

Dialysis Assessment, Feedback, Incentives, eXchange Program (D-AFIX)

A Guidebook for ESRD Dialysis Facility Staff to Improve Preventable Disease Vaccination Rates in Dialysis Settings

Adapted from the
Centers for Disease Control and Prevention's
AFIX Policies and Procedures Guide 2013 - First Edition



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Introduction

The Assessment, Feedback, Incentives, and eXchange (AFIX) approach was adapted for the dialysis setting to increase the rates of hepatitis B, pneumococcal pneumonia and influenza vaccinations for ESRD patients.

This guidebook represents an evolution of the original AFIX Guidebook that was developed by the CDC for pediatric providers. Congress directed the CDC to develop guidelines for assessing vaccination rates in public clinics. In 2000, the CDC established the Vaccinations for Children (VFC) AFIX. In 2015, ESRD Networks 9, 10, and 12 staff modified the CDC AFIX model for use in improving hepatitis B, pneumococcal pneumonia and influenza vaccination rates in dialysis facilities. The goal is to make this model useful and effective for dialysis settings. These guidelines are intended to help ESRD dialysis facility management and staff increase vaccination rates through quality improvement efforts.

This guidebook focuses primarily on vaccinating dialysis patients; however, dialysis facilities should have policies and procedures to ensure that ALL STAFF are vaccinated appropriately to protect both patients and facility staff members.

The Role of the D-AFIX Coordinator:

This guidebook has been adapted for use in the dialysis setting, and can be employed by various dialysis facility quality oversight agents who are charged with improving vaccination rates at the dialysis facility level, including:

- Quality Oversight Coordinators working for dialysis corporations
- Regional Quality Managers for dialysis corporations
- Dialysis facility staff conducting internal reviews of vaccination practices

In each case, the oversight body should appoint a dialysis facility D-AFIX coordinator who will be objective and responsible for assessing dialysis facility vaccination policies and procedures as explained in this guidebook in order to improve vaccination rates. Network staff are available to support the dialysis facility D-AFIX coordinator if there are any questions or assistance needed.

The CQI Approach

Continuous Quality Improvement (CQI) is an approach to quality management that builds upon traditional quality assurance methods by emphasizing organization and systems. It focuses on the process of conducting business and promotes the need for objective data to analyze and improve processes.

CQI usually involves a common set of characteristics, including:

- A quality improvement team
- Training
- Mechanisms for selecting improvement opportunities
- A process for analysis and redesign
- A link to an organization's strategic plan
- An organizational culture that supports continual learning systems and process improvement

Dialysis facilities are expected under the CMS Conditions for Coverage (CfC) to develop, implement, maintain and evaluate an effective, data driven quality assessment and performance improvement (QAPI) program with participation by the professional members of the interdisciplinary team (IDT). The QAPI program involves the review of facility aggregate data and requires facility based assessment and improvement of care. As with any effort to improve care for dialysis patients, it is critically important that the dialysis facility staff listens to the voice of the patient when considering changes to policies and procedures. The patient perspective can provide insight on helping patients overcome negative attitudes toward vaccination. Peer-to-peer counseling may also be employed to put knowledgeable patients in touch with their peers who may be resistant to being vaccinated. This component of patient involvement should be considered when strategizing change to increase vaccination rates.

D-AFIX is a CQI process used for improving vaccination rates and practices at the dialysis facility level. The D-AFIX process will assist dialysis facility staff in improving vaccination rates through assessment of vaccination policies and procedures and identification of CQI strategies for implementation. This D-AFIX process should be reported and documented through QAPI.

If corporate staff members come into the unit to conduct the D-AFIX assessment, there should be close interaction between the corporate D-AFIX coordinator and dialysis facility staff members involved in the vaccination process. This interaction provides an important and unique opportunity for education, outreach and consensus toward improved vaccination services and the attained benefits of CQI. The D-AFIX components, once understood and implemented by dialysis facility staff, can assist in meeting vaccination goals for a variety of standards, including but not limited to Healthy People 2020 and HEDIS (Healthcare Effectiveness Data and Information Set) measures.

When implementing D-AFIX, it is important to understand how CQI works and define the parameters that can be best addressed through D-AFIX implementation:

1. State the problem and desired result
2. Use data to understand the problem
3. Identify and select strategies to improve (i.e., strategies to reduce missed vaccination opportunities)
4. Implement solution(s) on a small scale
5. Test the selected solution(s)
6. Expand scope and spread throughout an organization or system
7. Evaluate the outcomes of the interventions used

Assessment and **feedback** have been employed by vaccination programs in order to assess and improve vaccination practices and coverage rates, for example:

- In 1986, the Georgia Department of Public Health implemented a statewide program that consisted of annual Assessments of immunization records at its public health clinics. Information was fed back to clinic providers and their staff who, in turn, developed their own solutions to improve coverage. Incentives included rank order listings of clinics by coverage level, awards for sites with the highest levels, and presentations by successful clinics at annual immunization meetings. Other successful strategies included conducting reminder/recall phone activities and providing performance Feedback (eXchange) to nursing staff. As a result of these efforts, immunization coverage levels in Georgia public clinics increased from 40% to 91% between 1986 and 2001.
- In 1996, the CDC's ACIP recommended assessment and feedback be conducted at all provider offices.

- In 1999, the National Vaccine Advisory Committee (NVAC) recommended assessment and feedback should be used to have vaccination coverage levels assessed annually in both public and private settings.
- In 2008, the [Task Force on Community Preventive Services](#) updated its original 1999 literature review on the topic and reaffirmed its earlier recommendation to use an assessment and feedback approach. In addition, the task force recommended assessment and feedback because of its effectiveness in improving vaccination rates in adults and children when used alone or with additional components, such as incentives. This same endorsement is cited in CDC's ACIP [2011 General Recommendations](#).

D-AFIX Objective

Using D-AFIX components, as appropriate, can assist dialysis facility staff with implementing quality improvement processes that can increase vaccination rates among dialysis patients and decrease missed vaccination opportunities. The D-AFIX process will evaluate dialysis facility vaccination rates using data from CROWNWeb, the dialysis facility electronic medical record (EMR) and/or vaccination tracking systems and assess opportunities to improve vaccination rates and data integrity. Facility staff should be educated that vaccination surveillance procedures should include documentation of all vaccines received regardless of where they are received. This will involve obtaining information from physician offices, hospitals and patients or family members.

