

Example: Decreasing Infection in Chronic Peritoneal or Hemodialysis Patients

First, look at your data from your most recent annual Kidney Epidemiology and Cost Center Report (KECC report) or the CDC website. Check to see if your facility rate has trended upward over last year's report. If you track infection rates using other methods, include these reports in your review. How do you compare to others in your geographic area? If your infection rates have increased or are not decreasing, you should consider an improvement effort in this area.

Next, decide which people at your facility should be included in the team effort. Do you have a designated staff member that tracks infections? Is your Medical Director aware of the facility infection rate? Consider adding the infection control nurse or physician from the hospital as an "expert" member. Who else would you like to include?

Now, take a closer look at your clinic to see what might be impacting your rates. Are there groups of patients who have infected central venous catheters or those who have a continuous problem with access infections? Are staff members following infection control procedures? Do patients know how to care for catheters at home? Do you have a process that includes a "foot check" for the diabetic patients? How do you educate patients who speak Spanish or are elderly regarding infection prevention? Which infection source needs to be the primary focus, i.e. surgical sites, wound, central venous catheters, hospital acquired infections (MRSA), or the absence of aseptic technique in the clinical setting. Looking at the specific infectious processes in your facility will allow you to focus and concentrate on the root cause of the problem.

To get you started, the following **barriers** to infection control have been identified by Medical Review Board members of Network #15 as potential causes of increased infection rates:

- Lack of staff and patient education regarding infection control
- Failure to track infections
- Infection Control team not in place
- Language barrier
- Most resistant organisms come from Central Venous Catheters (CVC's)
- Diabetic patients are higher risk for infections
- Lack of awareness of good hand hygiene
- Staff and patients lack of education regarding s/s of infection and when to report these symptoms

Root cause: Determined by your CQI team who have reviewed the data and barriers.
Example: High turnover of staff; lack of infection control education.

Decide on an “AIM” Statement; what are you trying to accomplish?

- Reduce infection rates of your dialysis patients by a percentage that is determined by your infection control team. Choose a reasonable goal and a reasonable time frame to reduce these rates.

How will you measure improvement?

Monthly measurement as QA monitor

Potential measurement (if above goal is used):

Numerator: # of patients with Central Venous Catheter infection

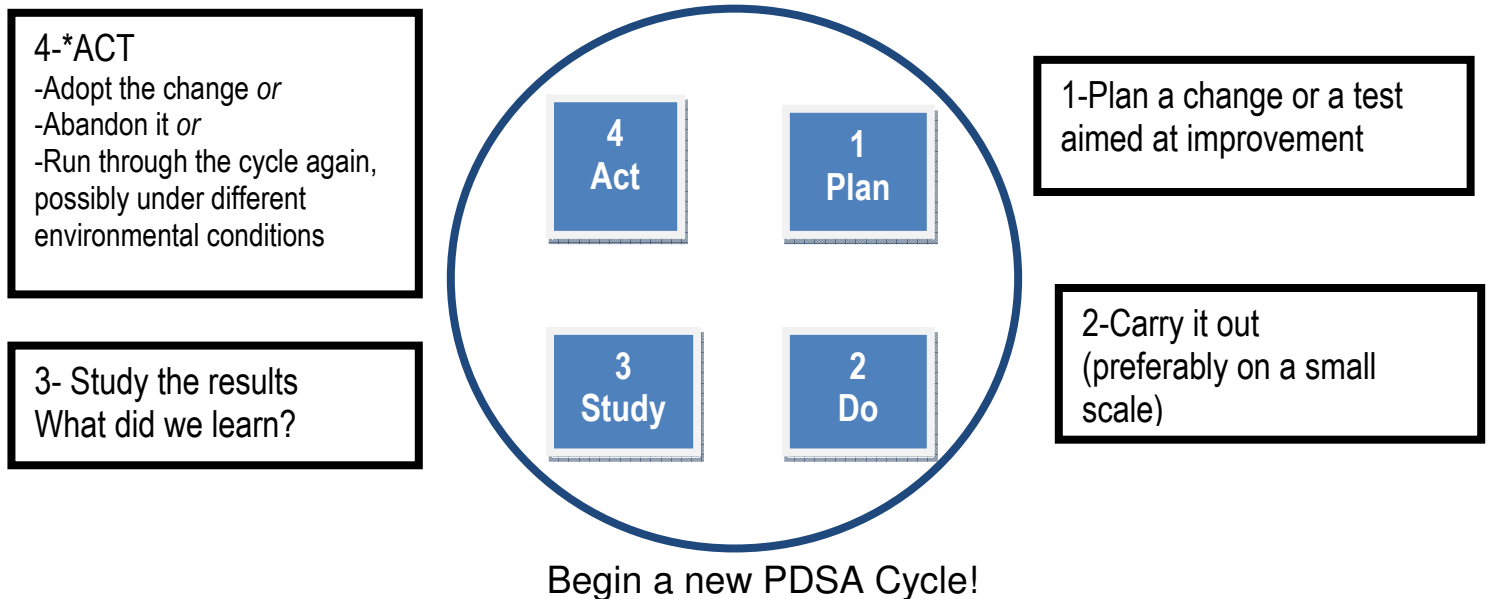
Denominator: total # of patients with central venous catheters in your facility

