**ZIKA: A Family Affair**

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**SIGNIFICANCE:**

- What we know...
  - Zika is spread mostly by the bite of an infected Aedes species mosquito. They are active both day and night.
  - Zika can be passed from a pregnant woman to her fetus.
  - Zika during pregnancy can cause specific birth defects.
  - There is NO vaccine or cure for Zika.
  - Local mosquito-borne Zika virus transmissions have been reported in the continental United States.[1]
  - Zika can be transmitted between sexual partners.[1]

**BACKGROUND:**

- Within the past ten months, the increasingly palpable impact of the Zika virus has become more and more obvious.
- Under the guidance of the Center for Disease Control and Prevention (CDC), the Office of the National Coordinator (ONC), and local pregnancy and infectious disease experts, a workflow was designed and implemented within an electronic health record (EHR) to assist providers with clinical decision support and guidance for the care of pregnant female patients and/or sexual partners that may have been exposed to Zika.
- Planning and building was followed by serious testing of all components already built/rules/alerts.
- Education was provided to all intake staff (nursing) and providers of patients impacted by possible Zika exposure, prior to implementation, or “go-live”. Post go-live monitoring was maintained to assure efficacy of build.[3]

**OBJECTIVES:**

- **Goal 1:** Analyze the technical needs to develop and implement an electronic Zika assessment process within an EHR, based on the most up to date CDC guidelines.[2,3]
- **Goal 2:** Rigorously test and adjust new rules and alerts as needed to fine tune process and assure that no potential patients would be missed during the implementation.
- **Goal 3:** Provide nurses and providers up-to-date clinical support and guidance in decision making regarding the care of a patient with potential Zika virus/exposure.
- **Goal 4:** Maintain flexibility in the EHR system for future expansion or changes in recommended guidelines.

**Limitation Statement:** Control group not possible for this project.

**TECHNICAL STRATEGY:**

- Reviewed current literature and consulted with CDC/ONC representatives to finalize clinical needs for patient type, travel, gender, age, exposure, symptomology as related to Zika.[4]
- Reviewed CDC recommendations with local subject matter experts to design a process applicable to the West Texas area.
- Assessed current components already within EHR, including data entry, rules, alerts, education.
- Designed and built usable and functional clinical decision support system in EHR to aid providers in the testing and care of Zika/possible Zika patient population.

**VALIDATION and RESULTS:**

- After build of an alert and education system for providers in the EHR, the build/rules/alerts were tested and validated for accuracy within many scenarios.
- The importance of inclusion or exclusion of certain patient populations was paramount to making the system work efficiently while also not contributing to “alert fatigue”, a problem with which providers already struggle significantly. The starts by assessing patients with Zika virus/exposure for women who are or who may become pregnant.
- After testing and implementation, the alert’s volume and accuracy was monitored continuously for four months. After which the monitoring was continued intermittently.
- The process was found to have assisted providers in identifying the first travel related Zika case in a pregnant patient in Lubbock County.

**CONCLUSION:**

- There are still many unanswered questions as to how this will impact women’s health in the future.
- Ultimately, the fetus is the one most impacted by the virus. But as the mother is the fetal caretaker, currently there is significant concern for women who are or who may become pregnant.
- The inclusion of education regarding effective safe sex and birth control methods, travel information, and mosquito bite prevention becomes preponderant. This applies to both males AND females.
- Currently we are revamping the process to start including not only pregnant women, but also any female of child-bearing age, males, and infant and children, according to CDC guidelines.
- Future plans of laboratory automation and reporting.

**REFERENCES:**