Kilograms versus Pounds:
Protecting Neonatal and Pediatric Patients against Inaccurate Weights

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Introduction and Background

Having a correct patient's weight documented within the Electronic Health Record (EHR) is crucial because it is used to calculate the appropriate dose of medications. In the pediatric population, all medication doses are weight based. Clinicians caring for pediatric patients need a quick and effective way to see if the documented weight had dramatically changed in a short period of time. Using existing rules and a weight warning that was already established, the weight warning and rule was redesigned to help show the clinicians various changes to the patient's weight.

Method

Some mistakes seen within documentation of weights include; missing decimals, charting pounds versus kilograms and height versus weight. Information throughout the EHR such as growth charts, patient's prior weights along with prior Body Mass Indexes and Z-Scores can help the clinician to determine whether or not the most current documented weight is correct. With clinician feedback, the redesigned warning was created in the EHR based on the child's growth chart, the expected weight and Z-Score. This alert will fire if the documented weight is either documented to be < 3% or >97% for age and sex of the patient. This alert will also fire if the newly documented weight is less than or greater than 20% of the previous weight. This alert is shown over the documentation prior to the end user signing and shows the prior documented weight against the newly documented weight.

Staff was educated on the use of this warning and alert through various venues such as Nursing Informatics Council and the Prescriber Educator Forum.

Results

Over a 3 month period, this rule was fired 2,462 times, while the alert was generated a total of 155 times in one day. Most warnings required a "re-weigh" of the patient for accuracy and confirmation. Some weight alerts were seen even though the newly documented weight was correct. In that case, communication on weight gain or loss was discussed in rounds and a nutrition plan was formed. Having immediate feedback presented to the clinician that the child's weight had dramatically changed, provided a mechanism that called for immediate action from the caretaker. This in turn helped the end user feel that the documentation was being recognized and investigated, which ultimately enhanced the user acceptance of change as they felt they were able to be a part of the solution.

Discussion

This warning is extremely effective. Having accurate weights in the pediatric population accurate weights is a crucial part in caring for a patient. Using backend tracking tools, both the technical teams and clinical teams were notified when the alerts "fired." With the Nursing Informatics team and Unit Educators, clinicians were able to understand the importance and justification of these early warnings and were taught to read and acknowledge these alerts, not just click through.

Communication among all care team members on the patient's accurate weight is needed for care. Keeping the channels of communication open on major weight changes is a priority for effective and safe nursing and clinical care.