

Newborn Hearing Screening: Early Education = More Satisfied Mothers

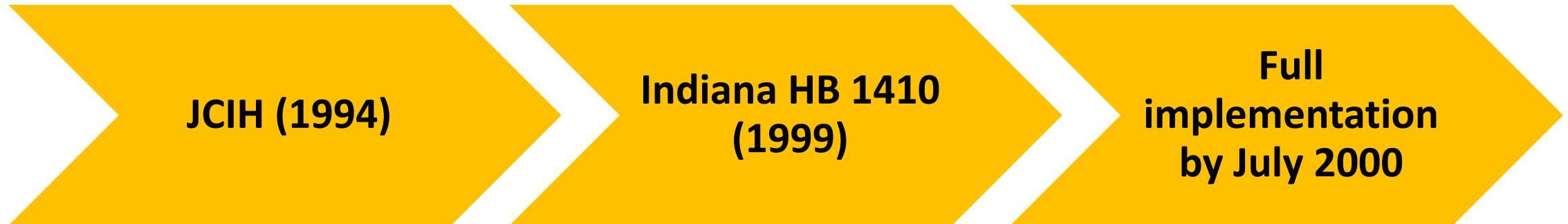
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- Kristin Taylor, RN
- Renee Knutson, MD
- Kevin Richards, PhD
- All the mothers who completed the questionnaire with a 4- to 6-week old infant!

