To provide guidance to the investigators as they submit letters of intent, this document represents project ideas suggested by the CChIPS Industrial Advisory Board (IAB) as relevant to their member companies. If principal investigators are interested in one of these ideas, prior to submitting the letter of intent, it is strongly suggested to:

- Contact the designated IAB member for further clarification and discussion of the project concept
- Perform a comprehensive literature search to assess other work previously completed in the field.

More than one letter of intent for a given project will be accepted for evaluation by the IAB. Note that letters of intent are due on 10/15/2012 to Kristy Arbogast, PhD, arbogast@email.chop.edu. Please contact Dr. Arbogast with any questions.

Project ideas:

1. Injuries due to early graduation into booster seats
   - Describe the injury risk, patterns and causation scenarios for those children who have graduated to booster seats too early.
   Company: Evenflo
   Contact: Eric Dahle, Eric.Dahle@evenflo.com

2. In-vehicle automated systems and teen drivers.
   - Do in-vehicle automated systems that provide alerts or other assistance help or hurt teen drivers? How do these systems interact with teens’ relative inexperience and susceptibility to distraction? What role does experience and practice play with learning to use in-vehicle system?
   Company: Parallel Consulting
   Contact: Noelle LaVoie, lavoie@parallel-consulting.com

3. Learning disabilities and teen drivers.
   - How do learning disabilities impact the process of learning to drive? Do teens with learning disabilities have higher crash risks, and in what specific situations?
   Company: Parallel Consulting
   Contact: Noelle LaVoie, lavoie@parallel-consulting.com

4. Updated anthropometrics
Follow up study on current children to ensure data collected in the 1970’s is still relevant. This study could begin with a smaller sample set to validate the existing information and move to a broader sample if necessary.

Company: Britax
Contact: Ken Wittenauer, ken.wittenauer@britax.com

5. Real world top tether anchor strength
   - Determine the actual strength of top tether anchors in current automobiles. This study could include both static and dynamic testing of various vehicle anchors with a correlation back to FMVSS213 testing to help determine how we can design more effective tether systems for higher weight limit seats.

Company: Britax
Contact: Ken Wittenauer, ken.wittenauer@britax.com

6. Rear Facing Vs. Forward Facing Performance of ATDs
   - Understand the performance differences of the CRABI and the 3YO anthropomorphic test devices (ATDs) during Frontal and Side Impact testing when placed in both rear facing and forward facing orientations. The study should include measurements beyond the standard HIC/Chest G/Excursion standards to provide a more complete picture of the dynamics involved in testing each orientation. Actual crash data could also be introduced to supplement the test findings.

Company: Britax
Contact: Ken Wittenauer, ken.wittenauer@britax.com

7. Novice drivers and collision avoidance technology
   - How do novice drivers utilize collision avoidance technology? Do they tend to overdrive the capabilities of the systems, not use them at all or become too reliant on them? If possible, compare to more experienced drivers.

Company: State Farm Insurance:
Contact: Chris Mullen, chris.mullen.R7da@statefarm.com

8. Inflatable seat belts and child restraints
   - How do inflatable seat belts perform with child restraints?

Company: State Farm Insurance:
Contact: Chris Mullen, chris.mullen.R7da@statefarm.com

9. Test procedure development for lateral vehicle interior head impacts
   - Previous work has shown that in side and frontal crashes children often sustain head injuries from contact with the vehicle side/door lining. We would like to better understand this impact condition and develop a draft test procedure which could be used to assess the relative performance of different liner designs specific for the pediatric population.
10. Side airbags and the rear seat
   • Recently there has begun a growing trend of including side airbags in the vehicle's rear row increasing the interaction of small children with these side airbags optimized to protect adults in side impact crashes. Do these side airbags provide effective injury mitigation to children in crashes where they deploy?

Company: Honda
Contact: Doug Longhitano, douglas_longhitano@ahm.honda.com

11. In-vehicle monitoring systems and positive reinforcement for teens
   • Does positive reinforcement from an in-vehicle monitoring system cause better driving in teens? Set up a monitoring system in a vehicle to assess teen driving. Award points for ‘good’ driving which can translate to ‘goodies’ (e.g., downloads, movie tickets, branded clothing, etc.) that can be purchased quarterly, yearly, etc?

Company: Ford
Contact: Steve Rouhana, srouhana@ford.com

12. Voice interfaces and teen-parent interaction
   • If parents use voice interfaces, are teens more likely to use them too? How are teens who have experience watching parents drive and engage in voice-interface interactions different from teens who have not directly witnessed such parent-system interactions? What is the perception of risk for in-vehicle activities (e.g., talking on a phone, controlling a music player, getting route guidance information) carried out with voice interfaces vs. visual-manual or carried-in devices? What do teens see as barriers to using voice interfaces while driving?

Company: Ford
Contact: Steve Rouhana, srouhana@ford.com