



Clinical Safety & Effectiveness Cohort # 15

Improving the Vaccination Rate for Diabetic Patients at Routine Visits



Educating for Quality Improvement & Patient Safety

The Team

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AIM STATEMENT

- To improve the percentage of adult diabetes patients who get the CDC recommended vaccines at their routine FHC visit from a baseline of 53% to 80% by June 1, 2015.

Background



- Routine vaccines should be updated as needed
- We have missed opportunities to give vaccines at continuity visits
- Rationale: Vaccines are a cost-effective prevention strategy

Project Milestones

- Team Created-planning 9/2014
- AIM statement created-planning 9/14
- Collect data for Fishbone 10/02/14
- Fishbone developed 10/29/14
- Regular Team Meetings-Do Sep-Dec/2014
- Background Data, Brainstorm Sessions,
Workflow and Fishbone Analyses- Study 11/5/14
- Interventions Implemented-Act 11/10/14
- Data Analysis 1/06/15
- CS&E Presentation 1/23/15

Process Analysis Tools

Fishbone

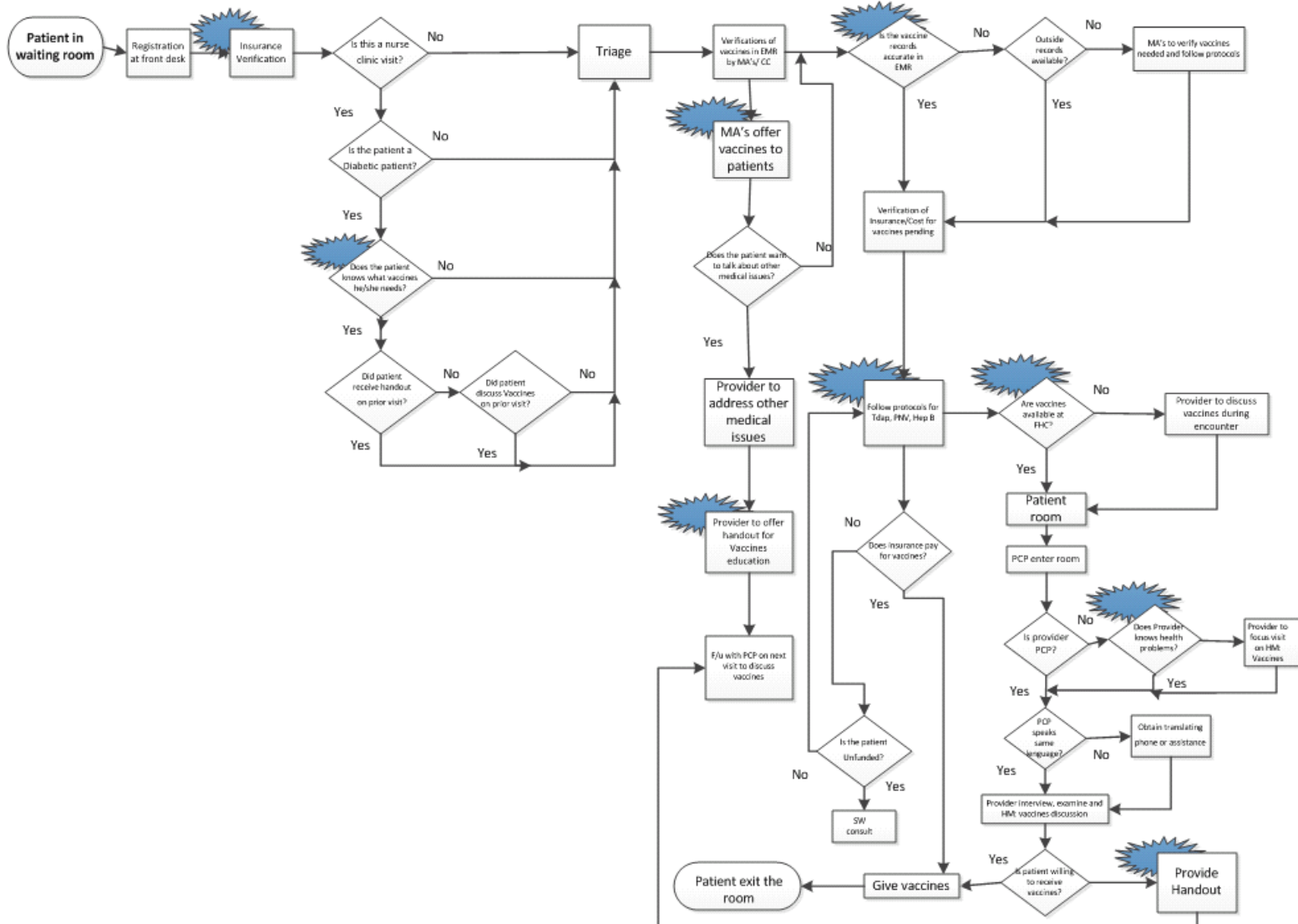
Brainstorming

Statistical Process Control graph

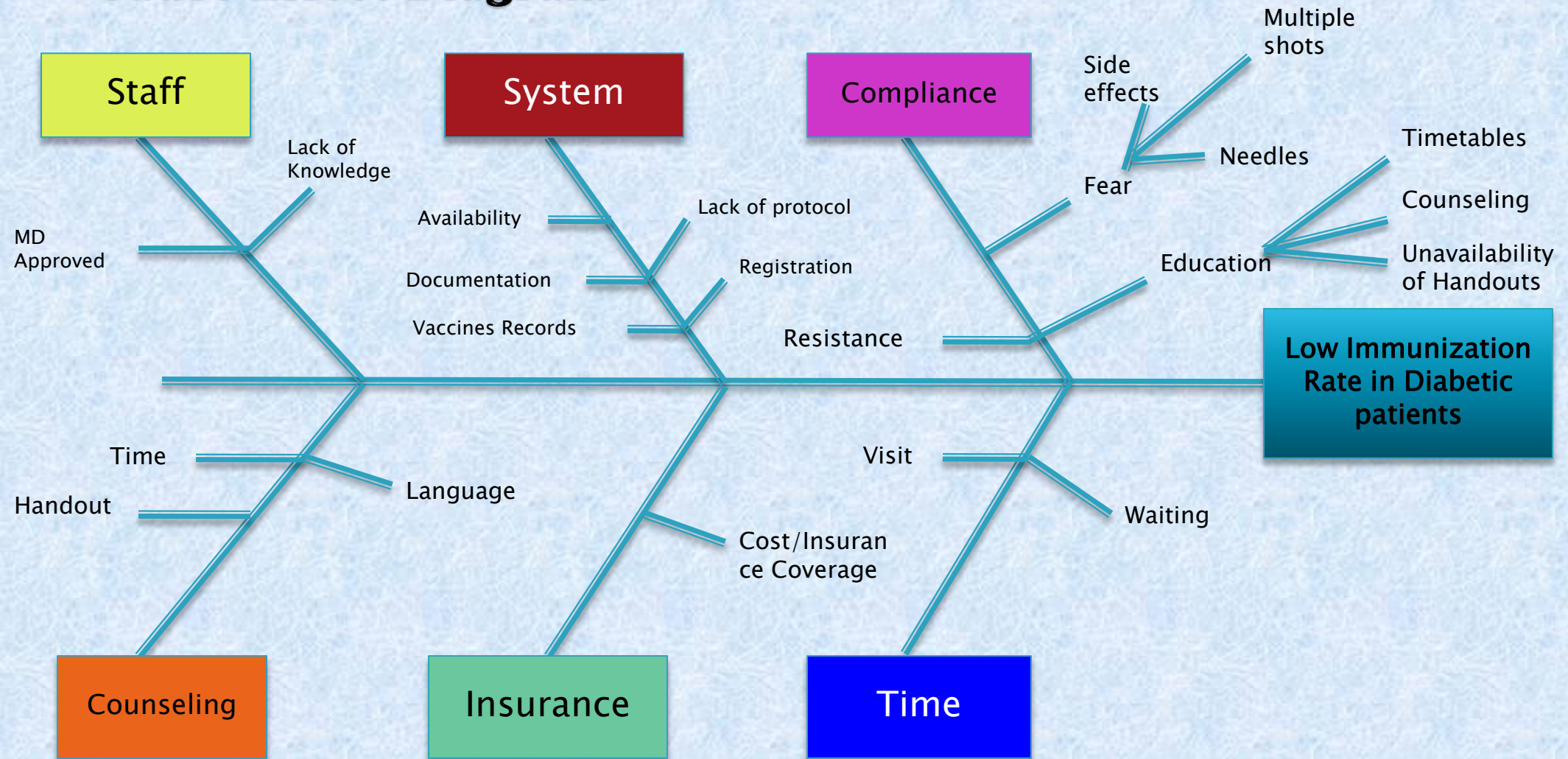
Flowchart

Flow chart

Improving Immunization Rate in Diabetic patients at FHC during September 2014- July 2015



Cause-Effect Diagram



PLAN: Intervention

Fishbone developed based on inputs from all personnel present at the monthly clinic meeting

Interventions based on evaluation of graphical data and the Fishbone Diagram

