td>
<td>Medical injuries</td>
<td>Written and signed order from both Med. Dir. and attending physician prior to discharge (Note: The new “discharge/transfer process is very lengthy, specific, and progressive.)</td>
<td>Inform medical staff of facility P&amp;P including QAPI</td>
<td>Adverse events</td>
<td>Participate in developing P&amp;P</td>
<td></td>
</tr>
<tr>
<td>Nutritional status</td>
<td>Deviations from AAMI standards (corrective action plan)</td>
<td>Medical errors</td>
<td></td>
<td></td>
<td>Infection control issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mineral metabolism</td>
<td>Water treatment equipment</td>
<td>Patient satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anemia management</td>
<td></td>
<td>Grievances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vascular access</td>
<td>Pt did not reach target weight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The QAPI team includes all interdisciplinary members and physicians.

Work together to:
- Track
- Trend
- Analyze data
- Formulate strategies
- Intervene
- Set goals
- Set timelines
- Document your efforts

This resource was created while under contract with Center for Medicare and Medicaid Services, Baltimore, Maryland. Contract #HHSM-500-2006-NW012C. The contents presented do not necessarily reflect CMS policy.
QUALITY ASSESSMENT AND PERFORMANCE IMPROVEMENT (QAPI)
TEAM MEMBER RESPONSIBILITIES & ROLES

The ESRD Conditions for Coverage that were released by the Centers for Medicare & Medicaid Services (CMS) on April 15, 2008, require that dialysis facilities establish a written Quality Assessment and Performance Improvement (QAPI) Program. The program is led by the Medical Director of the facility and designed to assist the facility in achieving clinical performance excellence. Below is a listing of possible QAPI team members and examples of their various responsibilities and roles. Facilities are encouraged to utilize this resource as they develop the written facility QAPI program.

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Responsibilities related to QAPI</th>
<th>Role in QAPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients</td>
<td>Patients are responsible to adhere to the physician ordered plan of care and dialysis treatment prescription to the best of his/her ability. Patients are encouraged to ask questions of the dialysis care team when clarification is necessary. Patients are encouraged to work cooperatively with the team to ensure that he/she receives the highest quality of renal care.</td>
<td>Meet monthly with the QAPI team</td>
</tr>
<tr>
<td>Medical Director</td>
<td>The Medical Director (MD) has operational responsibility for the Quality Assessment and Performance Improvement (QAPI) program and ensures that program data is used to develop actions to improve quality of care. The Medical Director ensures that the facility’s QAPI program is effectively developed, implemented, maintained, and periodically evaluated. The Medical Director ensures that the facility achieves clinical outcomes that include but are not limited to: adequacy of dialysis, nutritional status, anemia management, vascular access, medical injuries, and medical errors identification, hemodialysis reuse program, patient satisfaction and grievance. The Medical Director is in charge of oversight of attending physicians. The Medical Director controls the involuntary patient discharge/transfer process. The Medical Director The Medical Director ensures that the facility participates in ESRD Network activities and pursues Network goals.</td>
<td>Review aggregate patient data and formulate an overall facility plan for improvement, including a timeline. Adjust individual patient care plans (with attending physicians if applicable) to facilitate the meeting of clinical care goals for that patient. Make recommendations to the team on how to improve the quality of care delivered to the patients Control the involuntary patient discharge/transfer process for the facility Ensure that the facility participates in ESRD Network activities and pursues Network goals. Receive and act upon recommendations from the ESRD Network. Cooperate with the ESRD Network in fulfilling the terms of the Networks current statement of work.</td>
</tr>
<tr>
<td>Nephrologist</td>
