

Be Prepared: A Nurse Driven Protocol for the Management of Adverse Vaccine Reactions in Primary Care

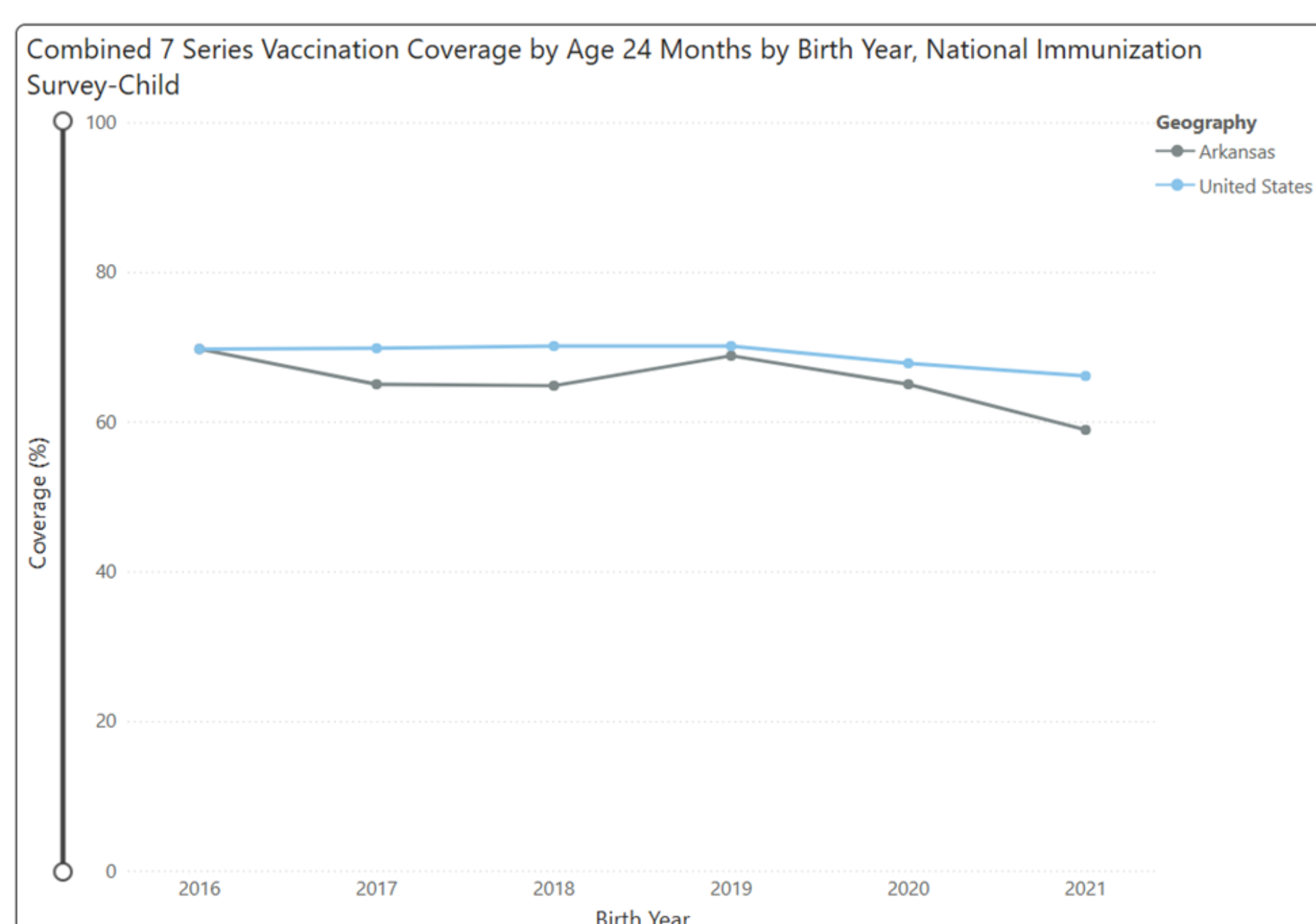
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Introduction

In the Primary Care setting at an academic children's hospital, focus on improving vaccination rates led to increased volumes of nurse only visits for vaccine administration. These visits could occur during times when no licensed independent practitioner (LIP) is present in the clinic. The need was identified for a nursing protocol, education and process for recognizing and safely managing acute adverse events following vaccine administration.

Background

Vaccination coverage rates in the United States decreased during the COVID-19 pandemic. The Center for Disease Control and Prevention (CDC) reported a marked decline in vaccination coverage rates by 24 months of age that ranged from 1.3% to 7.8% in those born in 2020 and 2021 when compared to those born in 2018 and 2019. In an effort to recover those vaccine rates, various strategies were utilized including optimizing clinic schedules, utilizing established nursing protocols for vaccine administration and adding nurse only visits and immunization clinics.