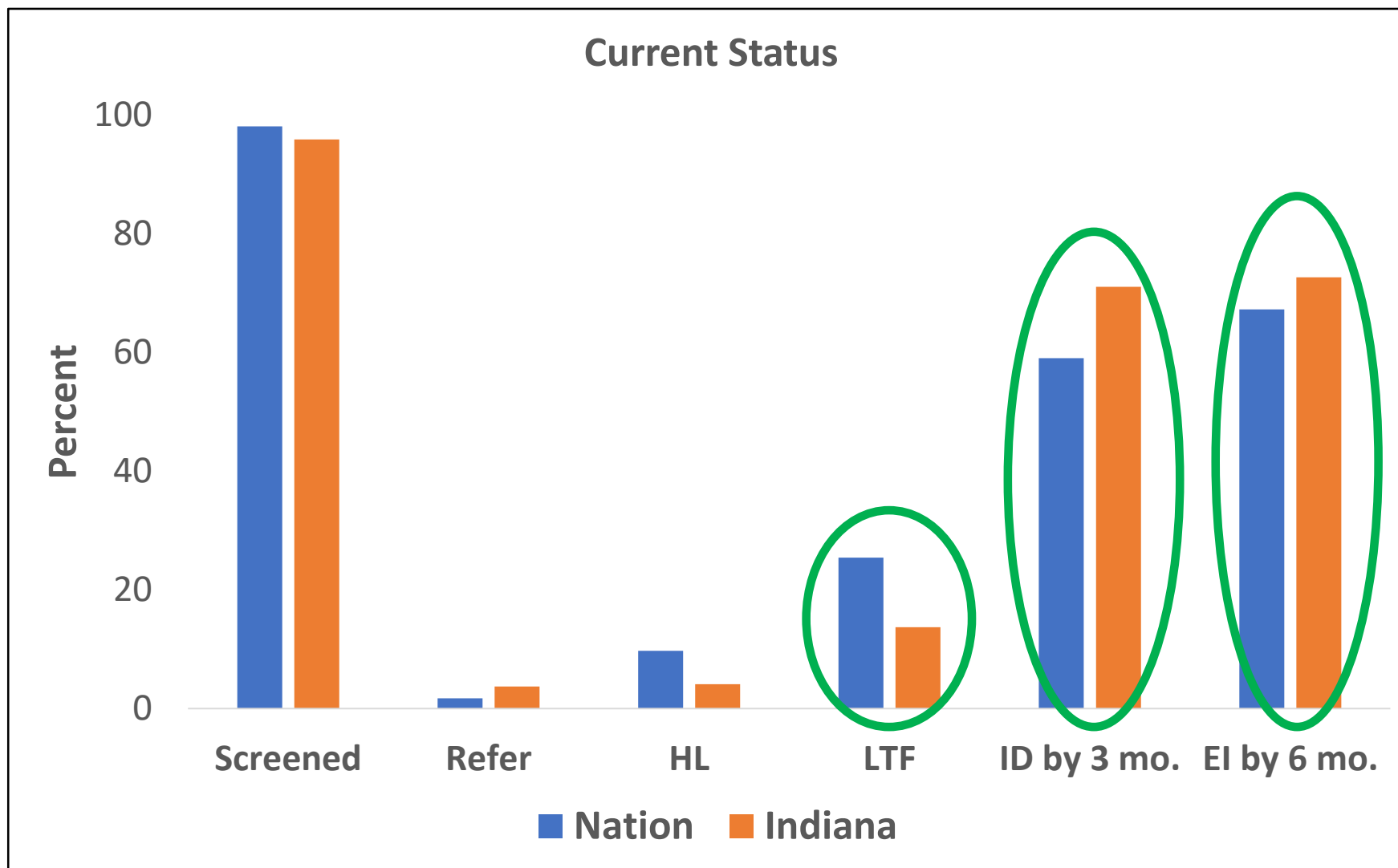


- Background Information
- Aim of project
- Results
- Discussion

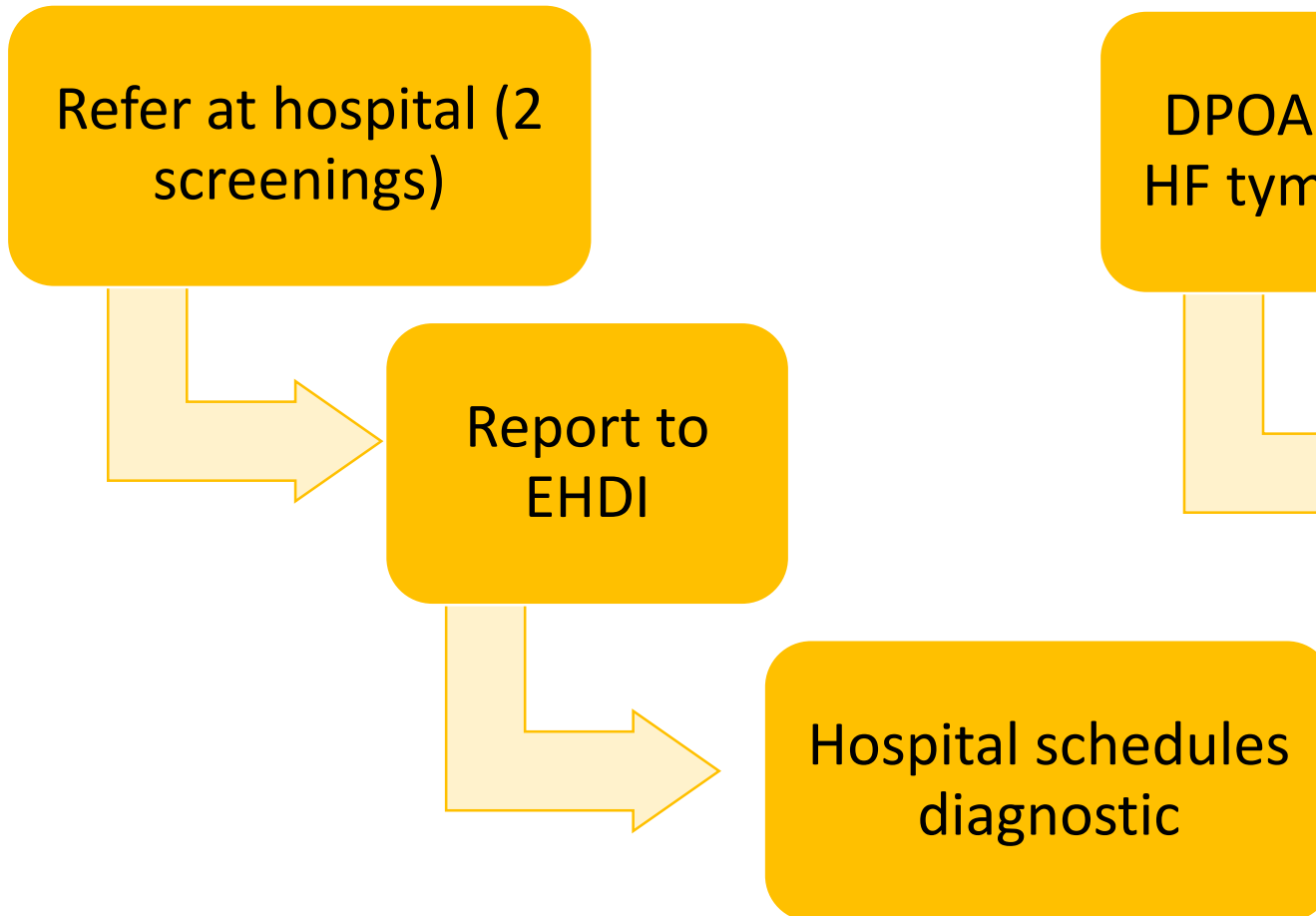
The Beginning of Universal Newborn Hearing Screening



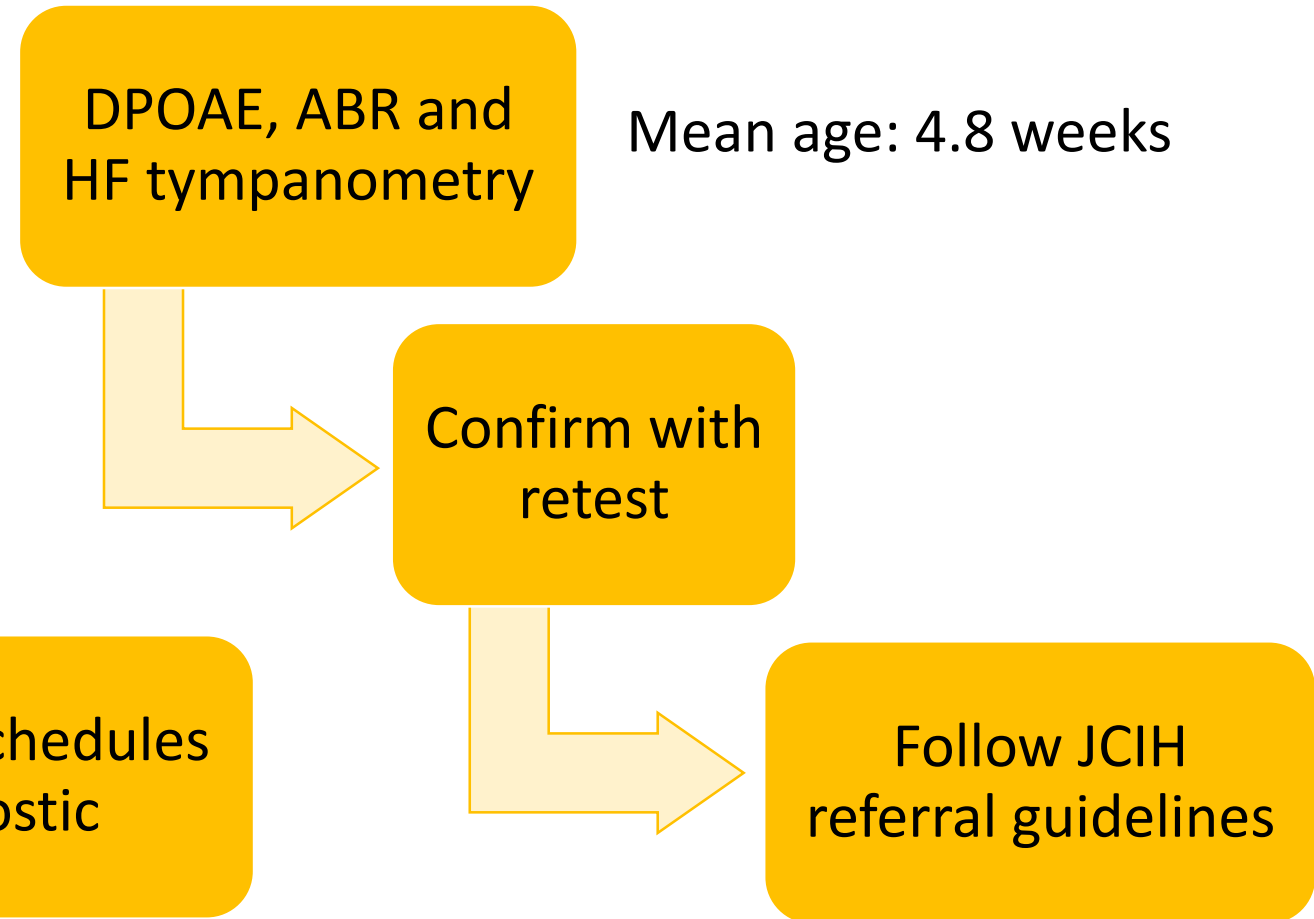
43 states mandate newborn hearing screening (NCHAM)



Indiana Procedures



Purdue Procedures



- Parental role: Awareness and Satisfaction
 - **Low awareness** of NBHS:
 - Only 62.9% of parents recall the hearing screening (Pynnonen et al., 2016)
 - 87-97% of mothers support and are satisfied with NBHS
 - **But, less satisfied with knowledge and information regarding NBHS** (Hergils & Hergils, 2000; Fox & Minchom, 2008; Lam et. al., 2018)

- Parental role: Timing and Anxiety
 - **Best time** for communication about NBHS is **before** birth (Arnold et. al., 2006)
 - But communication usually happens only at the **hospital**
 - Only 3 states have an informational brochure specifically to be provided before birth (Krishnan, Lawler & Van Hyfte, 2017)
 - Lack of knowledge and understanding may contribute to lower satisfaction or increased anxiety (Clemens, Davis & Bailey, 2000; Laugen, 2013)

- Will providing expectant mothers in their third trimester with information regarding the NBHS process increase their satisfaction with the NBHS program?