Healthy People 2020 Objectives and Targets

By using the D-AFIX model, the dialysis facility will align with the following Healthy People 2020 objectives:

IID-4 Reduce invasive pneumococcal infections

- IID-4.2 Reduce new invasive pneumococcal infections among adults aged 65 years and older
- IID-4.4 Reduce invasive antibiotic-resistant pneumococcal infections among adults aged 65 years and older

IID-13 Increase the percentage of adults who are vaccinated against pneumococcal disease

- IID-13.1 Increase the percentage of noninstitutionalized adults aged 65 years and older who are vaccinated against pneumococcal disease
- IID-13.2 Increase the percentage of noninstitutionalized high-risk adults aged 18 to 64 years who are vaccinated against pneumococcal disease

IID-15 (Developmental) Increase hepatitis B vaccine coverage among high-risk populations

- IID-15.1 (Developmental) Increase hepatitis B vaccine coverage among long-term hemodialysis patients

IID-25 Reduce hepatitis B

- IID-25.1 Reduce new hepatitis B infections in adults aged 19 and older

Healthy People 2020 targets:

- Achieving the national absolute vaccination rate of 90% for pneumonia vaccines for adults age 65 and older and 60% for high risk adults aged 18 to 64 by 2019
- Reducing disparities between racial and ethnic groups

For a list of the Healthy People 2020 objectives and targets, visit:

<http://www.healthypeople.gov/2020/topics-objectives>

D-AFIX Guidebook Overview

This guidebook is a compilation of D-AFIX materials that dialysis facility D-AFIX coordinators and dialysis facility staff can use to execute and deliver:

- The objective for D-AFIX
- Recommended activities for D-AFIX
- Required and recommended performance measures for D-AFIX
- Healthy People 2020 objectives and targets for D-AFIX (IID-4, IID-13, IID-15, IID-25)

The five components of the D-AFIX model are:

- Assessment
- Feedback
- Incentives
- eXchange of Information
- Program Evaluation

Components of the D-AFIX Process

1. Assessment

Assessment provides a standardized method for collecting and analyzing data and information. This process is the root cause analysis (RCA) that provides valuable opportunities to understand practice patterns that may encourage or unintentionally discourage the delivery of vaccinations to dialysis patients. The purpose of an assessment is to quantify a dialysis facility's vaccination coverage rate and evaluate the vaccination practices.

Implementing Assessment

1. The need for assessment implementation is based on data that identifies a dialysis facility that would benefit from a D-AFIX assessment by a dialysis facility D-AFIX coordinator. Current vaccination data for the dialysis facility should be generated from the facility EMR. CROWNWeb data provided through the Network can also be used.
 1. A dialysis facility is identified for D-AFIX assessment by low vaccination rates as reported in the dialysis facility EMR and/or CROWNWeb. Recommended criteria for consideration:
 - <85% vaccination rate for hepatitis B
 - <85% vaccination rate for pneumococcal pneumonia
 - <85% influenza vaccination coverage levels can also be assessed and improved by following the D-AFIX process
 2. A dialysis facility is identified for D-AFIX assessment by disparity in vaccination rates. Recommended criteria for consideration:
 - Disparity of >5 percentage points comparing African American vs. White
 - Disparity of >5 percentage points comparing Hispanic vs. Non-Hispanic
 - Disparity of >5 percentage points comparing rural vs. urban

- Disparity of >5 percentage points comparing female vs. male
 - Disparity of >5 percentage points comparing age 65 and older vs. younger than age 65
3. To calculate a disparity:
 - Calculate the vaccination rate for the non-disparate group (e.g., White for race).
 - Similarly, calculate the vaccination rate for the disparate group (e.g., African American).
 - The disparity in vaccination rates is the non-disparate rate minus the disparate rate.
 4. To calculate the change in the disparity rate:
 - Subtract the baseline disparate rate from the re-measurement disparate rate to get the change in the disparate rate.
 - Similarly, subtract the baseline non-disparate rate from the re-measurement non-disparate rate to get the change in the non-disparate rate.
 - Lastly, subtract the change in the non-disparate rate from the change in the disparate rate to get the change in the disparity.
 - Formula: $((\text{DisR} - \text{DisB}) - (\text{NonDisR} - \text{NonDisB}))$ R= re-measurement, B= baseline.
 5. The assessment is completed through the use of the D-AFIX Vaccination Assessment Questionnaire which assesses the quality of the dialysis facility's vaccination processes (See Appendix A).

D-AFIX Process Methodology for Dialysis Facility D-AFIX Coordinators

1. The D-AFIX process can be used for dialysis facility self- assessment or corporate assessment. The steps to starting and completing the dialysis facility assessment are:
 - a. Dialysis facility staff recognizes a need to improve vaccination rates.
 - Dialysis facility staff requests corporation leaders perform a D-AFIX assessment
or
 - Dialysis facility staff assigns a dialysis facility D-AFIX coordinator to lead the assessment and improvement plan
OR
 - b. The corporation leaders recognize a need to improve vaccination rates at a facility level and assign either a corporate leader or a dialysis facility staff member as a dialysis facility D-AFIX coordinator to lead the assessment and improvement plan.
 - c. The dialysis facility D-AFIX coordinator works with the dialysis facility staff to complete the assessment and design a quality improvement initiative based on the results of the D-AFIX Vaccination Assessment Questionnaire.
 - d. Network staff are available to support the dialysis facility D-AFIX coordinator if there are questions or if assistance is needed.
2. Assessment methods that dialysis facility D-AFIX coordinators should employ when conducting internal assessments include:
 - a. Completion of the D-AFIX Vaccination Assessment Questionnaire (see Appendix A)
 - b. Review of facility policy and procedures to ensure these are current with ACIP recommendations

- c. Chart review to ensure all vaccinations have been documented
- d. Patient interviews to ensure vaccinations given in other settings have been captured for documentation
- e. Physician office records review, if possible, to ensure vaccinations given in other settings have been captured for documentation

- f. Hospital records review, if possible, to ensure vaccinations given in other settings have been captured for documentation

- g. Evaluation of the dialysis facility vaccination tracking mechanism to identify any gaps in the process leading to missed vaccination opportunities.

D-AFIX Vaccination Assessment Questionnaire

Use of the assessment questionnaire (See Appendix A) is a requirement for every D-AFIX assessment. It aids the dialysis facility D-AFIX coordinator in the discussion with dialysis facility staff.

