MACPS Child Passenger Safety 2020 Hall of Fame Inductee Arnold W. Siegel

50 YEARS IN CHILD PASSENGER SAFETY

1932–2017

Mr. Arnold W. Siegel was a pioneer in the field of automotive safety. His innovative, life-changing research led to numerous safety features that are now common in production vehicles. He helped pioneer research on barrier, side-impact, rollover head-on, motorcycle and pedestrian crashes. He built the first infant and child dummies, crash tested them and worked on and designed the first rear facing infant safety seats and child booster seats resulting in significantly fewer injuries and deaths in auto accidents. In collaboration with others, he worked to reveal critical automotive safety issues and create life-saving solutions, bringing injury prevention to the forefront, forever altering the way automobiles are engineered. Mr. Siegel helped initiate SAE International's entry in the automotive safety field and contributed to many SAE standards and conferences; the result of which has greatly improved auto safety globally. Through the years, he served as a university research professor and industry consultant. Collaborating with a physician in 1960, Mr. Siegel began non-fatal, on-scene accident investigation using multi-disciplinary teams. He co-directed trauma research groups and developed and organized training programs for several governmental agencies, including the U.S. Department of Transportation and the National Transportation Safety Board.

Mr. Siegel was a major factor in the success of both SAE International and the SAE Foundation. He served on the SAE International Board of Directors, numerous Society committees, sub-committees and operating boards. In addition, he also was a long-standing member of the SAE Foundation's Board of Trustees and, for

years, served as co-chair of the SAE-managed STAPP Car Crash conference, which helped to place SAE International at the center of automotive safety progress.
In 1987, Mr. Siegel established the Arnold W. Siegel International Transportation Safety Award. This prestigious award is presented at the SAE Awards Ceremony: Honoring Excellence, which is held during SAE's annual World Congress.
He was instrumental in the success of the SAE Foundation's $25 million capital campaign and in helping raise funds to support SAE's STEM education programs.
Mr. Siegel was a SAE International Fellow, SAE Medal of Honor recipient, a member of the California Association of Criminalists, Sigma Xi and is a professional safety engineer. He was a member of the Attorney General's Traffic Safety Committee and the California Passenger Safety Resource Panel, and was a consultant to many agencies and companies, including Physicians for Automotive Safety, and the SAE International Accident Investigation Practices Subcommittee.

He received many accolades and awards, including: the Abelson Leadership Award 2008; Montana Ambassador's Plenipotentiary 2001 Award; the Humanitarian Fellowship Award; Save the Children Federation Distinguished Service Award; the Legacy of Gold Award from West Yellowstone Foundation. Mr. Siegel provided more than 50 years of dedicated and meritorious service to SAE International and the SAE Foundation.

INFLUENTIAL EARLY ARTICLES:

- Severy, DM, Mathewson, JH, Siegel, AW: "Crashworthiness of Automobile Seat Belts," testimony before a subcommittee of the Committee of Interstate and Foreign Commerce, House of Representatives 85th Congress, pp 157–180 (August, 1957).
- Nahum, AM, Siegel, AW, Hight, PV: "Injuries to Rear Seat Occupants in Automobile Collisions," Eleventh Stapp Car Crash Conference (1967).
- Siegel, AW, Nahum, AM, Appleby, MR: "Injuries to Children in Automobile Collisions," Twelfth Stapp Car Crash Conference (1968).
- Burg, FD, Douglass, JM, Diamond, E, Siegel, AW: "Automotive Restraint Devices for the Pediatric Patient," Pediatrics, Vol. 45, No. 40–53 (Jan. 1970).
- Siegel, AW, Runge, DE, Nahum, AM: "Bus Collision Causation and Injury Patterns," Fifteenth Stapp Car Crash Conference (Nov. 1971).
- Siegel, AW: "Statistics, Kinematics and Restraints," 30th American Academy of Forensic Sciences Plenary Session, St. Louis (Feb. 1978)

Notables

1954–62: He conducted the first scientific crash test program for vehicles at UCLA, including full-scale crash tests (head-on, side-impact, and rollover types) not only of cars but also trucks, buses, and motorcycles. He also analyzed crashes involving pedestrians and focused on aircraft crash dynamics.

1960–80: As a research professor with a joint appointment at the UCLA Schools of Engineering and Medicine, Arne developed and built the first infant and child crash test dummies, which formed the basis for designing the first truly protective child safety seats. He was supportive of the earliest child passenger safety advocacy efforts such as Physicians for Automotive Safety, Women for Political and Social Action (WPSA), and Action for Child Transportation Safety. The film, *Broken Bus*, (1967) documents UCLA crash tests of school buses, demonstrating the lack of structural integrity of buses of that time. This research and film were instrumental in encouraging the National Highway Traffic Safety Administration to promulgate standards for school bus vehicle bodies. He also pressed for seat belts on school buses, an issue fraught with controversy but which has finally become reality.

1980–2017: Arne continued his research into biomechanics, mechanisms of injury, and the analysis of automotive and aircraft crashes. He served as a consultant nationally and internationally. At the advocacy level, he remained involved until his death in guiding the ongoing work of SafetyBeltSafe, U.S.A. (which grew from WPSA). He and his wife, Stephanie, founded the "Siegel SafetyBeltSafe, U.S.A., Child Restraint Award for Excellence" in 2015.

During his last 25 years, in Montana, where Arne and his wife vacationed and then lived in retirement, they started the West Yellowstone Foundation, which provides scholarships for local students as well as grants for other work in the Yellowstone/Bozeman area. For his work in STEM Education throughout Montana, he received the Montana Ambassador's Plenipotentiary Award.

Those of us who became active in protecting child passengers in the early 1970s used Arne's work as our foundation. Those who came to CPS later may not have known his name but have used the knowledge that he researched and established in our teaching and other work. Arne continued his support of advocacy and injury prevention throughout his life.