REDUCTION OF MEDICATION ERRORS AT COVID19 VACCINATION HUB

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BACKGROUND

- A vaccination hub was needed in Ellis County since the Texas State allocations of the Moderna Covid19 vaccination were being sent. Baylor Scott and White Medical Center at Waxahachie (BSWMCW) partnered with Ellis County officials and on February 2, 2021, opened a vaccination hub at the Ellis County Senior Center. Three weeks later, the state allocations began including the Pfizer Covid19 vaccine.
- During the first month of operation (February 2021), the vaccination hub administered over 14,000 vaccines and had 3 medication errors occur for a 0.20% medication error rate (per 1,000 doses dispensed). New processes needed to be designed and implemented to reduce/eliminate medication errors going forward.
- The vaccination hub needed to implement a process that successfully administered two different types of 1st and 2nd doses of Moderna and Pfizer vaccines simultaneously to roughly 2,000 patients a day.
- Literature review revealed the vaccine administration error rate in large academic medical centers and affiliated clinics was 0.04%.

PROBLEM

- By May 30, 2021, the Ellis County Covid19 vaccination hub will reduce the medication error rate from 0.20% to less than 0.04%. (March 1, 2021 – May 30,2021).

UNDERSTANDING THE PROBLEM

Brainstormed Issues	< Why It Happens	< Why It Happens
Administered two Moderna vaccines to two 16 year old patients - *Moderna age requirement is 18 or older*	<Patients were unaware of which vaccine was currently being administered at the vaccination hub. Patients assumed vaccinate allotment was Pfizer. *Pfizer's age requirement is 12 or older.*	<Team members did not ask and communicate current vaccine allotment
		<Signages were not present to indicate which vaccines were being administered
Patient received two different types of vaccines (Moderna and Pfizer)	<Patients not completing consent form appropriately	<Patient answered COVID-19 vaccine screening questions dishonestly
		<Team members did not review the consent form with the patient due to inconsistent role expectations
	<Team members were not aware that the patient had already received a 1st dose at another hub	<COVID-19 Immunization Clinic Warnings were not available in Epic
		<Vaccination process and patient paperwork did not distinguish Dose 1 and Dose 2 patients

- The vaccination hub leaders reviewed the three medication errors with a multidisciplinary team to identify reasons why the errors occurred.

IMPLEMENTED CHANGE

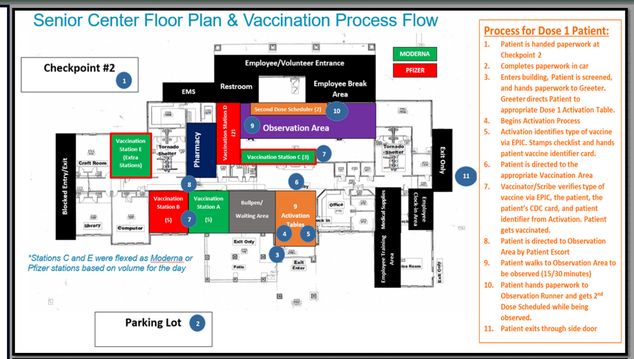
After reviewing the root causes, the team implemented a half-day soft opening (pilot) with the following interventions:

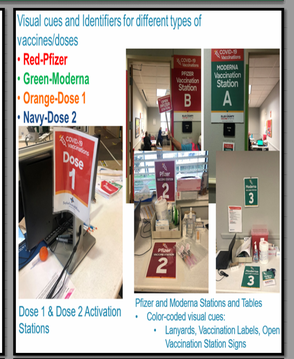
Intervention #1 – Different process flows and floor plans for Dose 1 and Dose 2 patients were created along with separate Moderna and Pfizer vaccination stations. **(3/2/2021)**

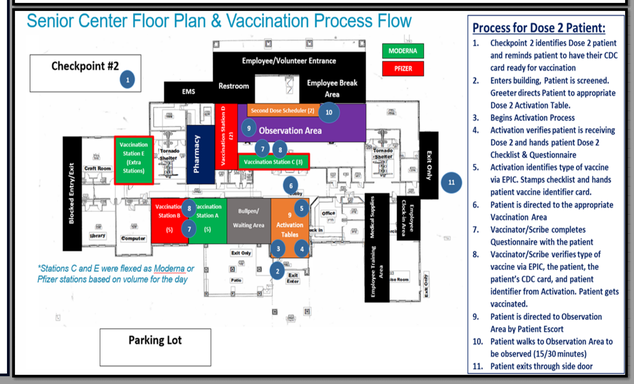
Intervention #2 –Visual cues with standardized color coding was created to identify the process flow for different doses and vaccine types. This included signs, stamps, vaccine identifier cards, lanyards, and vaccination labels. **(3/2/2021)**