<td>The Nephrologist is responsible to assist the Medical Director in the coordination of the Quality Assessment and Performance Improvement (QAPI) program. He/she agrees to adhere to and enforce facility policies and procedures. The nephrologist agrees not to dismiss or transfer a patient involuntarily without first discussing it with the Medical Director. The nephrologist will utilize clinical data to develop action plans to improve quality of care. The nephrologist will adjust individual patient care plans to facilitate achievement of clinical goals. The nephrologist agrees to promote participation in ESRD Network activities and the pursuit of Network goals.</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Meet monthly with the QAPI team</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Review patient data and formulate patient specific plans for improvement, including a timeline</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Adjust individual patient care plans to facilitate the meeting of clinical care goals for that patient.</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Make recommendations to the team on how to improve the quality of care delivered to the patients</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Ensure that the facility participates in ESRD Network activities and pursues Network goals.</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Receive and acts upon recommendations from the ESRD Network.</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Cooperate with the ESRD Network in fulfilling the terms of the Networks current statement of work</td>
<td></td>
</tr>
<tr>
<td>Advanced Practice Nurse name</td>
<td>The Advanced Practice Nurse (APN) is to practice under the authority of the Medical Director and Nephrologist. He/she is responsible to assist the Medical Director and Nephrologist in the coordination of the Quality Assessment and Performance Improvement (QAPI) program. To adhere to and enforce the facility policies and procedures. The APN agrees not to dismiss or transfer a patient involuntarily without first discussing it with the Medical Director. The APN utilizes data to develop actions to improve the patients’ quality of care. The APN adjusts individual patient care plans to facilitate achievement of clinical goals. The APN promotes participation in ESRD Network activities and the pursuit of Network goals.</td>
<td></td>
</tr>
<tr>
<td>Meet monthly with the QAPI team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist the team with tracking, trending, and analysis of the clinical data.</td>
<td></td>
<td></td>
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<tr>
<td>Make recommendations to the team on how to improve the quality of care delivered to the patients</td>
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<td></td>
</tr>
<tr>
<td>Review patient data and formulate patient specific plans for improvement, including a timeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjust individual patient care plans to facilitate the meeting of clinical care goals for that patient.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure that the facility participates in ESRD Network activities and pursues Network goals.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receive and acts upon recommendations from the ESRD Network.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperate with the ESRD Network in fulfilling the terms of the Networks current statement of work</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Unit Administrator | To assist the Medical Director (MD) in the coordination of the Quality Assessment and Performance Improvement (QAPI) program. The MD monitors facility management and patient care staff actions to assure that patient safety is a top priority and that the desired clinical outcomes are being achieved. The MD supports facility participation in ESRD Network activities and pursuit of Network goals. | Meet monthly with the QAPI team
Educate the patient care staff regarding QAPI requirements
Assist the team with tracking, trending, and analysis of the clinical data.
Suggest changes in policies and procedures that would facilitate achievement of clinical performance goals, promote patient safety, and/or improve patient satisfaction.
Track and trend medical injuries, medical errors, hemodialysis reuse program, patient satisfaction, and grievances
Work with the physicians and patient care staff to identify patient safety or grievance issues
Monitor and track patient satisfaction, grievances, patient safety, and other issues
Ensure that physicians’ orders are carried out.
Ensure that the facility participates in ESRD Network activities and pursues Network goals.
Receive and acts upon recommendations from the ESRD Network.