Additional MRB recommendations that might be included in your statement:

- Enroll in Center for Disease Control and Prevention surveillance program
- Annually, train staff and patients on infection control practices ,
- Complete your annual vaccinations for staff and patients
- Isolation procedures and (include information for resistant bacteria), who, what, when, and how.

Brainstorm potential solutions based on barriers / root cause prioritized by your QI team.

Begin PDSA cycles and document your improvement



Name of facility / Provider # _____

Facility Contact/Position _____

Root Cause Assessment
Infection/Immunizations

Major Barriers to Prevent Infections	Potential Root Cause For Infection/Immunization	Problem in facility?	Potential to change
Patient Factors			
Awareness/Knowledge	• Lack of education regarding the care of vascular access	Y/N	
	• Lack of education regarding s/s of infection	Y/N	
	• Lack of awareness of benefit of immunizations	Y/N	
	• Lack of awareness of benefit of Hepatitis vaccine	Y/N	
	• Lack of knowledge about infection control	Y/N	
	• Lack of knowledge concerning personal hygiene and hand washing	Y/N	
Physical factors that increase the chances of Infection	• History of respiratory problems	Y/N	
	• Diabetes	Y/N	
	• Long-term steroid use	Y/N	
	• History of or active drug abuse	Y/N	
	• Medical instability	Y/N	
	• Malnutrition	Y/N	
Communication/Education	• History of auto-Immune diseases	Y/N	
	• Failure to report s/s of infection to healthcare workers	Y/N	
Social	• Failure to take prescribed medications (antibiotics) as prescribed and for the length of time ordered	Y/N	
	• Cultural bias regarding sickness, hygiene, foods,	Y/N	
Other	• No insurance	Y/N	
	• Preference for catheters since catheters do not require a “stick” or wish to avoid another procedure	Y/N	
	• Patients aware that catheters are a major source of infection, but tend to ignore medical advice	Y/N	
	• Exposure to environmental hazards, ie. Smoking, pollutants	Y/N	
	• Under dialyzed	Y/N	
	• Hospitalization	Y/N	
Nephrologist Factors			
General	• Failure of nephrologists to educate patients regarding the pros and cons of the different types of vascular access	Y/N	
	• Failure of nephrologists to monitor infection control issues and lead CQI program to track and decrease infections	Y/N	
	• Failure to refer CKD patients for early access placement (catheters placed due to emergent need for care and ease)	Y/N	
	• Failure to track immunization rates of all patients and / or develop plan to make sure all patients are immunized at facility	Y/N	

