

## Improving the Bone Health Screening of Premature Infants

Rachel Appelbaum BS  
USF MCOM- LVHN Campus, Rachel.Appelbaum@lvhn.org

Alexandra Printz BS  
USF MCOM- LVHN Campus, alexandra.printz@lvhn.org

Antoinette Spoto  
St Joseph's Children's Hospital

Follow this and additional works at: <https://scholarlyworks.lvhn.org/select-program>



Part of the [Medical Education Commons](#)

Let us know how access to this document benefits you

---

### Published In/Presented At

Appelbaum, R., Printz, A., & Spoto, A. (2012, April 26). *Improving the bone health screening of premature infants*. Poster presented at: The Community-Based Clinical Mentoring - Action Research Project, University of South Florida, Tampa, FL.

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact [LibraryServices@lvhn.org](mailto:LibraryServices@lvhn.org).



**The Chronic Complex Pediatrics Clinic**

- Patients must have at least 2 chronic medical problems
- Ages 5-21 years
- >50% Hispanic population
- Team of several pediatric hospitalists (MD,DO), nurses, nurse practitioners, child life specialist, and social worker

**Osteopenia Of Prematurity at the Chronic Complex Pediatric Clinic**

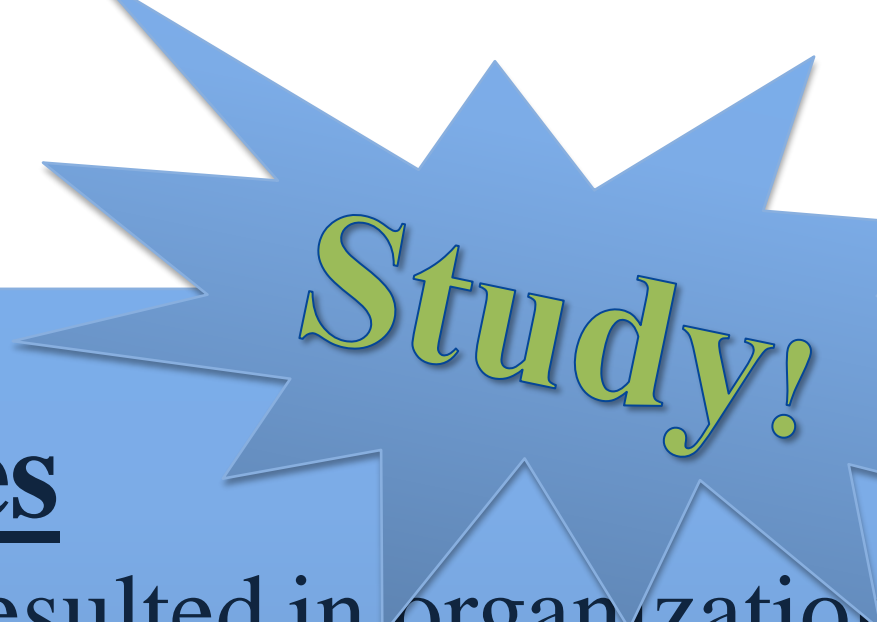
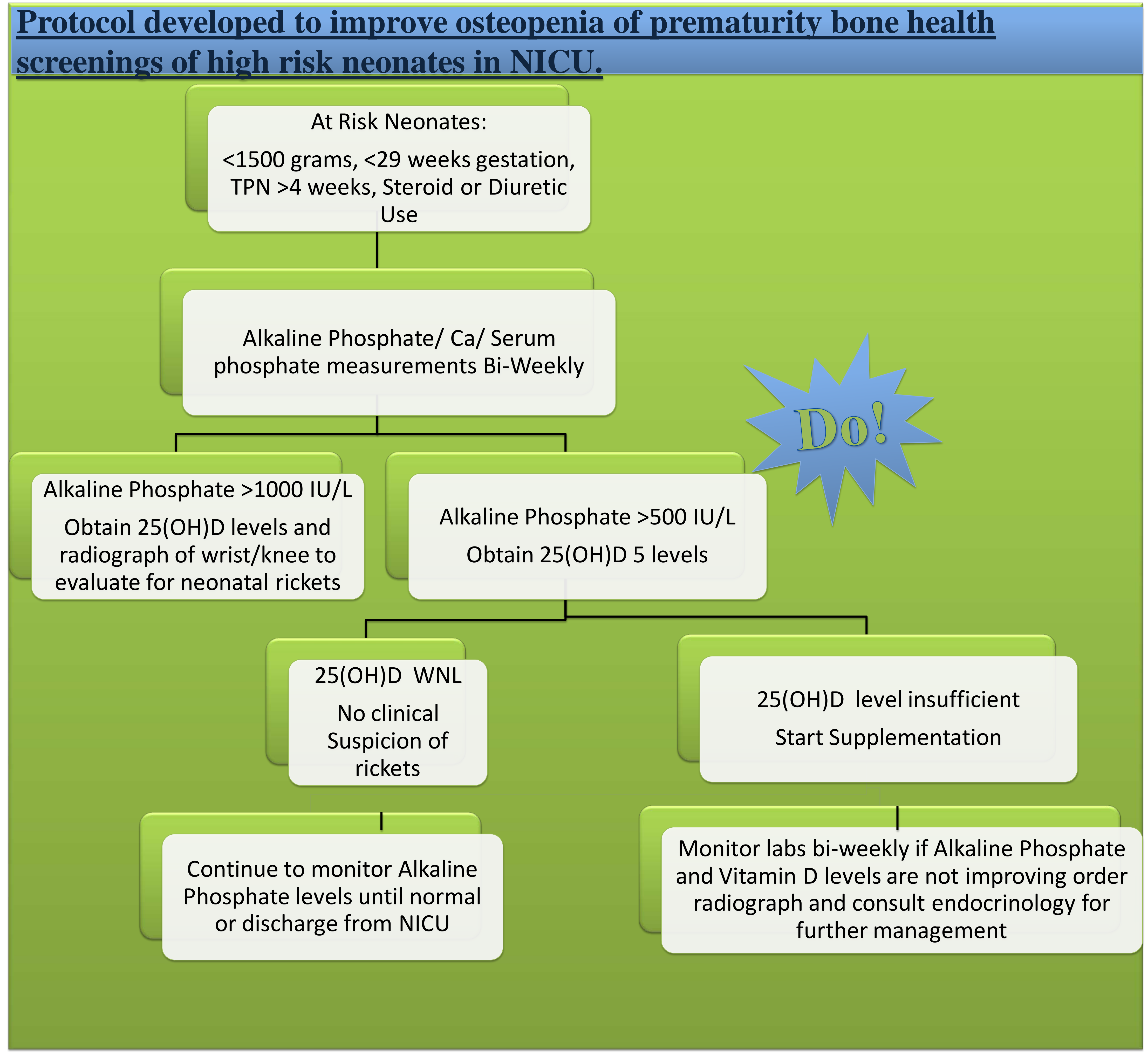
- Increased number of discharges from local NICU with undiagnosed VitD deficiency
- Delay of treatment leading to rickets and leg bowing

**Osteopenia Of Prematurity**

- 55% of infants with BW <1000g and 23% of infants with BW <1500g have low bone mineralization
- Low bone mineralization leads to respiratory distress, rickets, bowing of legs, and poor growth in childhood.
- Very diverse clinical approaches to diagnosis and treatment
- Limited research on screening protocol

