



2020 LEAD Capstone Poster Session

Improving management of iron deficiency anemia in pregnancy

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Abstract

- Iron deficiency anemia (IDA) is the most common cause of anemia in pregnancy
- IDA is associated with poor perinatal outcomes
- IDA is often undiagnosed and undertreated
- Goal is to standardize and improve identification and treatment of IDA in pregnancy



Objectives

- Determine baseline rate of IDA in pregnant patients delivering at CUH
- Create standardized algorithm for identification and treatment of IDA in pregnancy
- Educate obstetric providers and patients on IDA in pregnancy



Background Information

- 40% of pregnant women suffer from anemia.
- IDA is leading cause secondary to
 - ↓ dietary iron intake
 - ↑ iron requirements
 - Excessive blood loss
- Poor perinatal outcomes associated with IDA
 - Low birth weight
 - Preterm delivery
 - Blood transfusions
 - Maternal and neonatal death
- Anecdotally, IDA is undiagnosed and undertreated at UTSW



Specific Aims

- **↑** number of patients tested for IDA (using ferritin as surrogate)
- **↓** number of patients with anemia on admission for delivery
- **↓** number of patients requiring blood transfusion

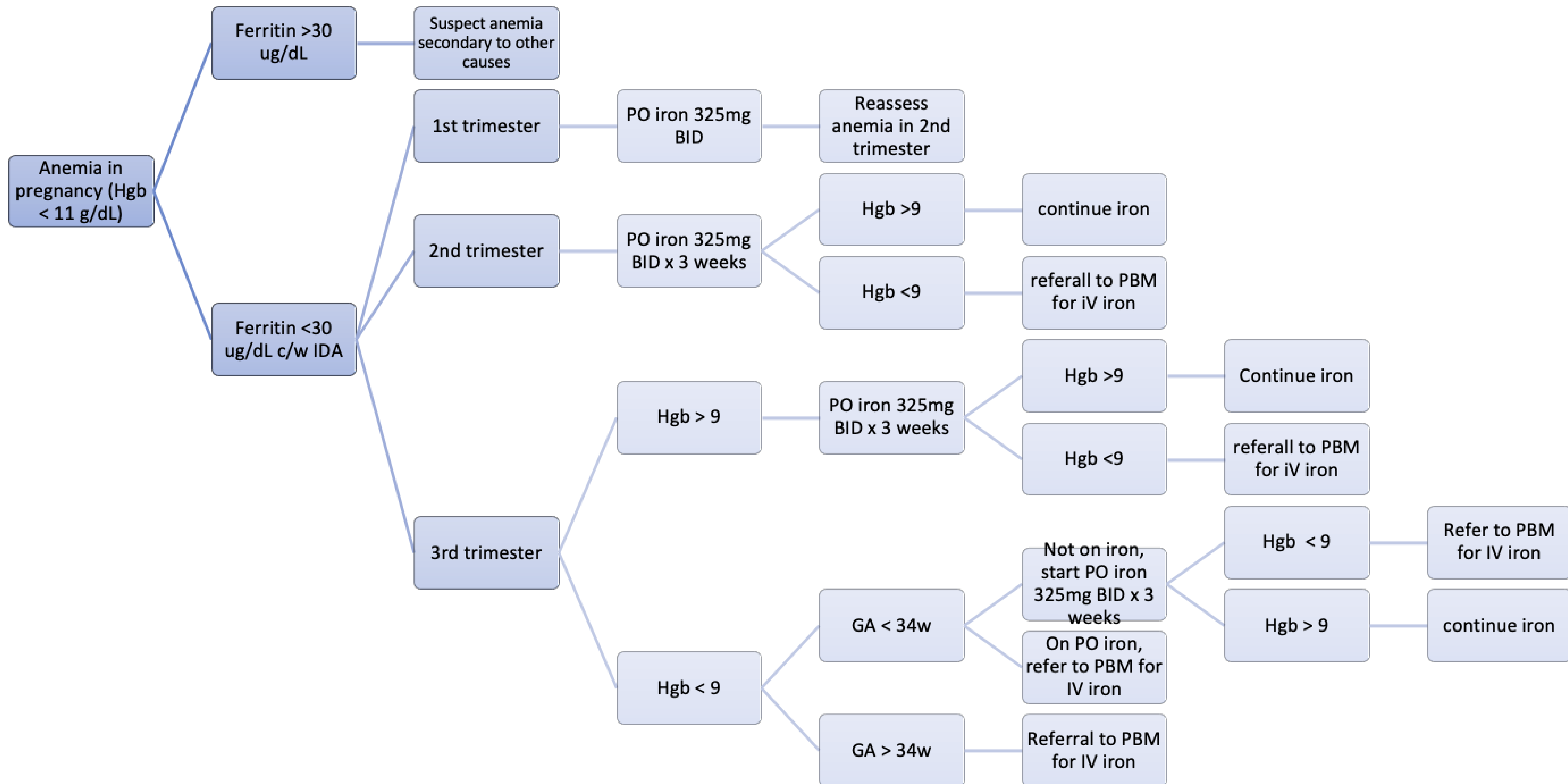


Project Plan

- Standardize definition of anemia in pregnancy
 - Create OB dashboard to determine baseline IDA in CUH population
 - Implement treatment protocol
 - Protocol action determined by level of anemia and gestational age
 - Educational resources for clinicians and patients
 - Determine impact
- Anemia: Hgb <11 g/dL
- Mild: 9-10.9 g/dL
 - Moderate: 7-8.9 g/dL
 - Severe: <7 g/dL



Algorithm by gestational age





Application of What You Learned at LEAD

- Collaborate with other departments by identifying common interests
- Asking leadership for help
- Communication and negotiation skills to bring together stakeholders



Proposed Budget

- \$\$ needed to create educational brochures for both providers and patients



Innovation and Significance

- Improve care of the obstetric patient at UTSW
- Potentially decrease maternal morbidity and mortality, which has been rising in recent years
- Decrease in the number of blood transfusions, which has clinical, economical, social and accreditation implications.



References

- 1. Abdulrehman J, Lausman A, Tang GH, et al. Development and implementation of a quality improvement toolkit, iron deficiency in pregnancy with maternal iron optimization (IRON MOM): A before-and-after study. *PLoS Medicine*. 2019;16(8):e1002867. doi:10.1371/journal.pmed.1002867
- 2. Hamm RF, Blauvelt C, Wang EY, Srinivas SK. Effectiveness of antepartum intravenous iron sucrose: dose timing and impact on outcomes. *J Matern Fetal Neonatal Med*. Published online August 25, 2019:1-8. doi:10.1080/14767058.2019.1656189
- 3. Flores CJ, Sethna F, Stephens B, et al. Improving patient blood management in obstetrics: snapshots of a practice improvement partnership. *BMJ Open Quality*. 2017;6(1):e000009. doi:10.1136/bmjquality-2017-000009
- 4. Smith C, Teng F, Branch E, Chu S, Joseph KS. Maternal and Perinatal Morbidity and Mortality Associated With Anemia in Pregnancy. *Obstetrics & Gynecology*. 2019;134(6):1234–1244. doi:10.1097/AOG.0000000000003557