Methods

Intervention Group (n=25)

- OB/GYN nurse provided IN brochure re: NBHS during office visit at third trimester
- Modified Parent Satisfaction Questionnaire with Neonatal Hearing Screening Program* (PSQ-NHSP) completed at post-partum office visit

Control Group (n=25)

- No information provided prior to birth of infant
- Modified PSQ-NHSP completed at post-partum office visit

The WHO, WHAT, and WHY of Newborn Hearing Screening

WHO?

Your baby, and every baby born in Indiana, should be screened for hearing loss BEFORE your baby leaves the hospital. If your baby is not born in a hospital, call the nearest hospital to set up a time to have the screening completed before your baby is one month old. If the hospital cannot complete the screening, call the Early Hearing Detection & Intervention (EHDI) Program at 888.815.0006. Individuals who are deaf or hard of hearing may access Relay Indiana to assist you with this call at 711, if needed.

Has your baby's hearing been screened?

WHAT?

A hearing screening checks to see if your baby's hearing is normal or if more testing is needed. The screening is quick, easy, and can be done while your baby sleeps or rests quietly. Two ways to screen hearing are OAE (Otoacoustic Emissions) and ABR (Auditory Brainstem Response). Both of these are safe and do not hurt your baby.

- The OAE is done by putting a tiny microphone in each of your baby's ears, and checking each ear's response to sounds.
- The ABR is done by putting three electrodes on your baby's head and checking the brain's response to sounds played in your baby's ears.

WHY?

If not found early, hearing loss can delay the normal growth of your baby's speech and language skills. About every 48 hours, a baby is born in Indiana with hearing loss. Hearing loss cannot be seen. Your baby cannot tell you if he or she cannot hear your voice and other important sounds.

If a hearing loss is present, there is hope and help available. Research shows babies born with hearing loss that is found early have a good chance of learning speech and language like other babies.

Questions?

Call the Early Hearing Detection & Intervention (EHDI) Program at (855)875.5193 or go online to www.hearing.in.gov. We can answer questions about your baby's hearing. Individuals who are deaf or hard of hearing may access Relay Indiana to assist you with a TDD call at 711 if needed.

Your primary care provider or your medical home can help. This is your baby's doctor or other medical provider who helps keep your child healthy and oversees your child's medical needs.

For general questions or concerns about your baby, call the Indiana Family Help Line at (855)435.7178 or go online to www.IFHL.ISDH.IN.gov



Script: Here is some information about the newborn hearing screening program in Indiana. Every baby's hearing is screened at the hospital before discharge. The screening is safe and quick and will tell you if your baby's hearing is normal or if more testing is needed all while your baby sleeps or rests. The screening is important because if hearing loss is not detected early, it can affect how your baby learns to talk and communicate. But if detected early there are many things that can be done to help your baby. Do you have any questions? You can take a few minutes to read the information and ask me any questions that you have.

- Satisfaction with tester (6 questions): 5-point Likert type scale
 - Informed parents about procedure, knowledgeable, skillful, approachable, gentle, informed parents about results
- Satisfaction with procedure (6 questions):
 - Length of screening, waiting time, test site, had a chance to ask about the program, procedure, and results
- Overall satisfaction with the program (2 questions)
- Additional information: (4 questions)
 - Prior information and brochure content

