

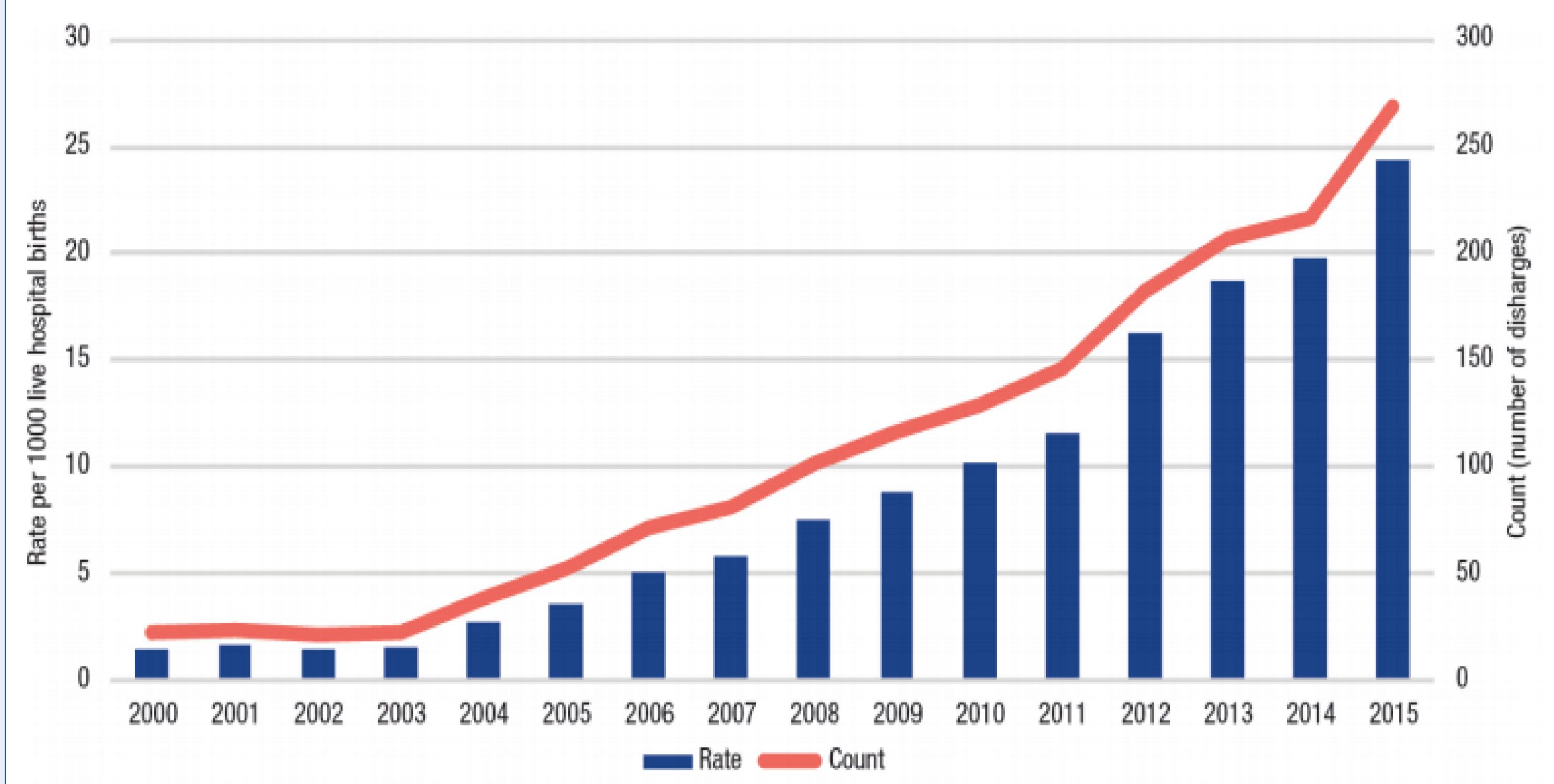
Mitigating the Long-Term Effects of Neonatal Abstinence Syndrome

Eric Bormann (BBT/BCB), Larkin Jainschigg (BCB), Taylor Paradis (BME/ME)
 Advisors: Professor Elisabeth Stoddard and Professor Reeta Rao