1. The goal of the D-AFIX Vaccination Assessment Questionnaire is to identify areas within the dialysis facility's vaccination processes in need of improvement.
2. Through this identification, the dialysis facility D-AFIX coordinator will work with dialysis facility staff to introduce, encourage, and support (through technical assistance) the implementation of evidence based CQI strategies for improving vaccination rates.
3. The completion of the questionnaire and subsequent discussion surrounding it assists dialysis facility staff to reach a 100% implementation status for the needed CQI identified strategies by the end of project. The CQI strategies identified will be based on the questions answered "no," providing an opportunity for improvement. All improvement area strategies identified should be implemented by dialysis facility staff within 30-45 days.
4. Meeting the implementation of the CQI strategies goal of 100% will vary depending on several factors including current vaccination strategies at the dialysis facility, resources and incorporating D-AFIX into the facility QAPI program. The dialysis facility D-AFIX coordinator should provide technical assistance and encourage dialysis facility staff to implement proven strategies to ensure vaccination rate improvement (see Appendices A, B and C). Dialysis facility staff should ensure 100% implementation of the CQI strategies using the QAPI process within 30-45 days of the feedback session.
5. The questionnaire should be completed by dialysis facility staff.
6. The follow-up process for implementation of the CQI strategies should be clearly explained to the dialysis facility staff by the dialysis facility D-AFIX coordinator.
7. Through the follow-up process, dialysis facility D-AFIX coordinators will work with dialysis facility staff to complete the implementation of the selected CQI strategies agreed upon during feedback sessions (described in "Feedback" section on page 9). Improvement area strategies that have not occurred within 30-45 days should be discussed in QAPI with a plan in place to ensure process changes are made.
8. Dialysis facility D-AFIX coordinators should analyze D-AFIX Vaccination Assessment Questionnaire data shortly after the data is collected to prepare timely feedback for the dialysis facility staff. The data should be analyzed within one week with a feedback session scheduled to discuss the results and develop the CQI action plan.

2. Feedback

Feedback is the process of informing the dialysis facility staff about observations and results from the assessment, and it is a critical component of the D-AFIX process. The feedback session provides a forum for discussing a dialysis facility's vaccination delivery system and ways to improve it, as well as ways to improve vaccination rates and reduce missed opportunities to vaccinate. Feedback involves a review of the areas for improvement identified through use of the D-AFIX questionnaire. The knowledge gained through the feedback process allows the planning of activities to make the necessary improvements.

The feedback session should be a two-way conversation between the dialysis facility D-AFIX coordinator and dialysis facility staff and should result in the development of quality improvement activities that are clear, achievable and agreed upon by the dialysis facility staff. The quality improvement activities should be specific, well-defined and focused. The quality improvement activities should have measurable goals identified and be reviewed on an interim basis to ensure the project is on track. The goals should be attainable and within reach of the timeframe set for the activities. The quality improvement activities should be relevant to the needs for improving vaccination rates. The project must have a timeframe associated with it so that quality improvement activities are completed and goals are achieved. The list of quality improvement activities will form the basis for all follow-up work to confirm the implementation and measured success of the project.

Feedback process overview

- a. After the assessment is completed, feedback should be shared with the dialysis facility staff as soon as possible. A feedback session held within a week of the assessment will be timely for sharing the information learned from the questionnaire.
- b. The feedback session is an educational session that can benefit all staff members, regardless of their role. Feedback sessions should assure that staff are knowledgeable about current ACIP recommendations and the facility's vaccination policies and procedures, including minimum intervals between vaccinations and potential contraindications.
- c. Consider incorporating the feedback session into a staff meeting to identify the CQI strategies and actions to be taken.
- d. As part of the feedback process, dialysis facility D-AFIX coordinators should share the following information with all dialysis facility staff:
 - Current vaccination data for the dialysis facility generated from the facility EMR. CROWNWeb data provided through the Network can also be used.
 - Results of the completed D-AFIX Vaccination Assessment Questionnaire.
 - Guidance on ways to make changes in response to questions answered "no" on the D-AFIX Vaccination Assessment Questionnaire forming the basis for the quality improvement action plan.
 - Review of disparity data and ways to narrow gaps between identified population groups.
- e. It is also recommended that dialysis facility D-AFIX coordinators share any other information and resources that might be useful for improving vaccination rates, including translated materials. Resources could include:
 - Vaccine Information Statements (VIS) developed by the CDC
 - The most current ACIP schedule

- Vaccine-oriented educational materials for dialysis facility staff and patients from the CDC, the Immunization Action Coalition and the National Kidney Foundation
- Informational materials contained on ESRD Network websites

Procedures for implementing feedback

1. When conducting a feedback session, the dialysis facility D-AFIX coordinator should begin with an overview of the D-AFIX process. It is necessary to make sure all involved understand the purpose of D-AFIX.
2. The dialysis facility D-AFIX coordinator should include in the presentation information on the dialysis facility's current vaccination rates, as well as missed vaccination opportunities and other vaccination issues that can help the dialysis facility understand where it currently stands regarding vaccination rates. Issues that may be discussed could include vaccination tracking processes, vaccination standing orders and ensuring vaccinations are documented even if they are given off site.
3. It is strongly recommended that feedback reports include data and graphs depicting a dialysis provider's vaccination rates compared to national standards (e.g., Healthy People 2020 goals <http://www.healthypeople.gov/>) and vaccination program standards. It would also be helpful to dialysis facility staff to be compared to other dialysis facilities within their corporation.
4. The feedback session should include updating vaccination policies and procedures if needed as found through assessment.
5. Results of the completed questionnaire should be discussed. CQI strategies should be identified based on the results of the questionnaire.
6. A quality improvement plan should be developed to address dialysis facility needs. General recommendations on what to include in this plan for D-AFIX purposes include:
 - a. The assessment findings incorporated into the CQI Plan.
 - b. The quality improvement initiatives selected for the dialysis facility.
 - i. This list should include, but not be limited to, initiatives based on the results of the questionnaire.
 - ii. Incorporate a strategy for evaluating and summarizing the progress made toward implementing the selected initiatives.
 - iii. Opportunities for improvement that focus both on enhancing dialysis unit strengths and improving areas of weakness.
 - iv. Disparity reduction initiatives should be discussed and included in the plan.
7. Discussion among dialysis staff members should be encouraged throughout the session.
8. Areas of strength should be highlighted.
9. The program's follow-up process should be explained, along with the timeline for following up with the dialysis facility staff to check the implementation status of CQI initiatives.
10. The D-AFIX incentives process should be explained. The dialysis facility D-AFIX coordinator can provide incentives such as recognition certificates, recognition in newsletters and recognizing dialysis facility staff at meetings. The dialysis facility D-AFIX coordinator can also encourage dialysis facility management to provide incentives at the facility level such as a wall of fame for staff that achieve the desired outcomes and/or patients that have agreed to be vaccinated.
11. The 30-45 day timeline for CQI strategy implementation should be added to the CQI plan to ensure dialysis facility staff are making the necessary process improvements.

D-AFIX Vaccination Assessment Questionnaire Feedback

Any "no" answer on the questionnaire is an opportunity for improvement. The dialysis facility D-AFIX coordinator should review this questionnaire with dialysis facility staff and have dialogue about the

opportunities for improvement that will become the basis for the quality improvement work plan. The following strategies are ways the dialysis facility D-AFIX coordinator can address the needs for improving vaccination rates in the dialysis facility.