Plus qualitative questions

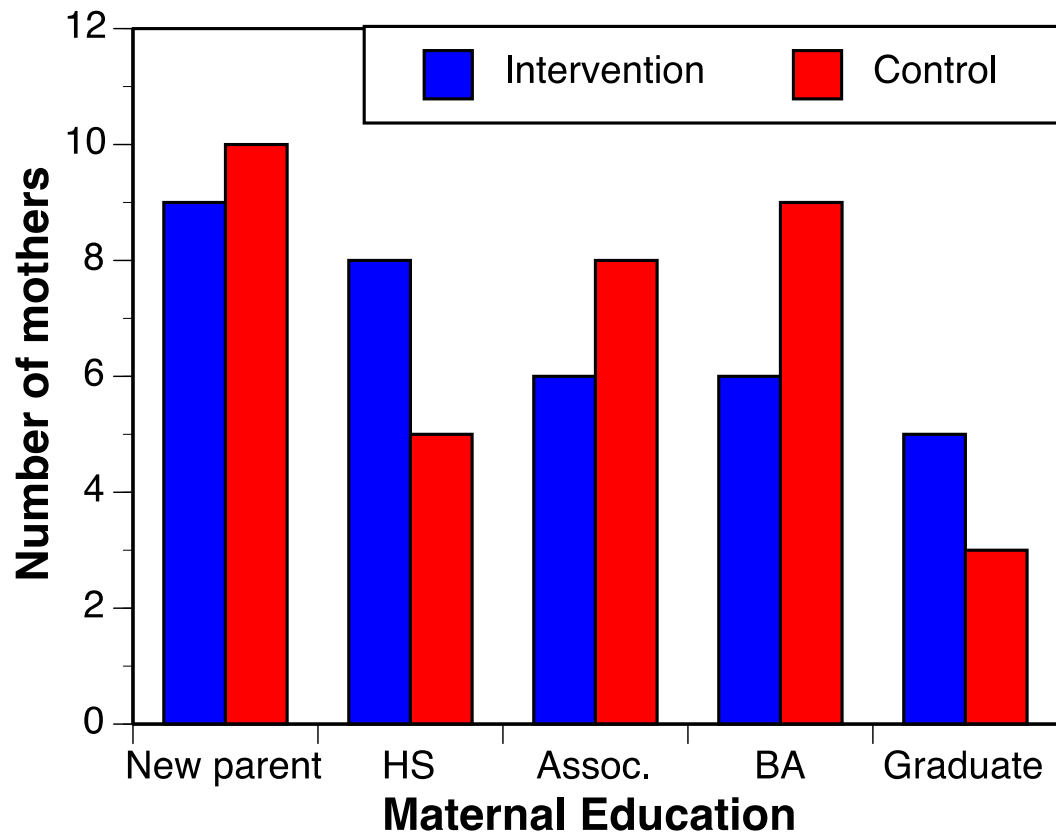
Mazlan, Hickson & Driscoll, 2006

Results

Results: Demographics

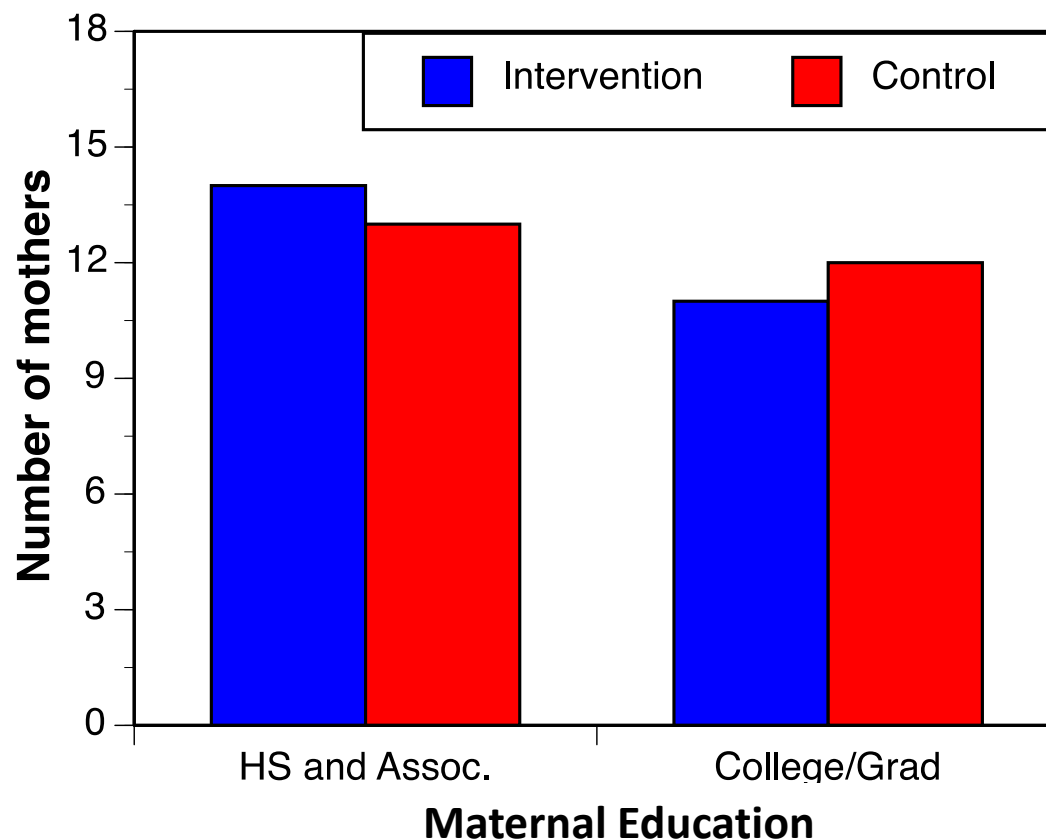
Intervention Group (n=25)

- Mean age: 28.6 years (16-41)



Control Group (n=25)

- Mean age: 29.8 years (21-44)



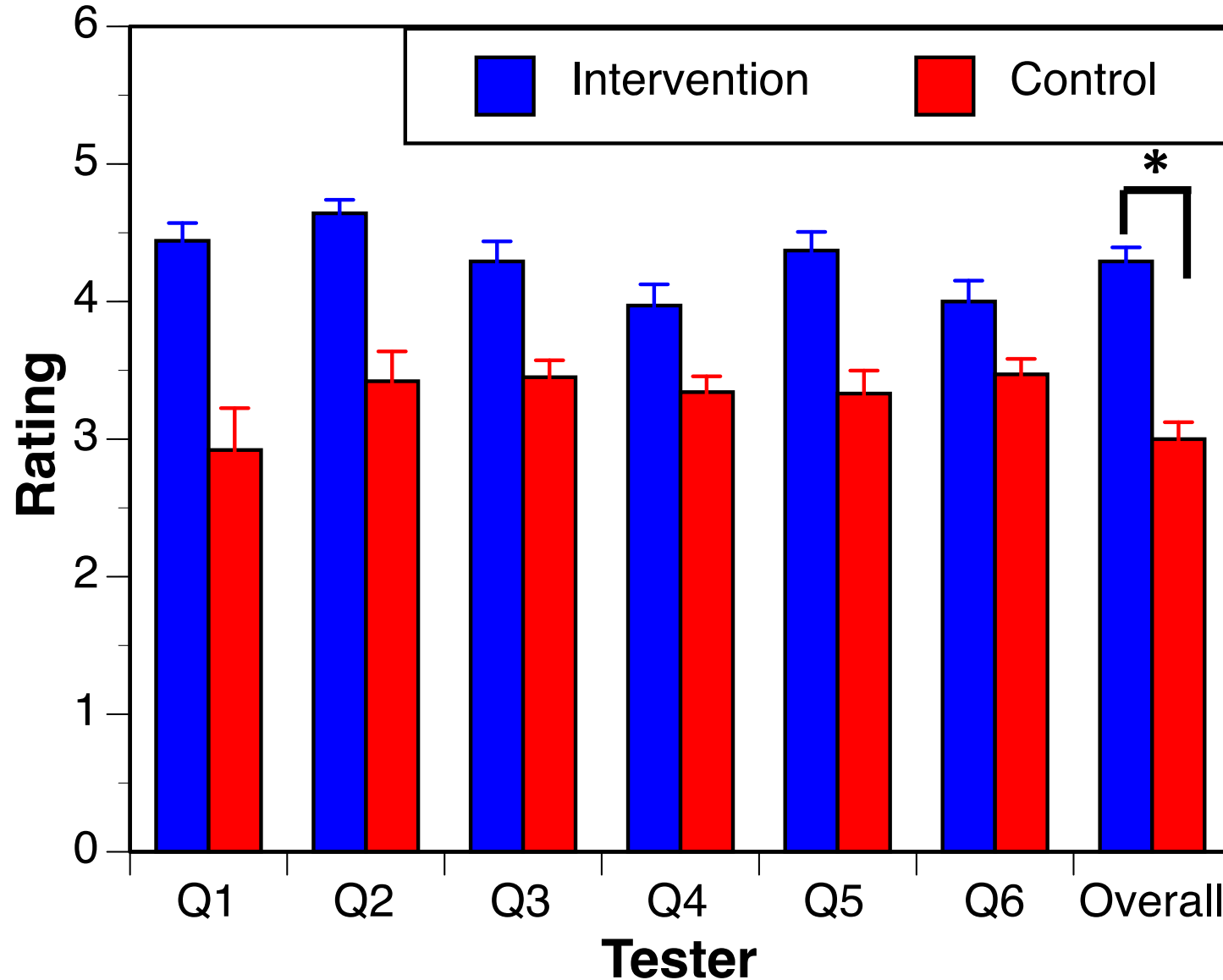
12 questionnaires excluded because of ambiguity

Intervention Group (n=25)