Problem: Lack of Follow-up

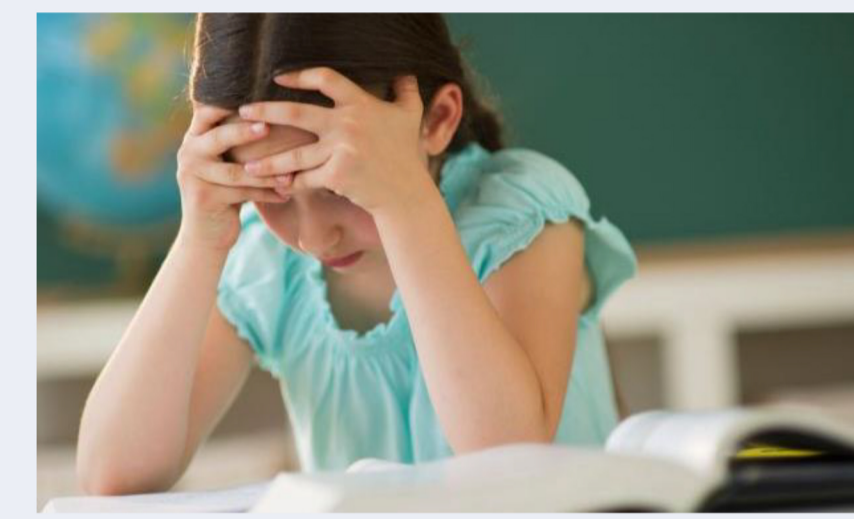
FIGURE 2. NEONATAL ABSTINENCE SYNDROME AMONG NEW HAMPSHIRE INFANT DISCHARGES, 2000–2015



With an increasing number of children born with NAS in New Hampshire, an effective treatment regimen has been developed for infants, however, past infancy, there is no treatment in place for affected children.

Long Term Effects of NAS

Cognitive



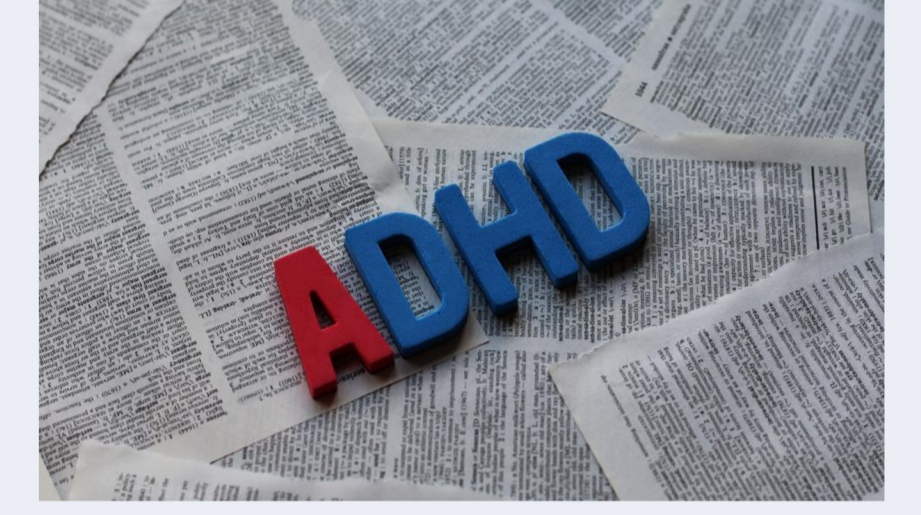
- Poor cognitive skills
- Poor perceptual skills
- Poor memory skills

Physical



- Hearing**
- Otitis Media
- Vision**
- Strabismus
 - Nystagmus
 - Cerebral Impairment