- Review of 3 key immunizations with faculty physicians and residents
- Regular team meetings to develop interventions and plan implementation

Do: Implementing the Changes

- Training for medical assistants on benefits and costs of vaccinations
 - Improve approach that is used to “market” the recommended vaccine to the patient
- Engaging with Merck to try to improve our Patient Assistance Program-low cost vaccines for our patients
- Implementation of Wellness visits
 - This is a long term improvement which will require the work of dedicated, multidisciplinary team

DO: Implementing the Change

Appointed an MA to champion the project – early Nov

Developed materials to hand to patients – Nov 7

Implemented in Clinic week of 10 November

What You Need to Know About Diabetes and Adult Vaccines

Each year thousands of adults in the United States suffer serious health problems from diseases that could be prevented by vaccines — some people are hospitalized, and some even die. People with diabetes (both type 1 and type 2) are at higher risk for serious problems from certain vaccine-preventable diseases.

Vaccines are important for you.

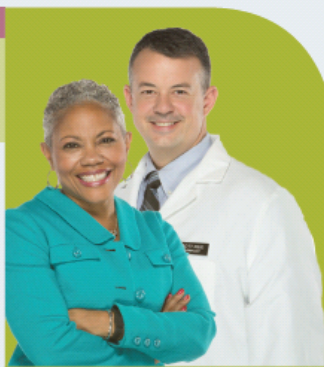
Diabetes, even if well managed, can make it harder for your immune system to fight infections, so you may be at risk for more serious complications from an illness compared to people without diabetes.

That's why you should talk to your healthcare professional to make sure you have all the vaccines you need.

- Some illnesses, like influenza, can raise your blood glucose to dangerously high levels. **That's why a flu vaccine every year is important.**
- People with diabetes have higher rates of hepatitis B than the rest of the population. Outbreaks of hepatitis B associated with blood glucose monitoring procedures have occurred among people with diabetes. **That's why the hepatitis B vaccine is important for you.**
- People with diabetes are at increased risk for death from pneumonia (lung infection), bacteremia (blood infection) and meningitis (infection of the lining of the brain and spinal cord). These infections can be prevented by the pneumococcal polysaccharide vaccine. **Certain types of pneumonia can be prevented by pneumococcal vaccines.**

Vaccines are one of the safest ways to protect your health.

- **Vaccines are tested and monitored.** Vaccines are tested before being licensed by the Food and Drug Administration (FDA). The Centers for Disease Control and Prevention (CDC) and FDA continue to monitor vaccines after they are licensed.
- **Vaccine side effects are usually mild and temporary.** The most common side effects include soreness, redness, or swelling at the injection site. Severe side effects are very rare.
- **Vaccines are safe to get, even if you are taking prescription medications.** In fact, they are an important part of staying healthy especially if you have a chronic condition like diabetes.



What vaccines do you need?