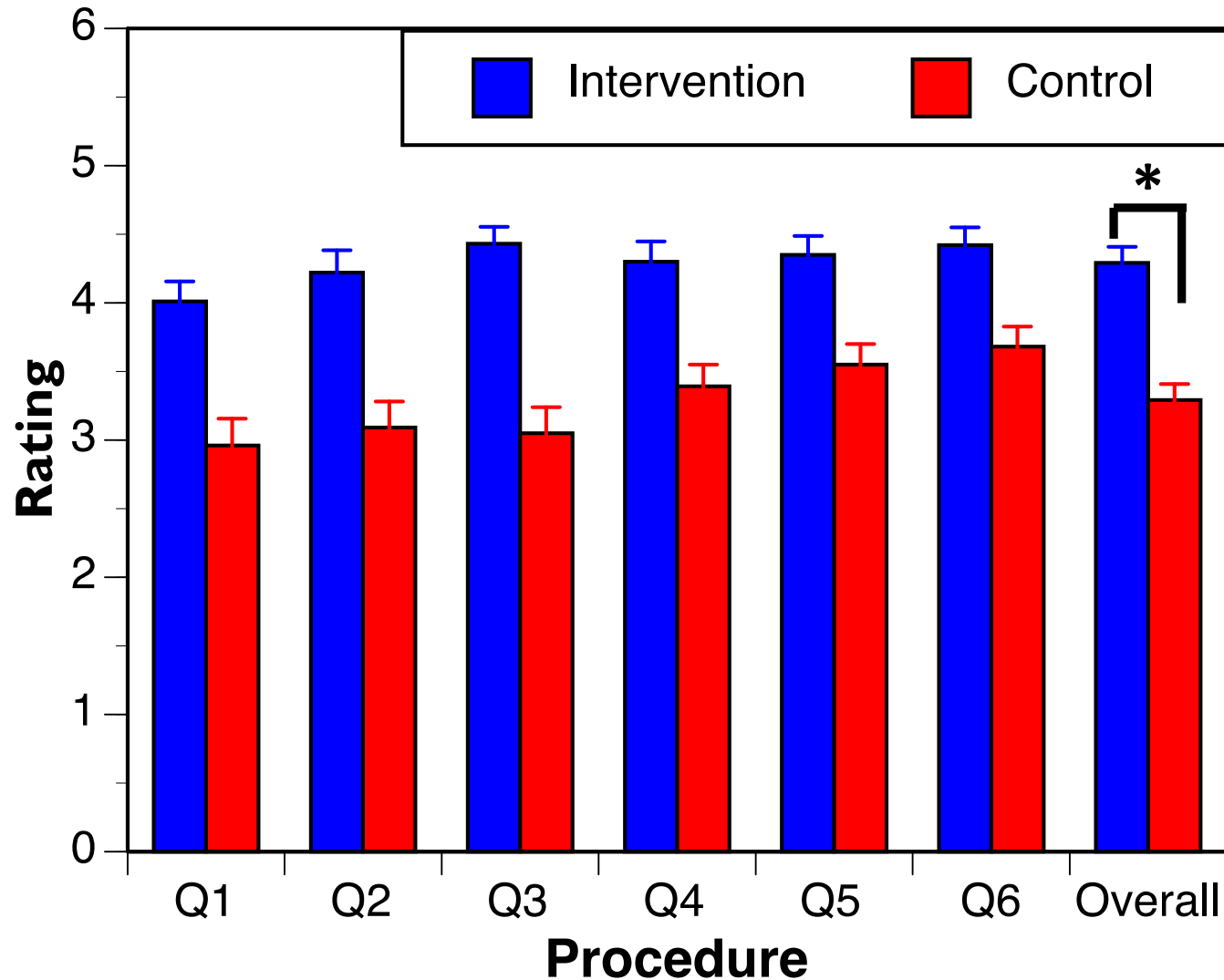
- Pass = 25

Control Group (n=25)

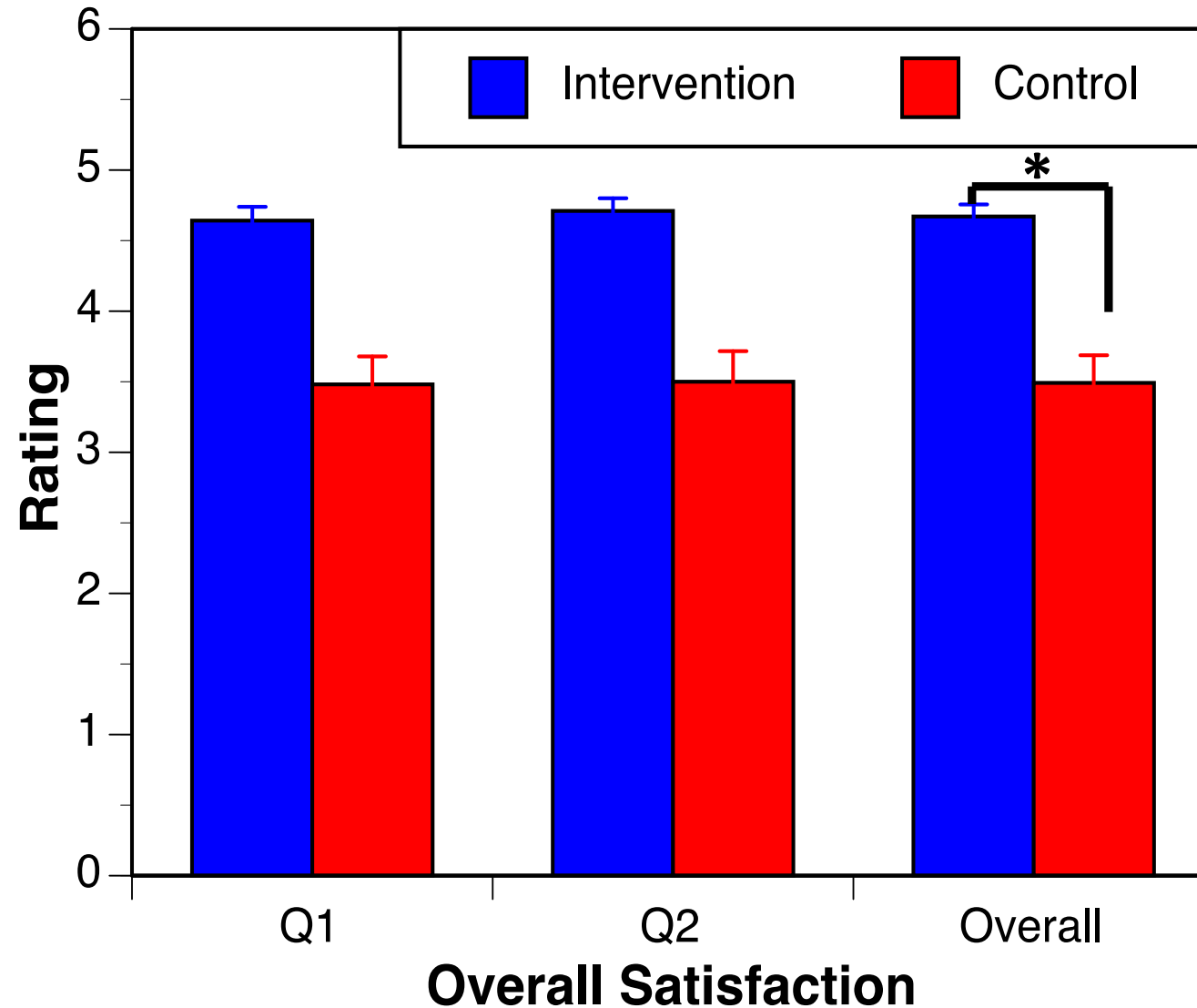
- Pass = 22
- Refer = 2
 - Received written info and have appointment = 1
 - Received verbal info = 1
- Don't know = 1



