Characterization of Dockless Electric Scooter Related Injury Incidents — Austin, Texas, September–November, 2018

Learning Objectives
Objective 1. To describe an epidemiologic approach to collect injury and risk factor data on the use of rentable dockless electric scooters, a new transportation modality being seen in many cities nationwide.
Objective 2. To describe the type of injuries and risk factors associated with rentable dockless electric scooters.

Statement of Purpose
Rentable dockless electric scooters (e-scooters) are shared electric-assisted scooters that are an emerging transportation modality being introduced in cities nationwide. Limited e-scooter related injury data exists. To inform data-driven injury prevention strategies, we characterized e-scooter related injuries and calculated an injury incidence rate.

Methods
Potential e-scooter related injury incidents occurring in Austin, Texas from 9/5/2018 to 11/30/2018 were identified by searching for the word “scooter” in 1) Emergency Medical Service (EMS) narratives, and 2) Emergency Department chief complaints from Austin Public Health’s syndromic surveillance system. Injured individuals were contacted by phone, text, and letter and were administered a standardized questionnaire about e-scooter related injury risk factors and outcomes. Abstraction of medical records was completed for individuals who could not be contacted. E-scooter related injury incidents were classified as confirmed if the injury was related to an e-scooter; probable incidents were classified as an injury related to an electric scooter, not otherwise specified. Incidence rates were calculated by using the number of interview confirmed and probable e-scooter related injury incidents as the numerator and the number of e-scooter trips occurring during the study period as the denominator.

Results
During the 87-day study period, we identified 192 persons with confirmed or probable e-scooter-related injuries. Injured e-scooter riders (n=190) were 55% male, nearly half of riders were 18–29 years of age (range 9–79 years), and 14% were hospitalized. Of the injuries reported, 48% sustained a head injury and 35% of riders sustained bone fractures (excluding nose/fingers/toes). Among interviewed riders (n=125), the majority (55%) of e-scooter injury incidents occurred in the street, 11% involved a collision with a motor vehicle, a third involved first-time riders, 41% of the injury incidents occurred on the weekend (Saturday and Sunday), and <1% of riders reported helmet use. The e-scooter related injury incidence rate was 20 per 100,000 trips.

Conclusions
A high proportion of e-scooter related injuries involved potentially preventable risk factors, such as lack of helmet use, or motor vehicle interaction. Interventions aimed at these risks and education to first-time riders could potentially reduce injury incidence and severity.

David Zane
David Zane
David is an injury epidemiologist at the local health department (Austin Public Health) in Austin, TX. He previously worked at the Texas Department of State Health Services as an injury and disaster epidemiologist.
He has been active in Safe States Alliance (previously STIPDA), serving as past officer (Vice President), and former chairs of 2003 Injury Surveillance Workgroup and former Disaster Epidemiology Special Interest Group.
A Unified Approach to Documenting and Coding Injuries Associated with Motorized Dockless Scooters

Learning Objectives
1. Understand the benefits of having a unified coding system across multiple hospital systems that improve the ability to capture injuries associated with emerging technology.
2. Learn how to overcome the challenges associated with capturing information on an emerging topic, that previously had no work completed within its topic area.
3. Identify how an improved data system allows for stronger prevention work, as new innovations continually enter our system.

Statement of Purpose
Motorized dockless electric scooters have emerged as a common method of transportation for people living in over 100 cities across the United States. In 2016, with the launch of the ICD-10 coding system, these devices were not designated with an ICD-10 specific code, as they had not emerged as a mode of transportation. Over the past year members of Texas’ Governor’s EMS Trauma Advisory Council (GETAC) Injury Prevention and Public Education Committee have worked to establish a unified ICD-10 code to capture the total number of injuries sustained on these devices. This proposal underlies the process in which members of the above committee worked to unify a large state’s hospitals and pre-hospital systems, as a means of improving overall data quality.

Methods
Members of the committee conducted a preliminary investigation of all current ICD-10 coding and their designated intended purpose. This included code book reviews, ICD-10 specialist outreach, and data dictionary mining. Surveys were also sent to representatives of the 22 trauma service areas comprising Texas, to get appropriate coding feedback from both hospital and pre-hospital stakeholders. Submitted codes were analyzed and reviewed in comparison to appropriate meaning, and applicability to the devices.

Results
As a result of the project ICD-10 code V00.18 and the subsidiary ICD-10 codes that fall under it was identified as the appropriate code for usage. Members of the committee are presenting the code for statewide adoption through the full state GETAC council.

Conclusions
Establishing consistent usage of ICD-10 coding related to motorized dockless scooters is important for future public health research, as a means of being able to consistently account for the total number of people injured while using these devices. A statewide coordination of coding these injuries, ensures that we will be able to conduct large scale efforts focusing on minimizing and reducing the total number of injuries sustained on these devices into the future.

Mr. Kevin C Rix, Jr, MPH
Dell Seton Medical Center at the University of Texas
TX
Mr. Kevin Rix, MPH is the injury prevention coordinator at Dell Seton Medical Center at the University of Texas. Since 2014, Kevin has been tasked with starting, growing, managing and maintaining the injury prevention program for the only Level 1 Adult Trauma Center in Central Texas. His work at Dell Seton, has allowed him to work on projects covering many aspects of injury and violence prevention, from community programming, research, advocacy work, and in-patient services, across many different injury topics and risk areas. Kevin received his Bachelor’s degree in public health from Syracuse University in 2012, and his Masters in Public Health from Boston University in 2014. Kevin is currently pursuing his Ph.D at the University of Texas Health Science Center at Houston, with a concentration in Behavioral Science.