Strategies to improve the quality of vaccination services

1. Do you have a Vaccination Policy and Procedure in place for Hepatitis B, Pneumococcal, & Influenza? (Y/N)

Every dialysis facility should have vaccination policies and procedures in place for the vaccines that they administer. The dialysis facility D-AFIX coordinator should review vaccination policies and procedures.

The following guidelines are summarized from recommendations of the CDC's ACIP and should be incorporated into the appropriate vaccination policies and procedures.

Hepatitis B Vaccine

All susceptible patients should be offered the hepatitis B vaccine series upon admission to the facility. Patients who have received the vaccination series for hepatitis B surface antibody (anti-HBs) must be tested 1-2 months after the final dose of the series. A protective antibody response is 10 or more mIU/mL (anti-HBs \geq 10mIU/mL).

Patients who do not respond to the primary vaccine series should be revaccinated with one additional vaccine series and retested for response. No additional doses of vaccine are warranted for patients who do not respond to the second series.

If a patient's antibody level falls below 10mIU/mL after they were antibody-positive following a vaccination series, a booster should be given and the patient should be retested annually to ensure they remain antibody-positive. Retesting immediately after the booster dose is not necessary.

In order to improve vaccination rates through D-AFIX, if a patient declines vaccination, they should be offered the vaccination annually. The reason for refusal should be identified and documented, along with identification of appropriate educational resources that will address the reason for refusal. Documenting patient refusal of vaccination through QAPI also supports risk liability and provides confirmation that the vaccine was offered.

Pneumococcal Vaccine

ACIP and the CDC recommend that adults with chronic renal disease receive both types of pneumococcal vaccines. Pneumococcal polysaccharide vaccine/Pneumovax® (PPSV23) and Pneumococcal conjugate vaccine/Prevnar® (PCV13) are the two types of pneumococcal vaccines that protect against different types of pneumococcal bacteria.

To determine if the patient has received the pneumococcal vaccine, check medical records or speak with the patient and/or family member/caregiver.

PPSV23: Adults age 19-64 diagnosed with chronic renal disease should receive a dose at the time of the chronic renal disease diagnosis or if at least five years has elapsed since the last dose. At age 65 years and older, patients should receive a dose if at least five years have elapsed since their previous dose.

PCV13: Adults older than 19 years of age diagnosed with chronic renal disease should receive one administration of the vaccine per lifetime. Eligible patients should be vaccinated with PCV13 during their next pneumococcal vaccination opportunity which depends on the timing of the patient’s PPSV23 vaccination status:

- Patients who have not previously received PCV13 or PPSV23 should receive a dose of PCV13 first, followed by a dose of PPSV23, no sooner than eight weeks later.
- Patients who previously have received one or more doses of PPSV23 should be given a PCV13 dose no sooner than one year after the last PPSV23 dose was received.
- For patients who require additional doses of PPSV23, the first dose should be given no sooner than 8 weeks after PCV13 and at least 5 years after the most recent dose of PPSV23.

In order to improve vaccination rates through D-AFIX, if a patient declines vaccination they should be offered the vaccination annually. The reason for refusal should be identified and documented, along with identification of appropriate educational resources that will address the reason for refusal. Documenting patient refusal of vaccination through QAPI also supports risk liability and provides confirmation that the vaccine was offered.

Influenza Vaccine

CDC recommends vaccination against influenza. Influenza is a cause of substantial morbidity and mortality in the United States. Influenza vaccination is the most effective way to protect against the disease and its complications. Vaccination also reduces the risk of transmitting influenza to family members, other patients, and the dialysis facility staff.

The influenza vaccine should be offered to all patients in the dialysis facility on an annual basis. In order to improve vaccination rates through D-AFIX, if a patient declines vaccination they should be offered the vaccination monthly throughout the influenza season. The reason for refusal should be identified and documented, along with identification of appropriate educational resources that will address the reason for refusal. Documenting patient refusal of vaccination through QAPI also supports risk liability and provides confirmation that the vaccine was offered.

2. Do you have a process in place for vaccination reminders? (Y/N)

Dialysis facilities should have a process in place that provides a way to remind staff that vaccinations are due. A process should be in place that includes reminders regarding a dose in the series, a yearly vaccination, an annual anti-HBs blood test, a five year PPSV23 dose, or a reminder to revisit a patient who has refused with additional education and an offer of vaccination. The dialysis facility staff should develop a process that assists in making sure all patients are offered the vaccines and that vaccinations are not missed.

3. Do you routinely measure your clinic’s vaccination coverage levels and share the results with your staff? (Y/N)

Vaccination coverage should be a part of every QAPI meeting to evaluate opportunities to improve vaccination rates. Routinely measuring vaccination rates allows dialysis facility staff to understand the vaccination issues that are unique to their facility. For example, through routine measurement, some facilities may identify certain vaccines with lower rates, root causes for missed vaccination opportunities or certain demographic groups with lower vaccination rates.

Once facility staff are aware of this, they can plan quality improvement interventions that are tailored to the facility's needs and the needs of their patients. Routine assessments allow clinics to monitor trends over time and evaluate whether interventions designed to improve vaccination rates are having the desired effect. By raising staff awareness of vaccination rates, staff members will be cognizant of efforts that are working and also aware of areas where emphasis is needed, such as specific demographics and vaccines.

Dialysis facility vaccination data can also be shared with patients in order to raise awareness concerning infectious disease and the need for vaccination. Patients can be involved in the QAPI process and provide insight into barriers and solutions for improvement.

Do you regularly document vaccine refusals and reasons for refusals (patient choosing to delay, patient has safety concern, medical contraindication)? (Y/N)

Vaccine refusals should be documented with every vaccination offer. Patients should be informed about vaccine benefits and risks of not being vaccinated even if they refuse to be vaccinated. Tracking and documenting the reasons for refusal will identify the barriers to patients being vaccinated. Patients can be helpful in providing insight on issues related to disparity. Upon identifying the reason(s) for refusal, it is then possible to identify and share educational tools to address the patient's concerns. Documenting patient refusal of vaccination through QAPI minimizes risk liability and provides confirmation that the vaccine was offered. QAPI information should be shared with patients so that they will understand the goals and the importance of supporting efforts for goal attainment.

Dialysis facility D-AFIX coordinators should suggest that dialysis facility staff add vaccination discussions to the patient's plan of care conference. Time during the care conference can be set aside to discuss and educate patients on the importance of vaccinations. In the care conference setting there would be more time for facility staff to have a one on one session with the patient so education can occur.

Strategies to decrease missed opportunities

1. Does your staff educate patients about vaccinations and the diseases they prevent, even when the patient refuses to get vaccinated? (Y/N)

Patients need to know about the importance of vaccination, the availability of vaccines and the availability of convenient vaccination services. Even after a patient refuses, he/she should be educated on why vaccinations benefit patients and their families. Patients have stated that they are often asked to get vaccinated, but are never really educated on the disease itself and the complications the vaccine will prevent. An education program should be in place so that every patient receives the information needed to make an informed choice concerning vaccinations.