- Knowledgeable
- Skillful
- Approachable
- Gentle
- Sufficient information about
 - Procedure
 - Results

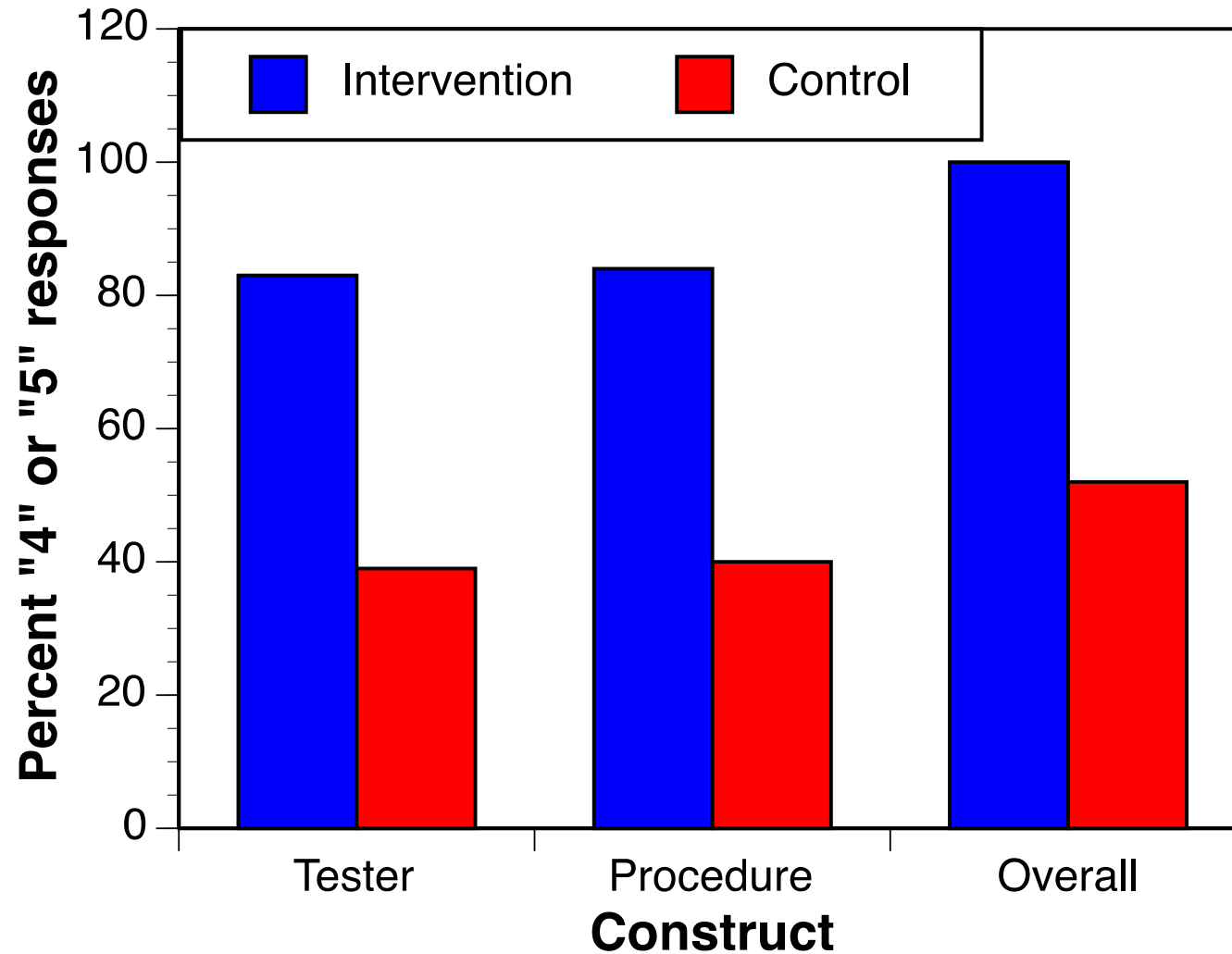


- Length of screening
- Waiting time
- Test site
- Had a chance to ask about
 - Program
 - Procedure
 - Results



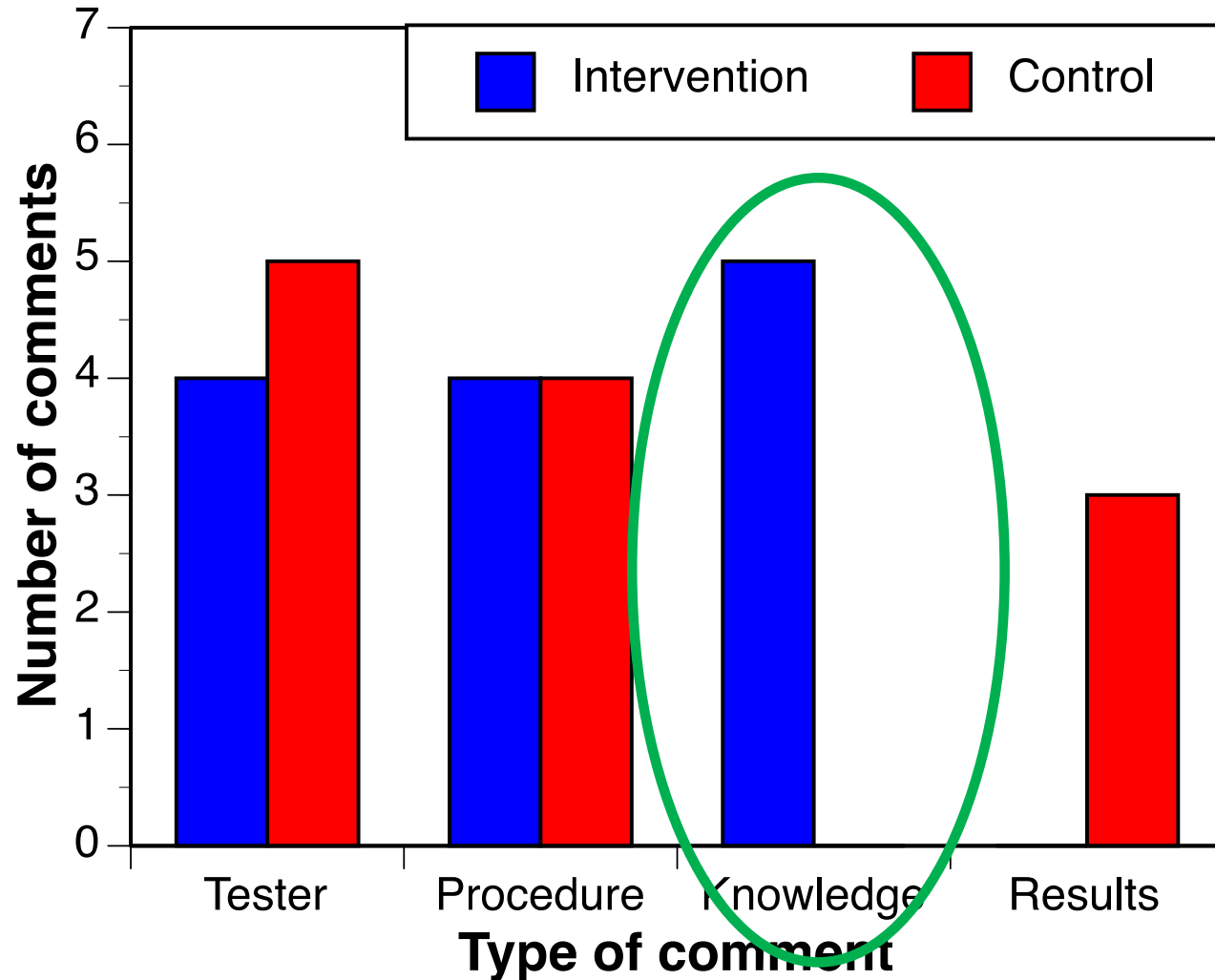
- Overall I was satisfied with the program
- I was not satisfied with the program