Whether you have type 1 or type 2 diabetes, there are a number of vaccines that can protect your health:

- **Flu vaccine** each year to protect against seasonal flu
- **Pneumococcal vaccine** to protect against certain types of pneumococcal diseases
- **Hepatitis B vaccine** series to protect against hepatitis B

In addition all adults need:

- **Tdap vaccine** to protect against tetanus, diphtheria, and pertussis (whooping cough)
- **Zoster vaccine** to protect against shingles if you are 60 years or older

There may be other vaccines you need so be sure to talk with your healthcare professional about what's right for you.

**DON'T WAIT.
VACCINATE!**



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Lo Que Usted Necesita Saber Acerca de la Diabetes y las Vacunas Para Adultos

Cada año miles de adultos en los Estados Unidos sufren serios problemas de salud por enfermedades que podrían ser prevenidas por vacunas - algunas personas son hospitalizadas, y algunos incluso mueren. Las personas con diabetes (tanto de tipo 1 y tipo 2) están en mayor riesgo de problemas graves de ciertas enfermedades prevenibles por vacunación.

Las vacunas son importante para usted.

La diabetes, aun siendo bien controlada, pueden hacer más difícil para que su sistema inmunológico combata las infecciones, por lo que puede estar en riesgo de complicaciones mas graves de una enfermedad en comparación con las personas sin diabetes.

Es por eso que usted debe hablar con su profesional de la salud para asegurarse de que tiene todas las vacunas que necesita

- algunas enfermedades, como la gripe, pueden elevar su nivel de glucosa en la sangre a niveles peligrosamente altos. Es por eso que una vacuna contra la gripe cada año es importante
- las personas con diabetes tienen más riesgo de la hepatitis B que el resto de la población. Brotes de hepatitis B se han asociado con el monitoreo de glucosa en la sangre entre personas con diabetes. **Es por eso que la vacuna contra la hepatitis B es importante para usted**
- Personas con diabetes tienen un mayor riesgo de muerte por neumonía (infección pulmonar), bacteriemia (infección de la sangre) y meningitis (infección del del cerebro y la médula espinal). Estas infecciones se pueden prevenir con la vacuna anti neumonía. **Ciertos tipos de neumonía pueden prevenirse mediante vacunas.**

Las vacunas son una de las maneras más seguras para proteger su salud.

- **Las vacunas se prueban y se monitorean.** Las vacunas se prueban antes de ser autorizadas por la Administración de Drogas y Comida (Food and Drug Administration-FDA). Los Centros para el Control y Prevención de Enfermedades (CDC) y la FDA continúan monitoreando las vacunas después de ser autorizadas.
- **Efectos secundarios de las vacunas son generalmente leves y temporales.** Los efectos secundarios más comunes incluyen dolor, enrojecimiento o hinchazón en el sitio de la inyección. Los efectos secundarios graves son raros.
- **Las vacunas son seguras para recibir, incluso si está tomando medicamentos recetados.** De hecho, las vacunas son una parte importante de mantenerse sano especialmente si usted tiene una condición crónica como la diabetes.



Qué vacunas necesita usted?

Si usted tiene diabetes tipo 2 o tipo 1, hay una serie de vacunas que pueden proteger su salud:

- **Vacuna contra la gripe** cada año para proteger contra la gripe
- **Vacuna de neumonía** para proteger contra ciertos tipos de enfermedades
- **serie de vacunas para proteger contra la Hepatitis B**

además todos los adultos necesitan:

- **Vacuna Tdap** para proteger contra el tétano, la difteria y la tos ferina (tos convulsiva)
- **Vacuna Zóster**, para proteger contra la culebrilla si tiene 60 años o más

Puede haber otras vacunas que necesita, así que asegúrese de hablar con su médico sobre lo que es correcto para usted.