Dialysis facility staff should consider incorporating peer-to-peer education into their vaccination programs. Patients who have been vaccinated may help address patients' fears or gaps in knowledge often leading to a change in mindset. Patients tend to listen and trust other patients who have similar experiences.

Dialysis facility D-AFIX coordinators should suggest that dialysis facility staff add vaccination discussions to the patient's plan of care conference. Time during the care conference can be set aside to discuss and educate patients on the importance of vaccinations. In the care conference

setting there would be more time for facility staff to have a one on one session with the patient so education can occur.

2. Do you have vaccination information resources to help answer questions from patients/family? (Y/N)

Many resources on vaccinations are available for dialysis staff, patients and family members. Dialysis facility staff can access materials developed by their state's immunization program, the CDC and/or the Immunization Action Coalition (IAC) on each organization's website. Additionally, the ESRD Networks offer vaccination information on their websites. Dialysis facility D-AFIX coordinators should assist facility staff in finding the educational materials and resources that would best fit their dialysis facility.

3. Is your staff knowledgeable and comfortable with your policies and procedures on vaccination for:

- a. Hepatitis B (Y/N)**
- b. Pneumococcal (Y/N)**
- c. Influenza (Y/N)**

Staff education is an important part of ensuring that patients feel comfortable that all staff are knowledgeable. Staff should have access to all policies and procedures for reference, understand the importance of vaccinations and the importance of not missing opportunities to vaccinate. Educate those staff who do not feel comfortable with the policies, so that all staff can inform patients.

4. Do you train your staff on scheduling vaccination times for:

- a. Hepatitis B (Y/N)**
- b. Pneumococcal (Y/N)**
- c. Influenza (Y/N)**

Staff should be trained regularly on the importance of ensuring that all vaccinations are scheduled as needed and given as ordered. Also, staff should be trained on current vaccination recommendations so that patients are vaccinated appropriately. Develop a tracking system and an alert system so that vaccinations aren't missed and refusal revisits are completed. A system needs to be in place that identifies patients who are due for vaccination and a list of patients who have refused. This tracking system should be reviewed monthly in order to make sure vaccinations are given when they are due.

5. Do you have a system for determining what vaccinations are due for each patient?

- a. Hepatitis B (Y/N)**
- b. Pneumococcal (Y/N)**
- c. Influenza (Y/N)**
- d. Describe the system that is in place.**

The vaccination process should be examined thoroughly to identify opportunities for improvement and why vaccination rates may be less than optimal. A tracking system should be in place that identifies vaccinations that are due for each patient. This system can also be used to trigger patient vaccination refusals and alert for refusal revisits. A conversation with the dialysis facility staff may yield a better understanding of areas that can be improved in the vaccination tracking processes. Dialysis facility D-AFIX coordinators should make sure there are no gaps in facility vaccination tracking processes that would keep vaccination rates from

improving. Quality improvement initiatives addressing gaps found should be included in the action plan.

6. **Do you have standing orders for registered nurses to identify opportunities to administer for:**
 - a. **Hepatitis B (Y/N)**
 - b. **Pneumococcal (Y/N)**
 - c. **Influenza (Y/N)**

Standing orders authorize nurses to assess a patient's vaccination status and administer vaccinations according to a protocol approved by the dialysis facility management and physicians. The protocol enables assessment and vaccination without the need for direct orders from the attending physician at the time of the interaction. With standing orders in place, vaccinations may be given in a timely fashion.

7. **Is your staff knowledgeable and comfortable with administering recommended vaccinations for:**
 - a. **Hepatitis B (Y/N)**
 - b. **Pneumococcal (Y/N)**
 - c. **Influenza (Y/N)**

Most patients look to the dialysis staff as a valuable source of information about vaccinations. Dialysis staff should be knowledgeable and comfortable answering questions and concerns. Dialysis staff should be provided with appropriate training and resources to ensure that they are comfortable administering all recommended vaccines and talking with patients who have concerns. Consider having experienced staff members mentor less experienced staff. Dialysis technicians should also be included in patient education, as they are the staff that tends to interact with patients the most.

Strategies to improve completeness and accuracy of vaccination information in CROWNWeb

CROWNWeb is a CMS-mandated data collection system that every Medicare-certified dialysis facility must use to input their patient and facility data, as well as monthly clinical measurements for patients. This information is used in a national ESRD information system and is used for quality improvement, performance assessment and will be used for determining reimbursement in the future.

1. **Does your staff report all vaccinations that are administered at your clinic in CROWNWeb for:**
 - a. **Hepatitis B (Y/N)**
 - b. **Pneumococcal (Y/N)**
 - c. **Influenza (Y/N)**

It is very important that all administered vaccinations are entered into CROWNWeb in a timely manner to allow for the generation of accurate vaccination reports. If administered vaccines are not entered into CROWNWeb in a timely manner, the vaccination rates may not be a true representation of the actual rates. CMS and the ESRD Network staff use the data in CROWNWeb to measure quality outcomes at the facility level. If the dialysis facility is a CROWNWeb batch submitting facility, vaccination data in the facility's EMR should be reviewed monthly to ensure that all vaccinations have been entered correctly. This will ensure that the batch system uploads accurate vaccination data into CROWNWeb. A process should be developed to review vaccination data in the facility's EMR and in CROWNWeb to ensure the accuracy of the data. Network staff are available to assist with CROWNWeb training as needed.

2. Does your staff report vaccinations previously administered to your patients by other providers into CROWNWeb for:

- a. Hepatitis B (Y/N)**
- b. Pneumococcal (Y/N)**
- c. Influenza (Y/N)**

Dialysis facility staff should report all vaccinations known to have been administered to a patient, regardless of whether the vaccines were administered by the dialysis facility staff, or at another location. This helps ensure that every patient has a complete, consolidated vaccination history in CROWNWeb and that the dialysis facility's data reflects the true vaccination coverage for the patient population served. CMS and the ESRD Network staff use the data in CROWNWeb to measure quality outcomes at the facility level. Vaccinations given at a location other than the dialysis facility can be retrieved by reviewing medical records (physician office medical records and/or hospital medical records) or by interviewing the patient. A process should be developed to ensure a complete vaccination history regardless of vaccination location.