Results: % Positive Responses



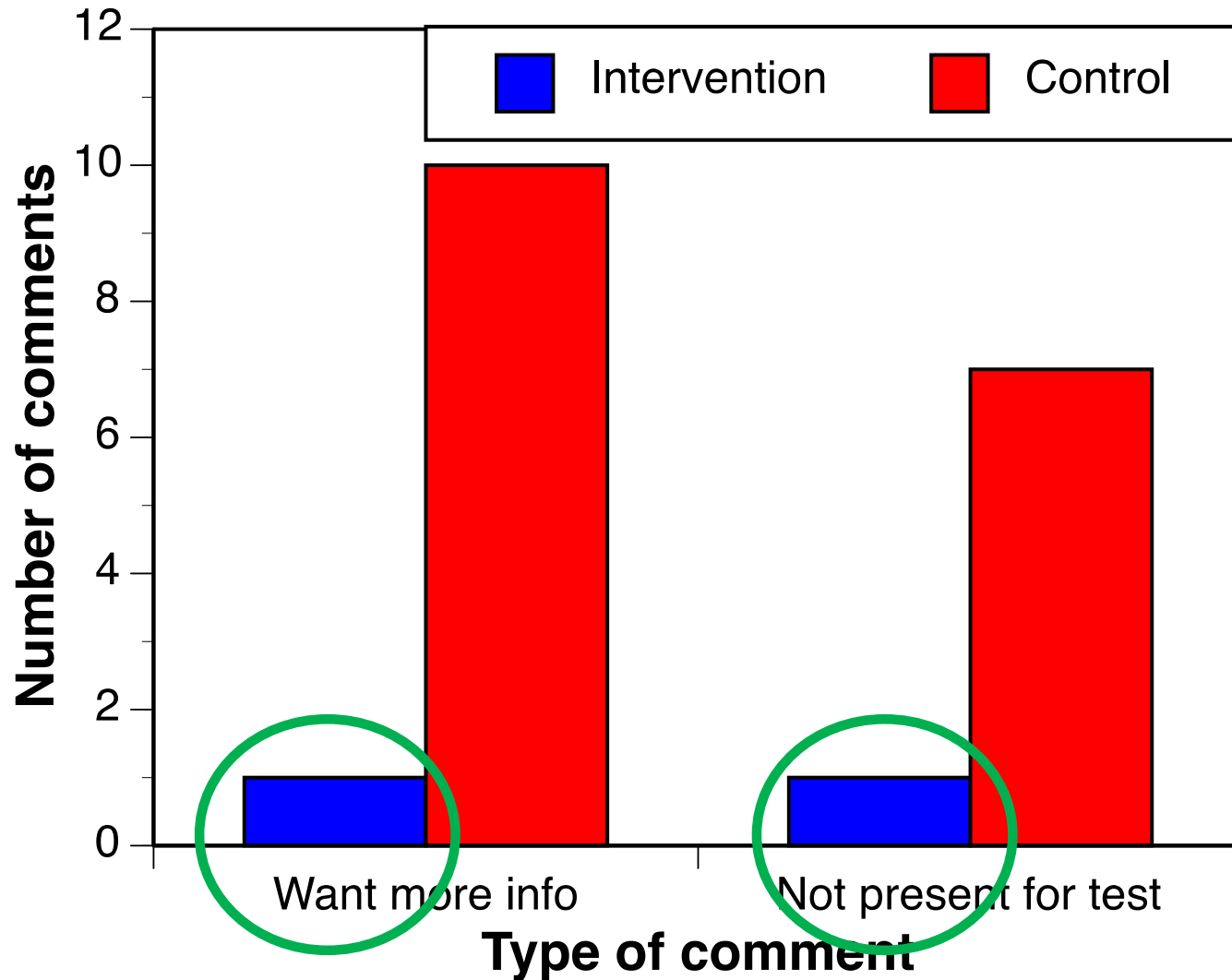
- More than satisfied about...
- Less than satisfied about...
- Suggestions
- Brochure