Behavioral

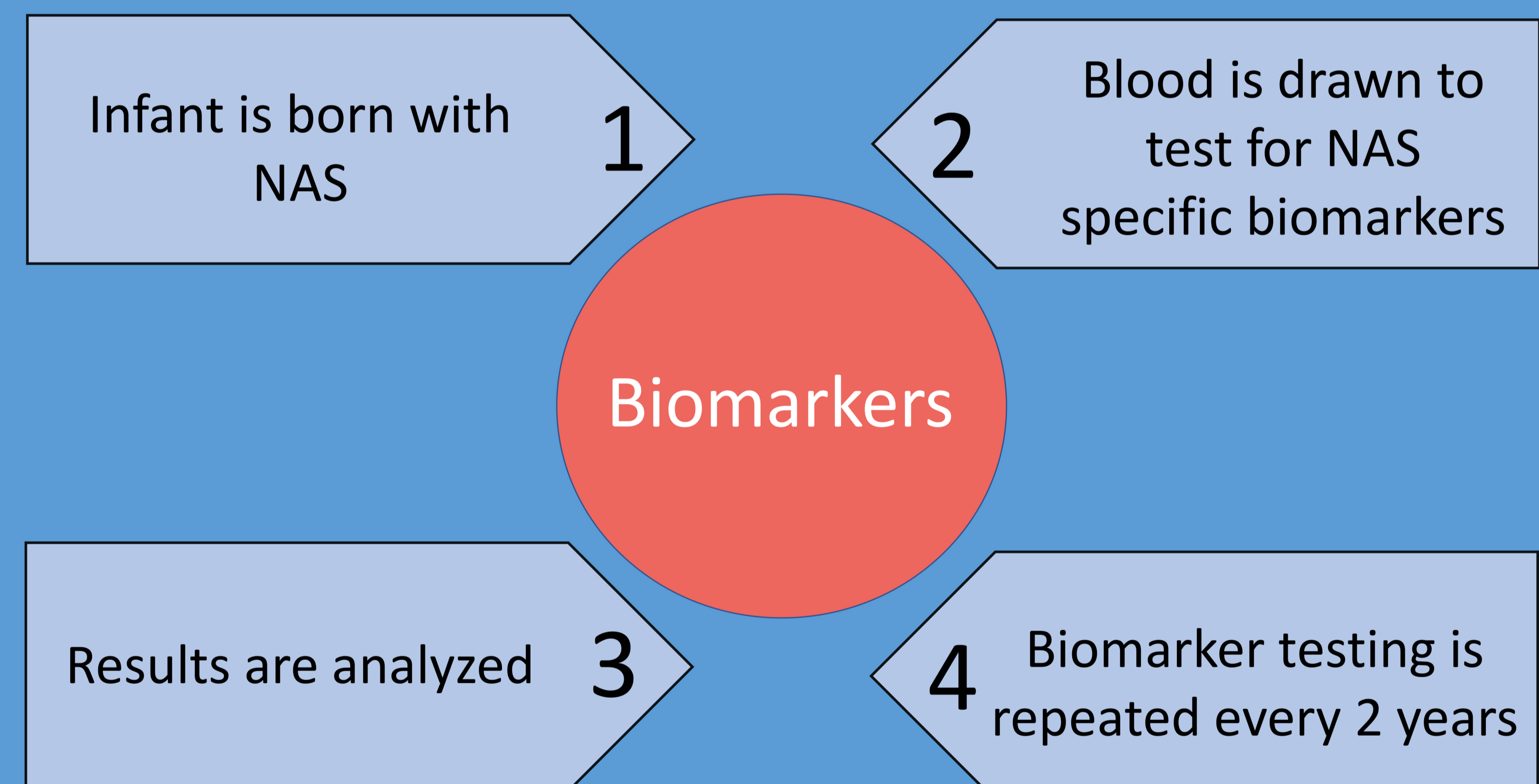
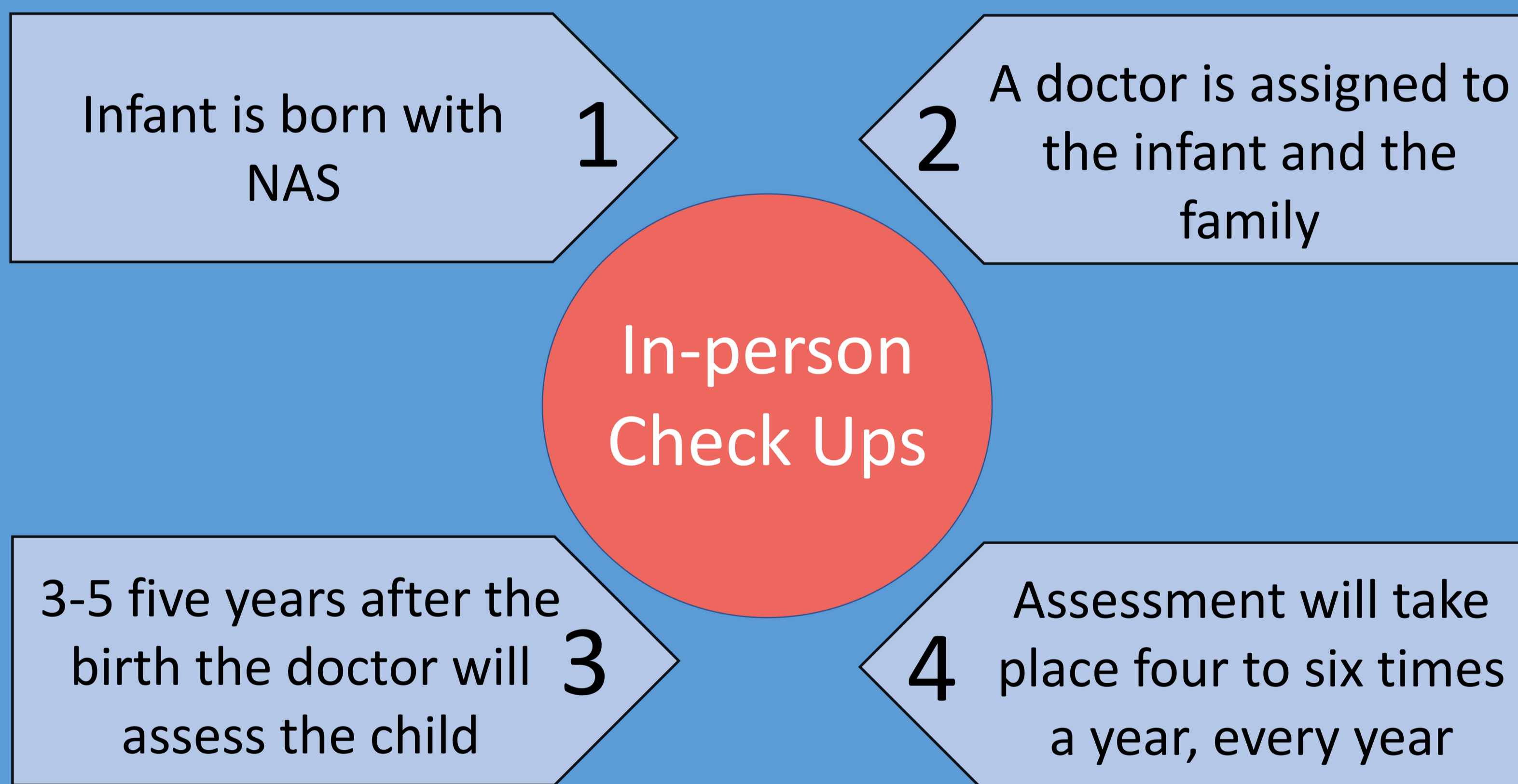