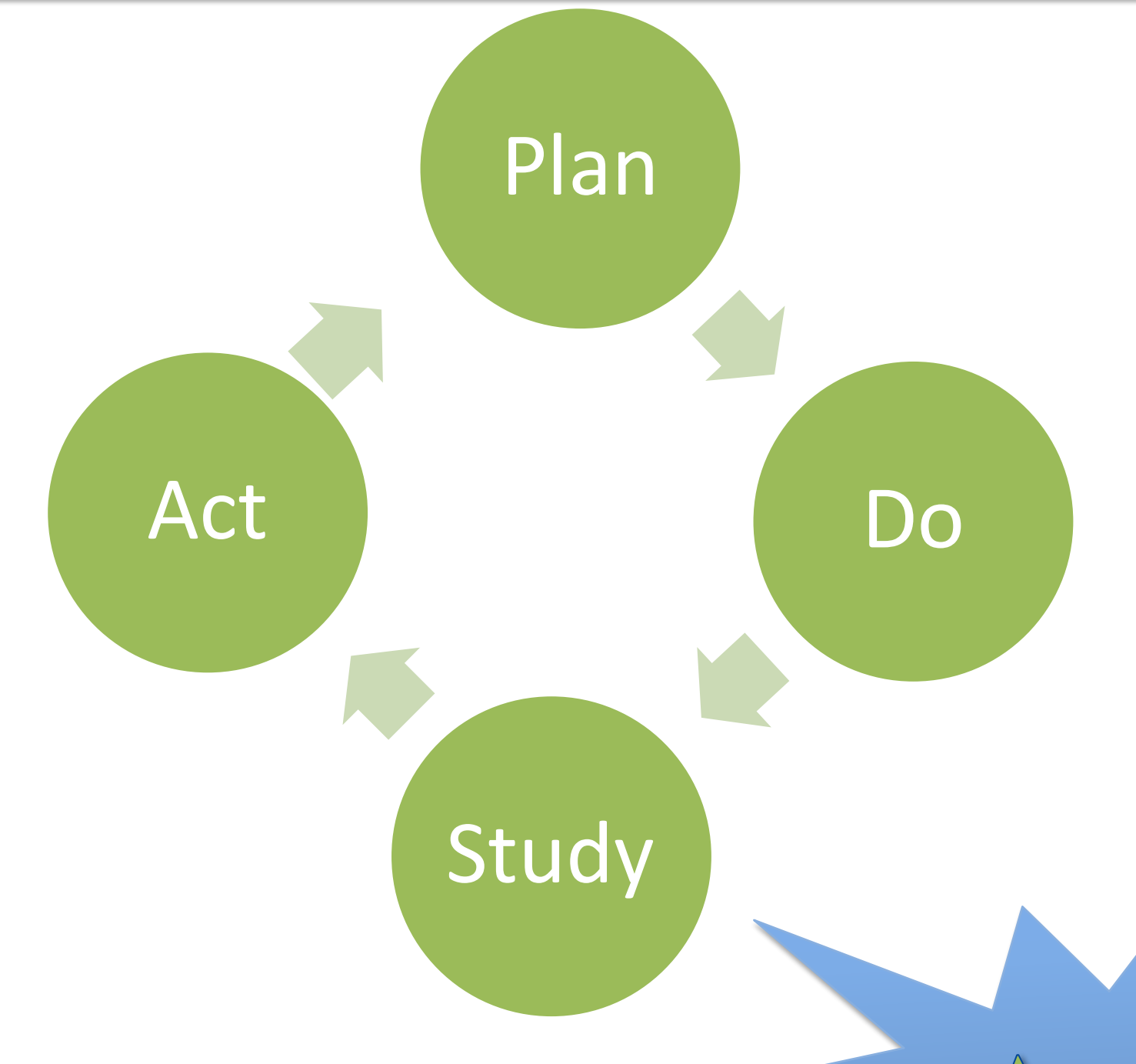
**Study Objectives:**

- Observe negotiations between healthcare leaders during the implantation of protocol for osteopenia of prematurity
- Research current osteopenia of prematurity literature and review current protocols
- Measure the current rate of NICU transfers with undetected Osteopenia of prematurity
- Present all research to healthcare team members working to implement protocol
- Follow the process of protocol development and implementation until the completion of the academic year.



**Protocol Outcomes**

- Leadership meeting resulted in organizational buy-in
- Protocol presented to local NICU was implemented
- Since March all patients transferred from NICU have been screened and appropriately treated for VitD deficiency



**Further Inquiry**

- Analyze the impact on the hospital from improved Osteopenia of prematurity prevention, detection, and treatment
- Analyze the impact on the patient from improved Osteopenia of prematurity prevention, detection, and treatment
- Measure the success of the protocol implementation:

**Conclusions**  
 Development of a protocol for bone health screening of at risk neonates has allowed for improved detection and treatment of osteopenia of prematurity in the NICU, preventing complications of low bone mineralization such as rickets.