Results: More than Satisfied

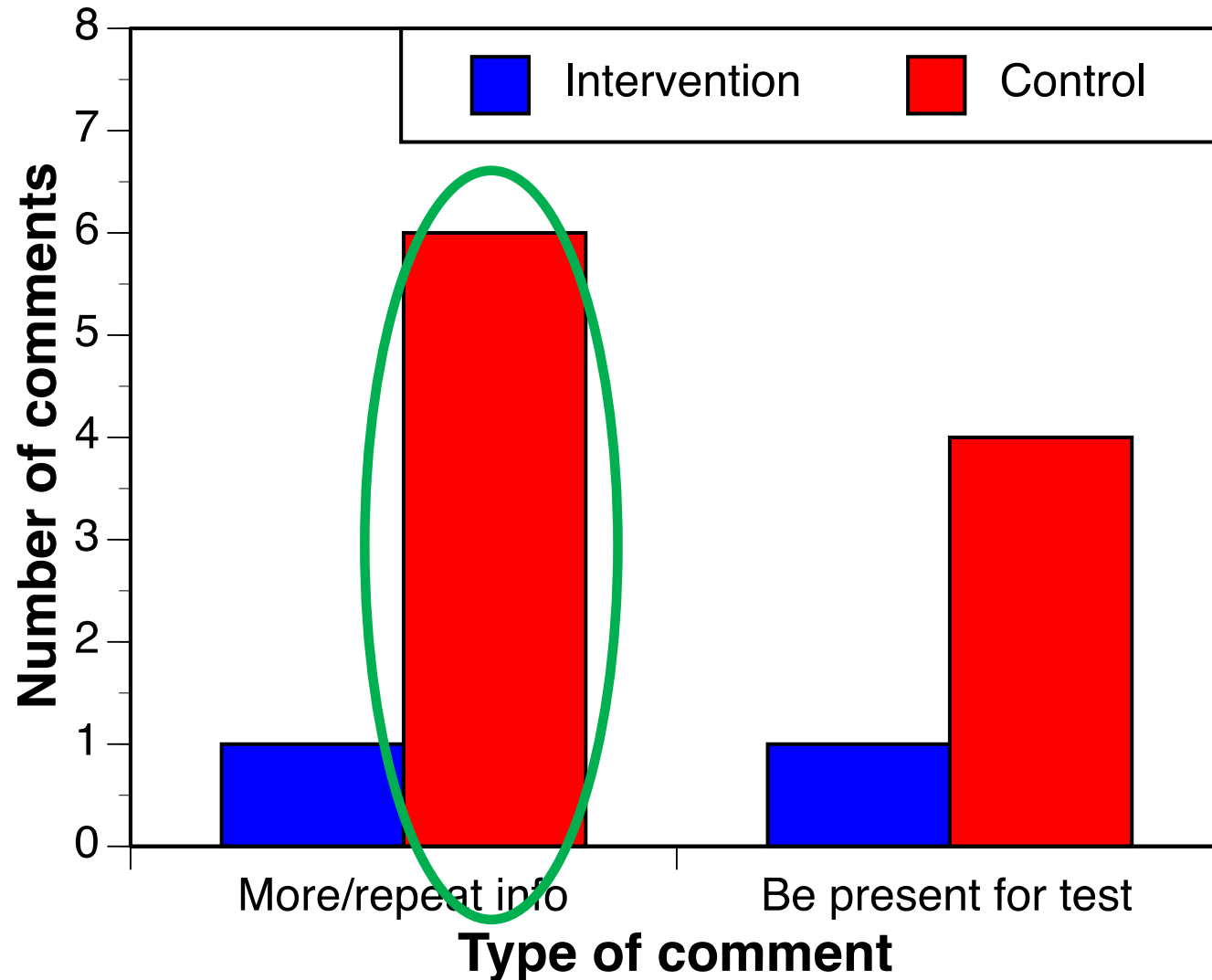


- 25 comments (I=13, C=12)
- Tester: “friendly”, “professional”, “cared”, “knew what they were doing”, “nice”, “polite”
- Procedure: “quick”, “convenient”
- Knowledge: “had prior info”, “plenty of info”
- Results: “test went well”, “given results”, “retested”

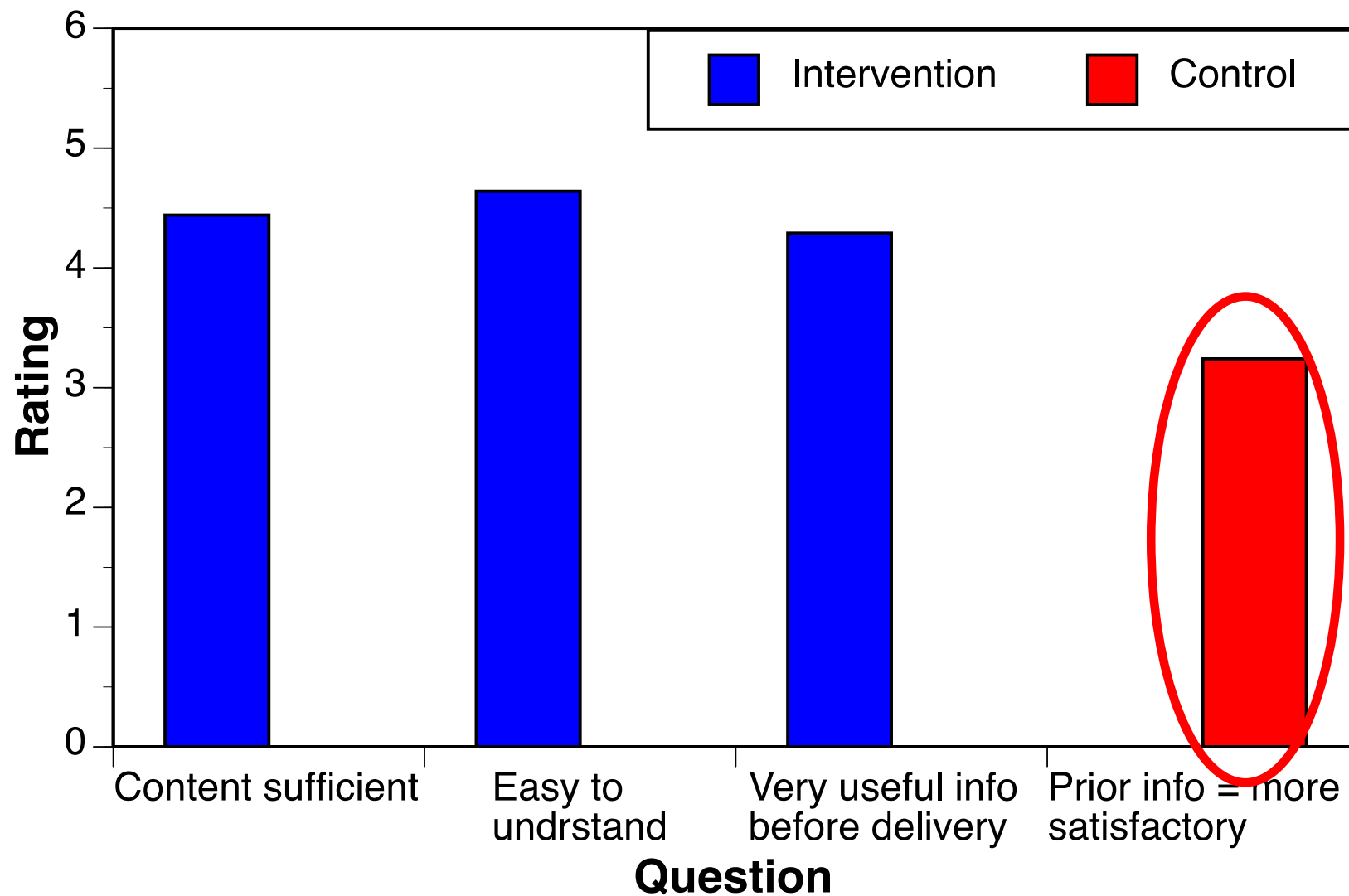
Results: Less than Satisfied



- 19 comments (I=2, C=17)
- Want info: “we were not given any info”, “no one explained how the test was done”
- Not present for test: “didn’t witness the test”, “would have liked to have been present”



- 12 comments (I=2, C=10)
- Information: “inform people about it”, “we never knew when he had it or how he had it done”
- Present for test: “let the mom go...if they choose”



- Mothers who receive information about NBHS prior to delivery during their third trimester are more satisfied with all aspects of the process
- Mothers would like to have the option to be present for the screening
- Mothers thought the content of the IN general brochure was sufficient, easy to understand, and very useful before delivery

- EHDl and NBHS programs may improve by
 - Educating OB/GYN physicians about NBHS and
 - Having them provide NBHS information to expectant mothers
 - Asking if parents want to witness the screening when possible
- In the greater Lafayette, IN area:
 - Have Dr. Knutson continue to provide NBHS information before birth
 - Spread the word to partners in her practice to do the same
 - Share information with OB/GYN offices in the area

Thank You!