3. Incentives

Incentives can be used to motivate dialysis facility staff to make protocol changes and to provide leadership in a way to recognize improved performance by rewarding achievement. Incentives can be used to encourage patients to be vaccinated and recognize patients after they have been vaccinated. Patients seeing patients getting recognized for being vaccinated may be more inclined to agree to vaccinations. It is important that incentives focus on quality improvement progress rather than simply outcomes, such as higher vaccination rates. Discussion during the feedback sessions will determine the incentives that are of value to dialysis facility staff and patients. Incentives alone are not enough to encourage long-term CQI among dialysis facility staff. Feedback sessions that promote learning and long-term change encourage:

- Participation in the D-AFIX process.
- Recognition of positive progress toward the long-term outcomes of incorporating CQI measures, improving vaccine rates and reducing missed vaccination opportunities.
- Recognition of the dialysis facility's individual improvement plan.
- Reward for improved performance.
- Accomplishment of goals and CQI plans agreed upon during feedback.
- Utilizing patient to patient education to encourage vaccinations.

Selecting Incentives

Incentives can take many forms, but, ultimately they are tools that can be used to reward good work and help employees (and/or patients) feel valued. The purpose of incentives is to motivate and encourage all staff (and/or patients) to accept improving vaccination rates as "part of their job." Public recognition of positive changes, as well as acknowledging high performing practices is encouraged.

When deciding which type of incentives to offer, the following tips can be used to select incentives:

- Identify the incentives that are valuable enough to encourage involvement for patients and dialysis facility staff.
- Be sure that the considered incentives are realistic.
- Incentives for patients should be tailored to the patient population of the facility but could include stickers or buttons for patients who have been vaccinated, and/or drawing for prizes.

- Incentives for staff could include competitions among staff for who has educated/encouraged the most patients to be vaccinated, and/or drawing for prizes.
- Consider whether to offer incentives for both CQI initiation and goal achievement.
- Discuss with dialysis facility management ways of implementing incentives to acknowledge the dialysis facility staff after positive changes.

When considering the following types of incentives, it is important to consider that facility type, size, and location can influence whether incentives are effective, relevant and genuinely motivating to the staff and/or patients.

1. Informal incentives

- a. Saying “thank you.” These words are powerful, as well as meaningful, to busy caregivers
- b. Writing thank you notes. The note should say thanks for accomplishing specific vaccination rates or improvement, with a copy of the personal, handwritten note added to the personnel file.
- c. Create a simple “ABCD” card that is given when staff goes “Above the Call of Duty.”
- d. Use vaccination message marketing, such as posters, buttons for staff and patients, and videos.
- e. Post a “thank you” sign in the lobby.
- f. Encourage management to place a wall of fame in the lobby recognizing staff achievement and/or patients receiving vaccinations.
- g. Encourage management to add 30 minutes to a staff member’s lunch time for demonstrating “Vaccination Champion” activities.

2. Formal incentives

- a. Certificates of improvement and collaboration
- b. Promotion of facility staff as “Vaccination Champions” or role models
- c. Recognition of facility staff in feature newsletter articles published by the facility or at the corporate level
- d. Arrange for senior or corporate management to stop by to personally thank individual staff members.
- e. Recognition of facility staff on the facility or corporate website
- f. Community press releases promoting success
- g. Acknowledging dialysis facility staff at facility staff meetings and/or corporate meetings
- h. At the corporate level – recognition of facilities with significant improvement or high vaccination rates at corporate meetings
- i. Tie in the tasks that dialysis staff do to support vaccinations as part of their employee evaluation process

Ensuring that patients are vaccinated may have other benefits for patients and the dialysis facility that could motivate staff to improve vaccination rates including:

- Vaccinations keep patients healthier while keeping them out of the hospital and continuing to dialyze at the dialysis facility.
- Having high vaccination rates may decrease the chance for a dialysis facility payment reduction under the ESRD Quality Incentive Payment (ESRD QIP) Program.
- State surveyors assess dialysis facilities’ QAPI programs. Making vaccinations a part of the dialysis facility QAPI program while being able to show progress towards improvement of

vaccination rates and understanding reasons for patient refusal would be viewed by surveyors as a quality practice.

- By vaccinating all patients and staff, there may be fewer employees, patients and patient family members ill.
- Encouraging dialysis facility staff as they move toward increasing their vaccination rates will also sustain the processes put in place.

4. eXchange of Information

The eXchange of information is a component of the D-AFIX process aimed at following up with dialysis facility staff to monitor and support progress toward implementing the quality improvement strategies discussed during the feedback process. This eXchange is necessary to ensure that quality improvement is taking place and can be sustained over time. This is an important step and can be considered the “study” step in the quality improvement Plan-Do-Study-Act (PDSA) cycle.

The follow-up eXchange process ensures not only continuous quality improvement, but also that dialysis facility staff have the necessary resources and information to improve the quality of their vaccination processes. The eXchange of information consists of an initial follow-up and subsequent follow-up sessions if needed. D-AFIX and its components should become part of the QAPI process with vaccination gaps, CQI strategies and outcomes toward goal being reviewed by the interdisciplinary team.

Initial and subsequent eXchange of information follow-up sessions

Every dialysis facility will have an initial eXchange follow-up session after completing the D-AFIX Vaccination Assessment Questionnaire and implementing the agreed upon CQI strategies. The topic(s) of the follow-up session is (are) determined by the dialysis facility staff and the dialysis facility D-AFIX coordinator following the feedback session and is dependent on the needs of the dialysis facility staff. The purpose of this follow-up is to discuss and document a dialysis facility staffs’ progress in implementing the agreed upon CQI strategies and to provide needed clarification and technical assistance. The discussion should be based on findings from the D-AFIX Vaccination Assessment Questionnaire and the agreed upon CQI strategies. If requested by dialysis facility staff or determined necessary by the dialysis facility D-AFIX coordinator, further guidance and technical assistance on achieving quality improvement may be necessary. For progress toward quality initiatives less than 100% complete, determine an estimated date for all quality initiatives to be implemented and plan for a subsequent follow-up to check on progress. The identified CQI strategies that have not been implemented should be implemented within two weeks after the first eXchange session. Schedule a follow-up eXchange session two weeks after the agreed upon implementation date to ensure strategies have been implemented.

Strategies for implementing eXchange of information follow-up sessions

If the dialysis facility D-AFIX coordinator is a dialysis facility staff member the eXchange follow-up sessions should be conducted as a formal meeting including all staff involved with vaccinations. The educational visit described below may also be needed if there are new staff or the dialysis facility D-AFIX coordinator wants to provide a vaccination training.

If the dialysis facility D-AFIX coordinator is an off-site assessor there are three strategies that can be used for the eXchange of information follow-up sessions. Selecting the appropriate strategy or strategies for a dialysis facility depends on the intention of the contact and the level of assistance that best meets the needs of the facility.

1. D-AFIX eXchange of information follow-up telephone call

Definition: This process involves the dialysis facility D-AFIX coordinator contacting the dialysis facility staff by phone 30-45 days after the feedback session to discuss progress toward meeting the completion point of the selected CQI strategies. The frequency and dates of phone calls should be agreed upon by the dialysis facility staff and the dialysis facility D-AFIX coordinator based on reported progress.