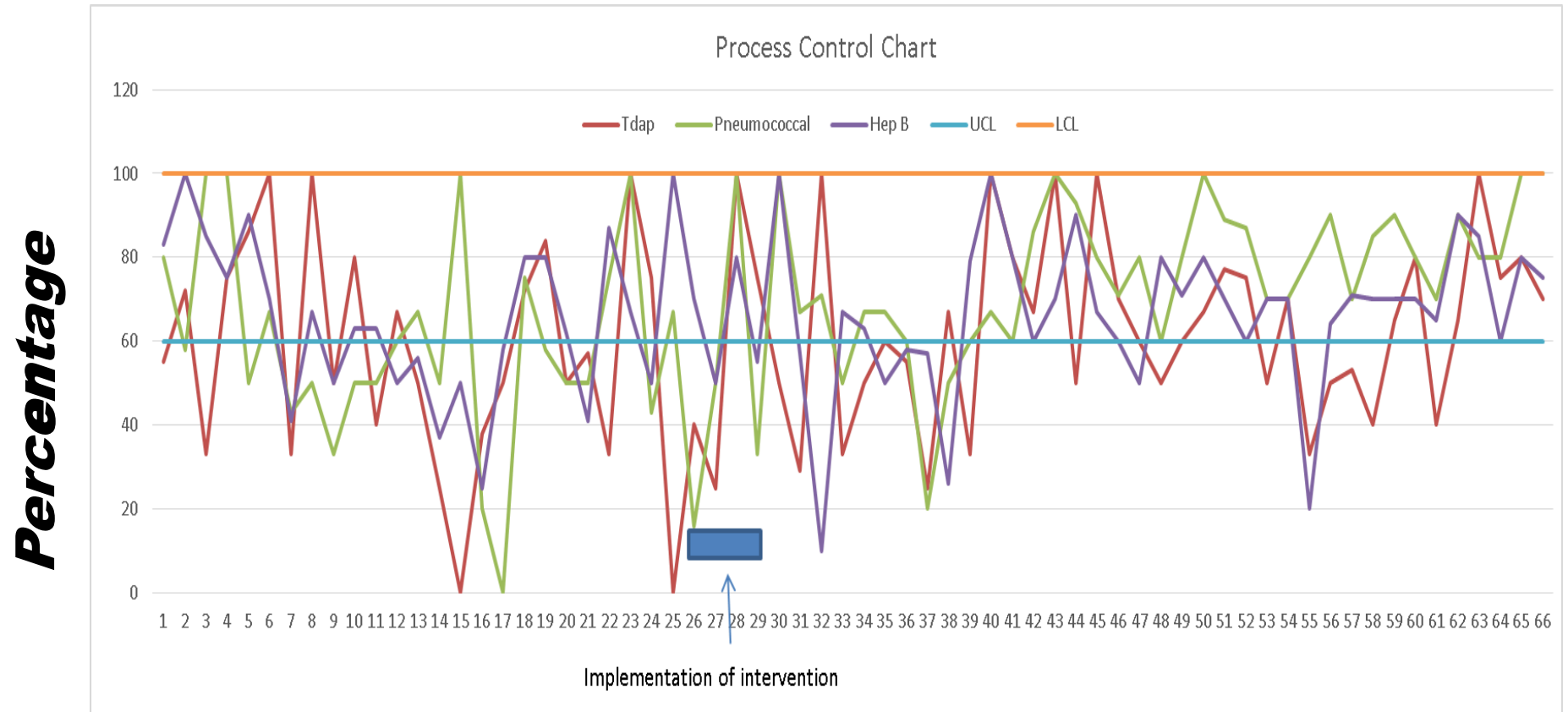
DO: Implementing the Change

- Implementation issues: There are multiple issues competing for the bandwidth of the people in the clinic
 - Flu season
 - Hep C study
 - DSRIP
 - Other preventive issues
 - Information related to other health system initiatives

DO: Implementing the Change

- Lessons learned:
 - No issues across organizations so far
 - Matrixed organizational structure
 - People seem willing to make changes, collect data, etc if they can sense that it improves our patient care
 - Residents interest has been high
 - Note ACGME requirement for teaching QI
 - The problem is multifactoral
 - Patient funding is a significant part of the issue