- ADHD/ADD
- Impulsivity
- Hyperactivity
- Short Attention Spans

Our goal is to create a program that will diagnosis children with potential long-term effects of NAS and to provide support to children throughout their childhood.

Proposed Solution

We decided to pair biomarkers with in person check ups: While biomarkers help to flag children at high risk for potential disabilities associated with NAS, in person check up serve as early intervention by providing support for the child before the effects become too problematic.



Implementation Strategy

Step One



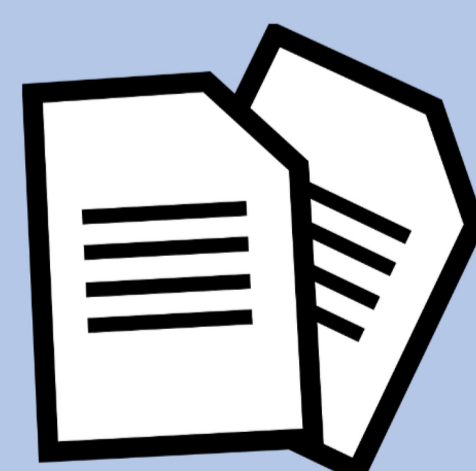
Research similar programs to find the best methods to track NAS affected children.

Find ways to fund the program and work out potential legal problems.



Step Two

Step Three



Create the federally funded program.

Hire workers and implement the program.



Step Four

Step Five



Research NAS specific biomarkers and implement them into the follow up program.

Solution Assessment

Assessments will be done biyearly between the ages of 3 to 18 to moderate the success of the program. Success will be based of many factors including behavior improvement and test scores.

We would like to thank Dr. Julia Few and Dr. Matthew Grossman for their contribution on this project.