Cooperate with the ESRD Network in fulfilling the terms of the Networks current statement of work |
<table>
<thead>
<tr>
<th>Registered Nurse</th>
<th>The registered nurse is responsible for assisting the Unit Administrator in helping the patient care staff to adhere to and deliver the patients prescribed plan of care and the dialysis prescription.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Meet monthly with the QAPI team</td>
</tr>
<tr>
<td></td>
<td>Educate the patient care staff regarding QAPI requirements</td>
</tr>
<tr>
<td></td>
<td>Maintain written minutes and notes from the QAPI meetings and distribute them as directed by the Unit Administrator</td>
</tr>
<tr>
<td></td>
<td>Under the direction of the Unit Administrator, assigns staff members to coordinate the following performance measures:</td>
</tr>
<tr>
<td></td>
<td>Adequacy of dialysis, nutritional status, and anemia management</td>
</tr>
<tr>
<td></td>
<td>Work with the Unit Administrator and patient care staff to identify patient safety or grievance issues</td>
</tr>
<tr>
<td></td>
<td>Ensure that physicians’ orders are carried out.</td>
</tr>
<tr>
<td></td>
<td>Ensure that the facility participates in ESRD Network activities and pursues Network goals.</td>
</tr>
<tr>
<td></td>
<td>Receive and acts upon recommendations from the ESRD Network.</td>
</tr>
<tr>
<td></td>
<td>Cooperate with the ESRD Network in fulfilling the terms of the Networks current statement of work.</td>
</tr>
<tr>
<td>Vascular Access Coordinator</td>
<td>The vascular access coordinator is responsible for monitoring adherence to the patients prescribed plan of vascular access care and dialysis prescription and coordinating education and care related to the selection, creation, and maintenance of the vascular access.</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>__________________________</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Meet monthly with the QAPI team</td>
<td></td>
</tr>
<tr>
<td>Educate the patient care staff regarding QAPI requirements</td>
<td></td>
</tr>
<tr>
<td>Track and trend catheter usage, arteriovenous fistula, and arteriovenous grafts.</td>
<td></td>
</tr>
<tr>
<td>Track and trend vascular access infections</td>
<td></td>
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<td>Work with the Unit Administrator and patient care staff to identify vascular access issues and/or the need for interventions</td>
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<td>Coordinate vascular access care (surgical referrals, etc.)</td>
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<td>Ensure that physicians’ orders are carried out.</td>
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<td>Ensure that the facility participates in ESRD Network activities and pursues Network goals.</td>
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<td>Receive and acts upon recommendations from the ESRD Network.</td>
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<td>Cooperate with the ESRD Network in fulfilling the terms of the Networks current statement of work</td>
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| Registered Dietitian | The registered dietitian is responsible for counseling patients on management of protein, sodium, potassium, phosphorus, and fluid controlled diets, translating the chemistry of these limits into meals for patients; monitoring vitamin and mineral supplementation including iron levels and their effect on erythropoietin; managing glycemic control of diabetic patients by manipulation of diet; and assessing nutritional status by using clinical and biochemical measures. | Meet monthly with the QAPI team
Work with the care team to identify patient dietary issues and/or the need for interventions
Make recommendations for interventions
Implement interventions as directed by the team
Perform follow up to assess improvements
Ensure that physicians’ orders are carried out.
Ensure that the facility participates in ESRD Network activities and pursues Network goals.
Receive and acts upon recommendations from the ESRD Network.
Cooperate with the ESRD Network in fulfilling the terms of the Networks current statement of work |
| Social Worker | The Social Worker is responsible to assist patients to achieve and sustain an effective level of vocational, emotional and social wellbeing. The social worker evaluates and addresses challenging or disruptive behavior as well. | Meet monthly with the QAPI team  
Work with the care team to identify patient issues and/or the need for interventions  
Make recommendations for interventions  
Implement interventions as directed by the team  
Perform follow up to assess improvements  
Ensure that physicians’ orders are carried out.  
Ensure that the facility participates in ESRD Network activities and pursues Network goals.  
Receive and acts upon recommendations from the ESRD Network.  
Cooperate with the ESRD Network in fulfilling the terms of the Networks current statement of work |
| Additional Team Members | The team members assist the QAPI team to improve the quality of care provided to the patients. Team members perform specific duties as assigned by the Unit Administrator and/or Medical Director. | Meet monthly with the QAPI team  
Work with the care team to identify patient issues and/or the need for interventions  
Make recommendations for interventions  
Implement interventions as directed by the team  
Perform follow up to assess improvements  
Ensure that physicians’ orders are carried out.  
Support other team members as directed by the Unit Administrator and/or Medical Director  
Ensure that the facility participates in ESRD Network activities and pursues Network goals.  
Receive and acts upon recommendations from the ESRD Network.  
Cooperate with the ESRD Network in fulfilling the terms of the Networks current statement of work |
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REFERENCE/RESOURCE LIST