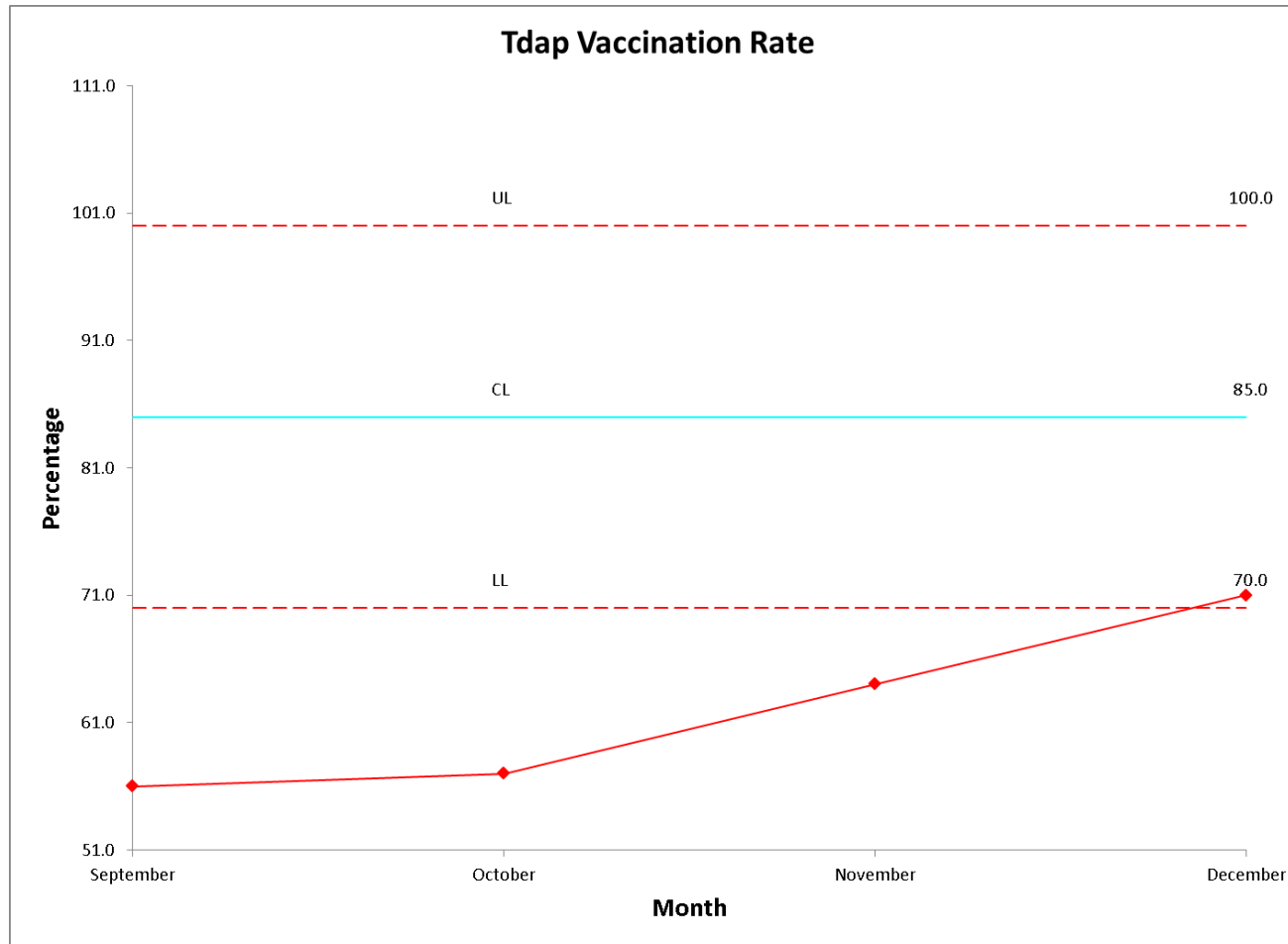
Check: Statistical Process Control



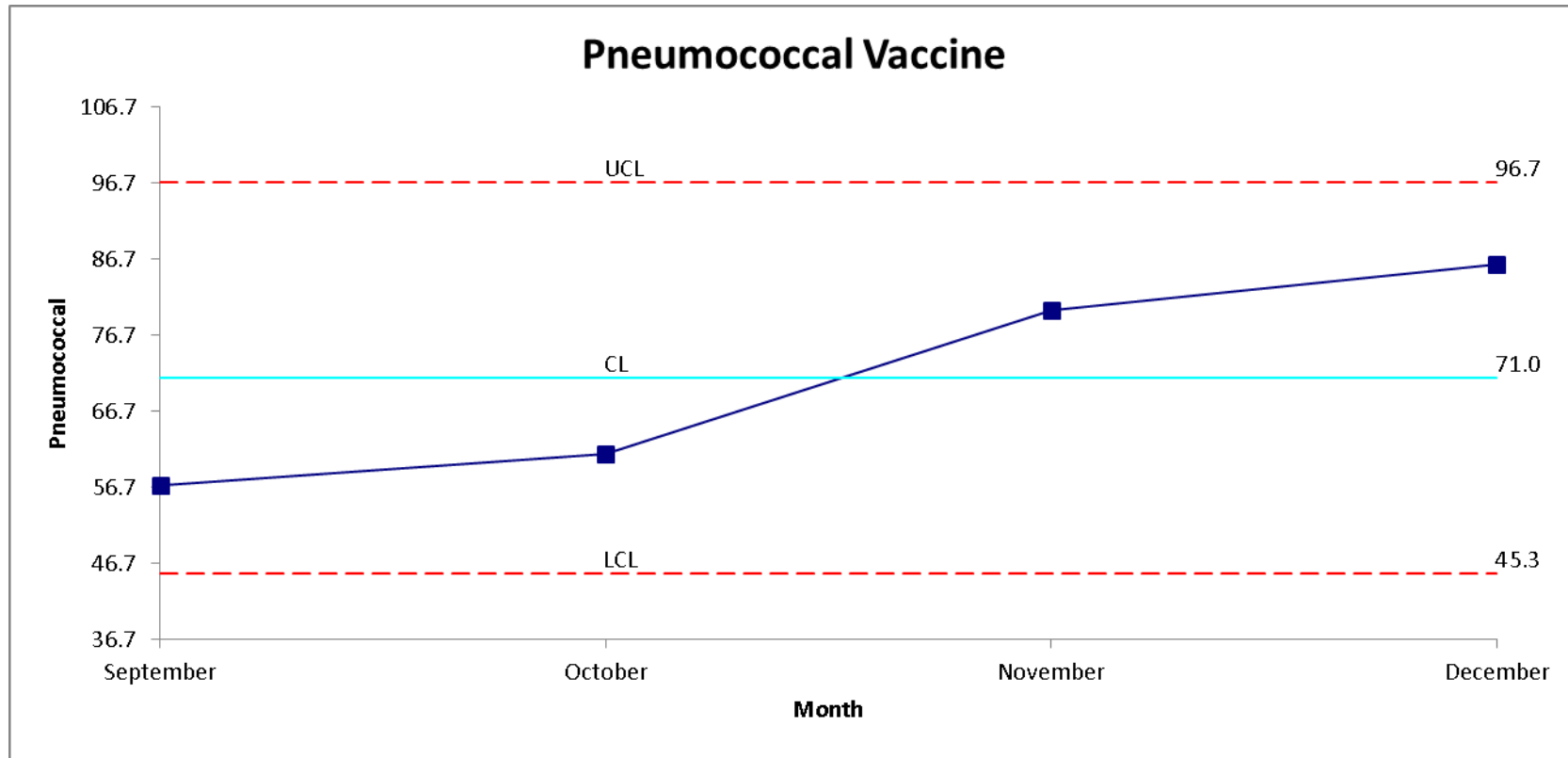
October-December

Tdap Vaccination Rate

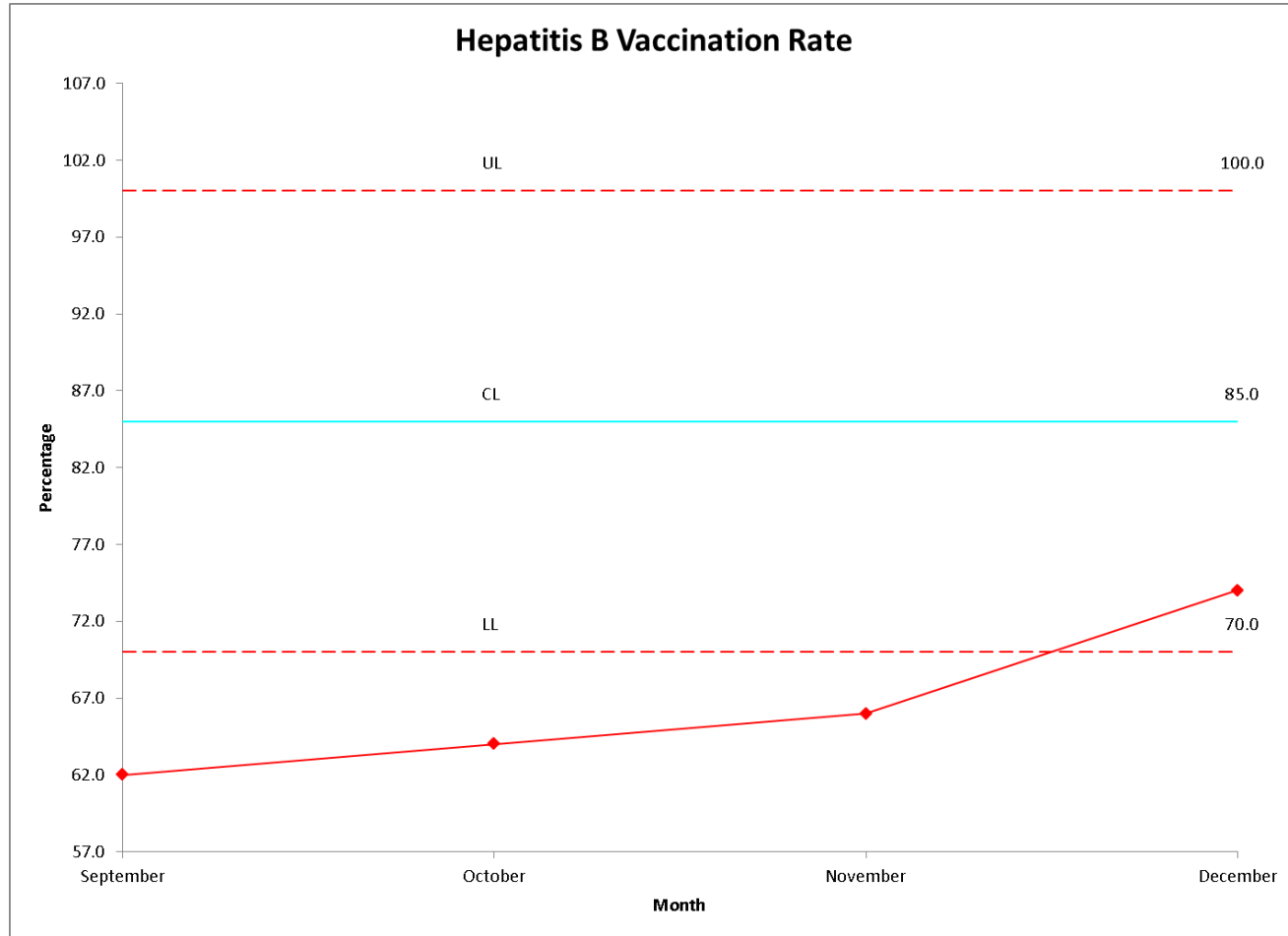
Statistical Process Control Chart



Pneumococcal Vaccination Rate Statistical Process Control Chart



Hepatitis B Vaccination Rate Statistical Process Control Chart



ACT: Sustaining the Results

Change the data collection, using total number of patients

Percentage by day was a good way to communicate variation in performance initially, doesn't reflect the overall percent

SPCC will be improve with this change in the data

Return on Investment

Much of the ROI is related to improved education

Prevention is one of the essentials of chronic care

Process change will increase the percentage of patients fully immunized

We still have concerns about cost of vaccines

Cost considerations, while important, did not preclude some success in improving this process

Conclusion/What's Next

Successful project and some lessons learned

Required collaboration and teamwork within a matrixed organization structure

Resident interest was high

The project inspired changes in our education process for residents, which is essential to our educational requirements

We have a dedicated computer with appropriate software for future projects



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