Source: National Center for Immunization and Respiratory Diseases

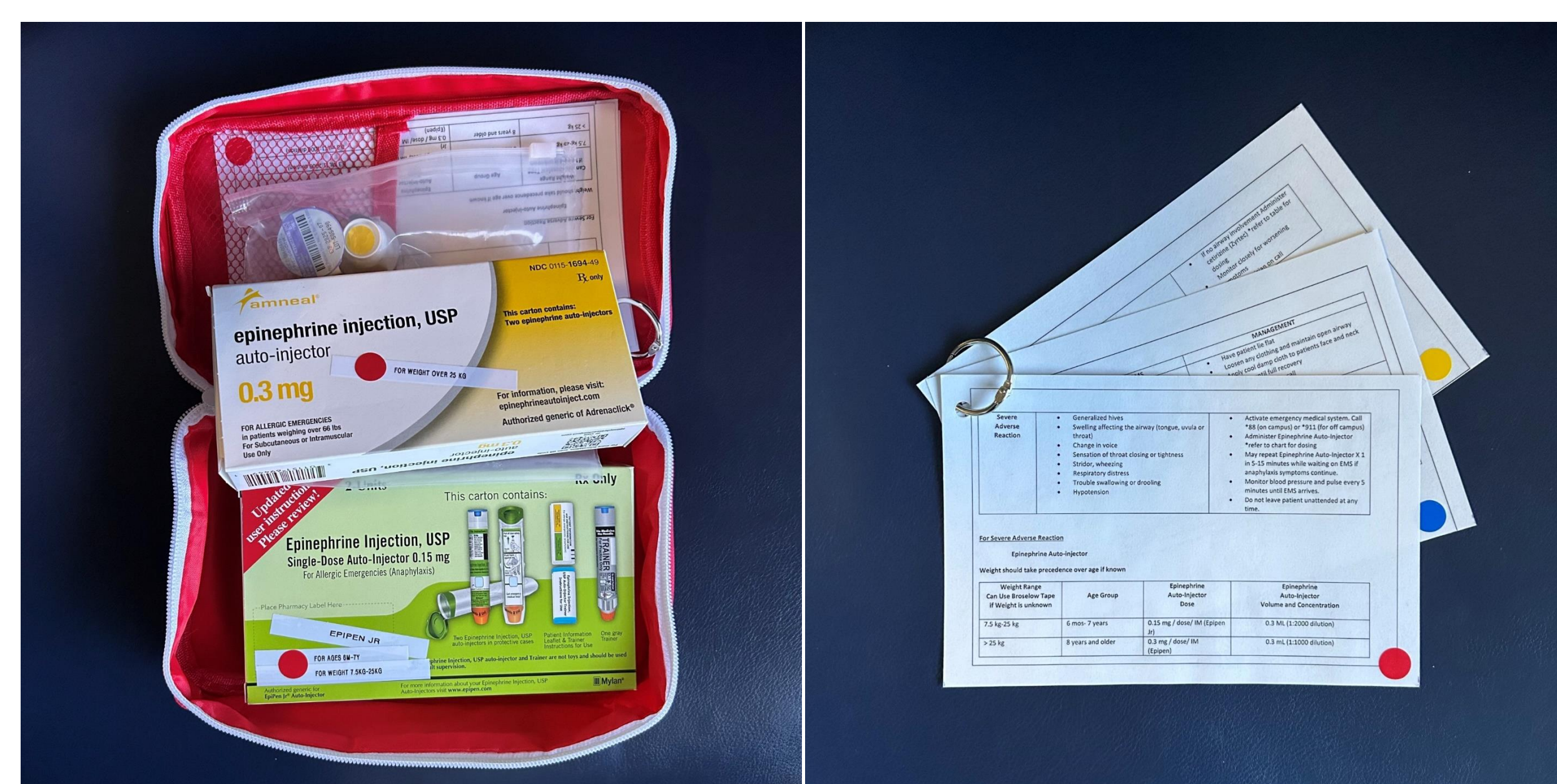
CDC guidance for immunization clinics recommends having a plan in place for medical management of an adverse event including recognition and management of severe allergic reactions and prevention and recognition of syncope. A review of nursing practice highlighted the need for education, clarity and established processes for the management of adverse events following vaccination.

Clinical Findings

- Nurse only visit volumes increased by 32% between 2021-2024 and continue to climb
- Vaccine administration accounted for 85% of nurse only visits
- Off-site vaccination clinics were implemented
- A safety culture focus brought more awareness of the potential for adverse events following vaccine administration
- Mild to moderate adverse events were reported during nurse only visits
- A review of emergency resources available highlighted the need for change in supplies and practices
- Knowledge deficits related to managing vaccines were uncovered with increased new nurse onboarding

Methods

- Reviewed literature on best practices related to vaccine administration and emergency management
- Developed a nursing protocol for management of adverse events after vaccines when no LIP present
- Created emergency medication kits for anaphylaxis management
- Devised nursing education and skills lab for managing syncope, local reactions and anaphylaxis
- Collaborated with leadership, pharmacy, quality, simulation center and information technology



Outcomes

- Nursing protocol developed aligning with CDC recommendations
- Change from epinephrine vials to auto-injectors
 - Additional expense and availability of epinephrine auto-injectors was an initial barrier
 - Standardized dosing with auto injectors saves time and decreases potential error
 - Skills lab included auto-injector training
 - Simulation center utilized for additional skills training
- Protocol and emergency kits were well received by nursing staff
- Addressed a need in satellite clinics where emergency medical services are not immediately available

Implications for Practice

- Patient safety was a primary focus when developing the protocol and kits
- Nurses were empowered to manage emergency situations
- Nurses felt more prepared, guided and supported leading to a safer process within Primary Care
- Potential to impact other clinical areas where vaccine delivery has become more prevalent
- Contributes to a strategic goal to increase immunization rates by providing safer environment for increased nurse only visits

References

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