When to select this method: If the dialysis facility staff have been making improvements in both implementing QI strategies and vaccination rates.

2. D-AFIX eXchange of information follow-up visit

Definition: This process involves the dialysis facility D-AFIX coordinator visiting the dialysis facility staff 30-45 days after the feedback session to conduct follow-up and to assess progress made in implementing CQI strategies. This visit may also include conveying information similar to information that was discussed during the feedback visit if needed to complete the identified CQI strategies. In certain situations, a face-to-face interaction is more effective than a telephone call.

When to select this method:

- If the facility had a change in staff and an in-person follow-up visit would help engage the new dialysis facility staff and inform them of processes and expectations.
- If the dialysis facility staff requests it and the dialysis facility D-AFIX coordinator can facilitate it.
- If necessary, in addition to following up on CQI progress, plan on repeating previous information discussed during the feedback session, such as dialysis facility vaccination rates, D-AFIX Vaccination Assessment Questionnaire results, and the CQI plan. An in-person visit may be more effective for this purpose.

3. D-AFIX eXchange of information technical support visit

Definition: This process involves visiting the dialysis facility to provide more education about items covered during the feedback session. This visit is not limited to following up on CQI strategy progress, but is also considered an opportunity to offer enhanced technical assistance and training for providers that need or request it. The technical support visit can be seen as a review of information that was presented in the feedback session related to vaccination recommendations, D-AFIX recommendations and promising vaccination practices. As a result of the educational eXchange session, staff should be knowledgeable about current ACIP recommendations and the facility's vaccination policies and procedures, including minimum intervals and contraindications. This could be considered as a webinar for new staff or staff that were not at the feedback session.

When to select this method:

- If the dialysis facility staff express the need for such a visit for reasons, such as staff turnover.

Technical assistance and education to be considered:

- D-AFIX objectives and CQI process

- ACIP recommendations, national vaccination standards, the CQI strategies in the D-AFIX Vaccination Assessment Questionnaire or other resources identified.
- Vaccine contraindications
- The importance of improving vaccination services in protecting lives
- Ensuring reporting is up to date and provided no matter where the patient was vaccinated.
- Training opportunities for nurses and dialysis facility staff and patients.

Program Evaluation

Program evaluation is the systematic collection of information about the activities, characteristics and outcomes of a program to make judgments about that program, improve program effectiveness and/or inform decisions about future program development. Program evaluation is an important component of the D-AFIX initiative.

Dialysis facility D-AFIX coordinators and the dialysis facility staff that are involved in the D-AFIX process should evaluate the components of the D-AFIX process at the completion of the project. Just as D-AFIX is designed to help dialysis facility staff improve vaccination processes, D-AFIX process evaluation will help improve the implementation and outcomes of the D-AFIX process. Dialysis facility staff evaluation of the D-AFIX process is important and will assist in identifying opportunities for improvement.

Program evaluation procedures

1. Review what happened through the D-AFIX process and look for areas that can be changed or improved.
2. Consider reviewing the D-AFIX Vaccination Assessment Questionnaire and evaluating the questions for effectively identifying gaps in policies and procedures.
3. Evaluate the effectiveness of the feedback session in motivating dialysis facility staff to implement CQI strategies and improve vaccination rates.
4. Evaluate the success of the interventions and resources.
5. Make changes as necessary for future D-AFIX assessments.

Promising Practices

Facility staff that have been involved in the D-AFIX process have incorporated the following promising practices into their vaccination projects:

- Facility staff began tracking vaccinations on a weekly basis in order to decrease vaccination missed opportunities. Staff reviewed their tracking practices and identified the need for more emphasis to be placed on following the facility vaccination policies and procedures. This has resulted in improving vaccination rates.
- Facility staff have cited that spending more one-on-one time with the patients when educating about vaccinations has improved vaccinations rates. Staff had not realized that patients felt they were not aware of why vaccinations were needed. When staff spent time sharing the benefits of vaccinations for the patients and their families, patients were more willing to get vaccinated.
- Facility staff have hosted vaccination lobby days. This is typically setting up a display in the facility lobby, handing out informational materials and hosting fun giveaways to bring awareness

to the patients. This can be done for two days, a week or even dedicating a month to a certain vaccination. Lobby days can incorporate games, competitions, videos, and/or guest speakers. Staff and patients can develop these lobby days together.

- Some staff have added vaccination flyers to the facility new admissions handbook. This is a great time to get the patient vaccinated. All vaccinations can be discussed as the patient is admitted. Staff have shared that if the patient refuses to be vaccinated, they re-visit the patient in two weeks with additional vaccination information.
- Facility staff have worked to identify the root causes for patient refusal of vaccinations. As causes are identified the staff provide educational and informational resources to the patients to address their specific barriers. One size does not fit all and this approach tailors education and conversation to the individual patient and their needs.

These promising practices have led to improved vaccination rates and the attainment of vaccination goals in dialysis facilities. Strong vaccination policies and procedures have led to sustained vaccination rates that meet Healthy People 2020 goals.

Appendix A – D-AFIX Vaccination Assessment Questionnaire

Dialysis – Assessment, Feedback, Incentives & eXchange Assessment/Root Cause Analysis Worksheet			
Assessment Date:			
Assessor's Name:			
Facility Name:		Facility Address:	
Facility CCN:		Facility Phone/Fax:	
Facility Lead:		Lead Phone:	
Facility Team Members:			
ASSESSMENT			
Component	Completion Date	Activities Completed	Key Findings
Population Data			
Strategies to Improve the Quality of Vaccination Services (See Vaccination Assessment Questionnaire – complete questions and summarize in Key Findings)			
Strategies to Improve the Quality of Vaccination Services			
Strategies to Decrease Missed Opportunities			
Strategies to Improve Completeness and Accuracy of Vaccination Information in CROWNWeb			
Describe Priority Areas for Improvement using Key Findings Identified			
Created 03/30/2015			

Dialysis – Assessment, Feedback, Incentives & eXchange
Assessment/Root Cause Analysis Worksheet

VACCINATION ASSESSMENT QUESTIONNAIRE

Strategies to improve the quality of vaccination services

1. Do you have a Vaccination Policy and Procedure in place for Hepatitis B, Pneumococcal & Influenza? (Y/N) If yes, obtain copies of policies
2. Do you have a process in place for vaccination reminders? (Y/N)
3. Do you routinely measure your clinic's vaccination coverage levels and share the results with your staff? (Y/N)
4. Do you regularly document vaccine refusals and reasons for refusals (patient choosing to delay, patient has safety concern, medical contraindication)? (Y/N)