	<ul style="list-style-type: none"> Lacks current knowledge concerning the latest medications for infection control and prevention methods 	Y/N	
Facility Factors			
Awareness/Knowledge	<ul style="list-style-type: none"> Facility failed to provide education to housekeeping regarding methods of cleaning and disinfecting surfaces in the facility to minimize transmission of microorganisms 	Y/N	
	<ul style="list-style-type: none"> Facility has failed to educate staff about AAMI Water Standards . Staff lack knowledge about procedures for monitoring water, monthly cultures, follow-up to results, and water sterilization 	Y/N	
	<ul style="list-style-type: none"> Facility lacks tracking mechanism for infectious processes 	Y/N	
Communication/Education	<ul style="list-style-type: none"> Lack of knowledge and training regarding handling and delivery of patient's medicine 	Y/N	
	<ul style="list-style-type: none"> Inadequate communication between facility and nephrologists, surgeon, radiologist regarding infection rates 	Y/N	
	<ul style="list-style-type: none"> Failure by nurses or technicians to report s/s of patient infections 	Y/N	
	<ul style="list-style-type: none"> Lack of centralized record keeping to monitor and prevent complications from infections, including immunization, bacteremia and access 	Y/N	
	<ul style="list-style-type: none"> Lacks Infection control team 	Y/N	
	<ul style="list-style-type: none"> Lack knowledge regarding infectious disease process for MRSA and VRE 	Y/N	
	<ul style="list-style-type: none"> Techs and nurses lack adequate training/experience in infection control and isolation practices 	Y/N	
Training/Experience	<ul style="list-style-type: none"> Lack of education concerning use of protective equipment (PPE) 	Y/N	
	<ul style="list-style-type: none"> Staff lacks education in proper personal and hand hygiene techniques. 	Y/N	
	<ul style="list-style-type: none"> Lack knowledge about need for immunizations for staff and patients 	Y/N	
	<ul style="list-style-type: none"> Lack of and/or failure to have a policy on monitoring infectious processes 		
	<ul style="list-style-type: none"> Lack of and/or failure to use a Quality Improvement program to monitor and decrease infection rates 	Y/N	
Administrative	<ul style="list-style-type: none"> Proper distance for patients infected with MRSA or VRE and the general dialysis population not maintained because Policy and procedures are not enforced 	Y/N	
	<ul style="list-style-type: none"> Designated supplies for those patients who have MRSA or VRE are not available 	Y/N	
	<ul style="list-style-type: none"> Lack of supplies available for hand hygiene 	Y/N	
	<ul style="list-style-type: none"> No current Policy & Procedure for infection control and prevention and/or improving immunization rates 	Y/N	
	<ul style="list-style-type: none"> Lack of and/or failure to use an educational program to instruct patients about post-op care, signs and symptoms of infection and when and to whom the patient report to, etc 	Y/N	
	<ul style="list-style-type: none"> Continuous educational opportunities for infection control issues and tracking 	Y/N	

* This list does not include every root cause affecting infection

Reducing Infections Resources

- Please contact us if you would like additional help developing a QI project that reduces Infection rates

Phone: 303-831-8818

E-mail: info@nw15.esrd.net

Web-site links:

- - Conditions for Coverage Infection Control Resources
<http://www.esrdnet15.org/cfc.html#infection>
 - Improving immunization rates
<http://www.esrdnet15.org/QI.htm>
 - Action plan to prevent Healthcare -Associated Infections
<http://www.hhs.gov/ophs/initiatives/hai/exsummary.html>
 - Agency for Healthcare Research and Quality (AHRQ)
<http://www.ahrq.gov/qual/errorssix.htm>
 - Reducing infections associated with catheters and surgical sites.
<http://www.cdc.gov/mmwr/mmwrsrc.htm>
http://www.cdc.gov/ncidod/dhqp/gl_surgicalsites.html
<http://www.cleanhandscoalition.org>