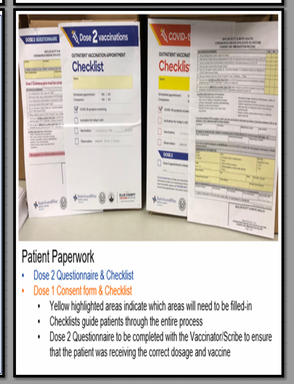
Intervention #3 –Separate Dose 1 and Dose 2 paperwork created by the BSWMCW Marketing team. Special consideration was used when formatting the patient paperwork (highlighting, shading, and color coding). **(3/2/2021)**

Intervention #4 – New Covid19 Immunization Clinic warnings were updated in the EHR system. The BSWMCW Informatics team created tip sheets to help vaccination hub team members distinguish between Moderna 1st Dose and 2nd Dose patients and Pfizer 1st Dose and 2nd Dose patients. **(3/2/2021)**

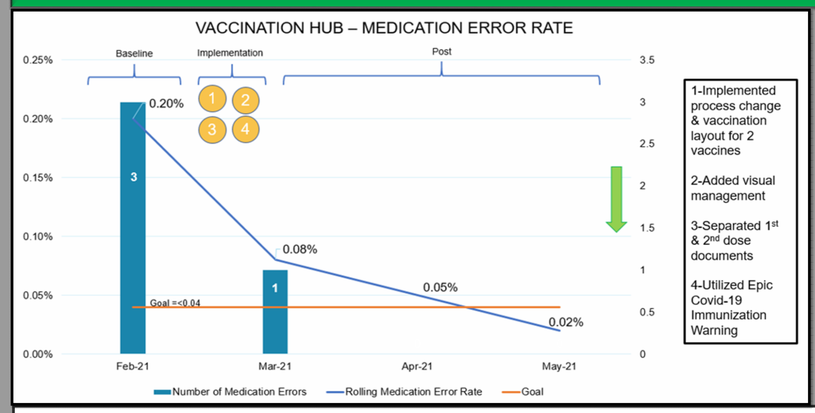


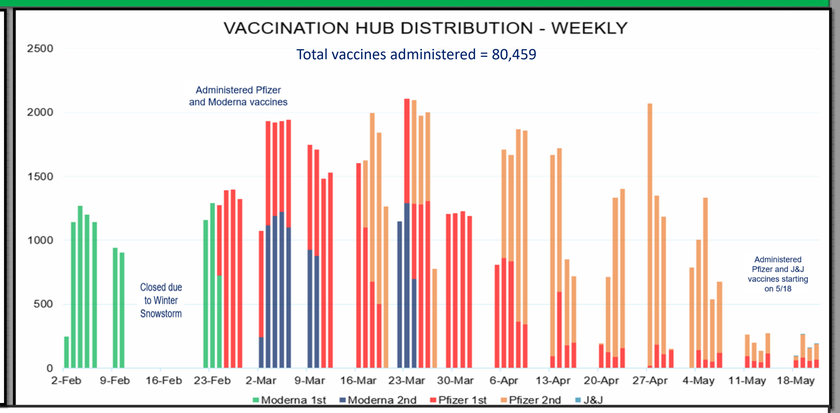






RESULTS





- The medication error rate at the vaccination hub between March 1, 2021 – May 30, 2021 was 0.02% (1 medication error in March 2021) which was below the goal of 0.04%. Over 65,000 Covid19 vaccinations were administered during this time.
- The average time for patients to flow through the vaccination hub remained at 30 minutes.
- In May 2021, the Johnson & Johnson Covid19 vaccination allocations were received. Identifying labels were created and utilized.

LESSONS LEARNED

- The importance of volunteer roles and seeking their inputs on process improvement initiatives was beneficial for patient safety and flow.
- Educating team members on the culture of patient safety and encouraging team members to the stop the line or speak up was critical.
- Due to constant change with team members and volunteers, standardizing roles and tasks maintained a high standard of care for patients.