Strategies to decrease missed opportunities

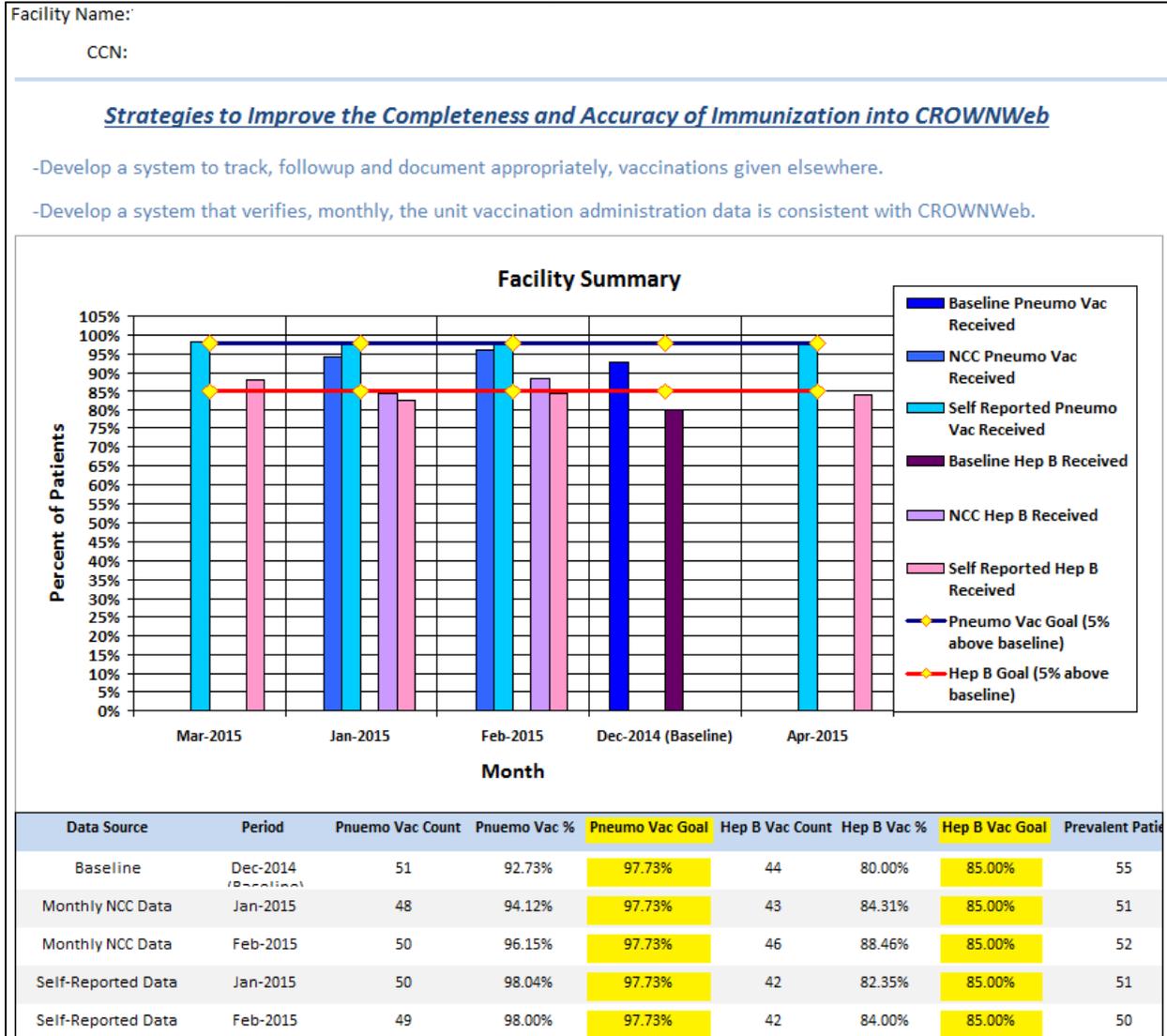
1. Does your staff educate patients about vaccinations and the diseases they prevent, even when the patient refuses to get vaccinated? (Y/N)
2. Do you have vaccination information resources to help answer questions from patients/family? (Y/N)
3. Is your staff knowledgeable and comfortable with your policies and procedures on vaccination for:
 - a. Hepatitis B (Y/N)
 - b. Pneumococcal (Y/N)
 - c. Influenza (Y/N)
4. Do you train your staff on scheduling vaccination times for:
 - a. Hepatitis B (Y/N)
 - b. Pneumococcal (Y/N)
 - c. Influenza (Y/N)
5. Do you have a system for determining what vaccinations are due for each patient?
 - a. Hepatitis B (Y/N)
 - b. Pneumococcal (Y/N)
 - c. Influenza (Y/N)
 - d. Describe the system.
6. Do you have standing orders for registered nurses to identify opportunities to administer for:
 - a. Hepatitis B (Y/N)
 - b. Pneumococcal (Y/N)
 - c. Influenza (Y/N)
7. Is your staff knowledgeable and comfortable with administering recommended vaccinations for:
 - a. Hepatitis B (Y/N)
 - b. Pneumococcal (Y/N)
 - c. Influenza (Y/N)

Strategies to improve completeness and accuracy of vaccination information in CROWNWeb

1. Does your staff report all vaccinations you administer at your clinic in CROWNWeb for:
 - a. Hepatitis B (Y/N)
 - b. Pneumococcal (Y/N)
 - c. Influenza (Y/N)
2. Does your staff report vaccinations previously administered to your patients by other providers into CROWNWeb for:
 - a. Hepatitis B (Y/N)
 - b. Pneumococcal (Y/N)
 - c. Influenza (Y/N)

Created 03/30/2015

Appendix B – Sample Feedback Report



Appendix C – D-AFIX Resources

1. Centers for Disease Control and Prevention (CDC), Vaccines and Immunizations
<http://www.cdc.gov/vaccines/>
2. AFIX
The CDC’s vaccination assessment program for the pediatric population
<http://www.cdc.gov/vaccines/programs/afix/>
3. Centers for Disease Control and Prevention (CDC), Vaccines and Immunizations for Program Managers
<http://www.cdc.gov/vaccines/imz-mangers/index.html>
4. The Renal Network (ESRD Network 9 & ESRD Network 10)
www.therenalnetwork.org
(317) 257-8265
5. Heartland Kidney Network (ESRD Network 12)
www.heartlandkidney.org
(816) 880-9990
6. ACIP Recommendations
CDC Pink Book - Information on routinely used vaccines and the diseases they prevent.
CDC Yellow Book – Vaccinations for international travel
<http://www.cdc.gov>
7. Guide to Community Preventive Services: Vaccines
Evidence based information on using vaccination standing orders
<http://www.thecommunityguide.org/vaccines/index.html>
8. Immunization Action Coalition
Immunization news and resources
<http://www.immunize.org>
9. National Kidney Foundation
Vaccination resources – vaccination flyers and pamphlets
<https://www.kidney.org/atoz/content/vaccinations>