

For All Emergency Medical Care Providers

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April 2018

# Maryland Trauma System's Distracted Driving Prevention and Awareness

In recognition of April's National Distracted Driving Awareness Month, the Maryland Trauma Quality Improvement Committee (TQIC), made up of representatives from Maryland Trauma Centers, held Distracted Driving Prevention Awareness events on April 4 and 5 at Trauma Centers across the state. Distracted driving continues to be a dangerous, escalating problem on Maryland's roadways. Maryland Trauma Centers see the tragic results that occur when individuals drive while distracted.

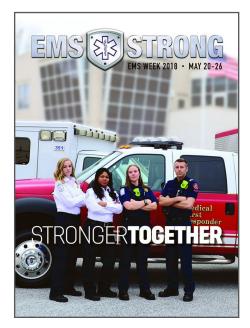
The events featured educational and interactive displays to bring awareness and help prevent distracted driving, including a new component: drowsy driving. Drowsy driving can happen to anyone; however, shift workers, such as emergency services and hospital workers are at a higher risk. Materials focusing on the effects of driving while drowsy among these groups were also distributed during this awareness program. Each of the events held are detailed below.

The Johns Hopkins Hospital Adult Trauma Center and Johns Hopkins Children's Center co-hosted a Road Safety Fair featuring information on distracted driving crash data, evidence-based prevention programs, policy implementation, and prevention successes. Representatives from the Maryland Legal Resource Center, Maryland State Police, and AT&T were present.

The Johns Hopkins Bayview Medical Center partnered with Johns Hopkins Wilmer Eye Trauma Center and Curtis National Hand Center at MedStar Union Memorial Hospital to host the 2nd Annual Distracted Driving Awareness Fair, featuring road safety

## National EMS Week 2018

This year, National EMS Week 2018 will be celebrated May 20–26. The EMS STRONG theme for 2018 is "Stronger



Together." Special theme days will be observed during the week:

- Monday: Education
- Tuesday: Safety
- Wednesday: EMS for Children Day
- Thursday: Save-A-Life (CPR and Stop the Bleed)
- Friday: EMS Recognition Day

MIEMSS will be holding the Annual Stars of Life and Right Care When It Counts awards in Annapolis on April 23, 2018. This event recognizes Maryland emergency responders, citizens, and youth who have provided exceptional service in caring for others.

National EMS Week brings together local communities and medical personnel to promote safety and honor the dedication of those who provide the day-to-day lifesaving services of medicine's "front lines." This information can be used throughout the year for public education and safety programs. For additional information, contact the American College of Emergency Physicians (ACEP) at <u>www.acep.org/emsweek</u>. information tables focusing on distracted and drowsy driving. Representatives from AT&T were also present

Suburban Hospital—Johns Hopkins Medicine Trauma Center hosted a Distracted Driving Safety Fair.

Peninsula Regional Medical Center trauma staff partnered with the Maryland Highway Safety Office and AT&T to host an informational booth on distracted driving.

At Sinai Hospital educational materials on distracted driving were displayed throughout the common areas of the hospital, and prevention messages were displayed on hospital LCD boards and via social media posts.

Western Maryland Health System focused on one of the highest risk populations for driving drowsy— health care workers by having a display in the lobby along with handouts and games.

Continued on page 2

### CONTENTS

Upcoming Pediatric Education
Opportunities3
L and C Tidbit3
EMS and Prevention Educational Conferences and Events
MIEMSS' Sudden Cardiac Arrest Steering Committee Initiatives4
2018 Medical Protocols for EMS Now Available4
Stay Alert and Get Home Unhurt5
International IV Fluid Shortages7
Trauma Injury Prevention Coordinators Collaborative <b>8</b> MSFA Holds Annual Hope
Awareness Cancer Walk8
Advanced Disaster Life Support Course9

### Maryland EMS News

# Maryland Trauma System's Distracted Driving Prevention and Awareness

Continued from page 1

Meritus Medical Center collaborated with AT&T to provide distracted and drowsy driving information in their cafeteria.

University of Maryland Prince George's Hospital Center Trauma Services collaborated with AT&T and Prince George's County Fire and EMS Department to host distracted driving prevention activities, including distracted driving goggles and a simulator, and passed out informational brochures and fliers in their main lobby.

The R Adams Cowley Shock Trauma Center's interactive distracted driving prevention event included hands-on safety demonstrations and activities, such as a distracted driving simulator, impaired driving goggles, and a distracted driving game pad. They partnered with URecFit, Maryland Auto Insurance, and AT&T for the event.





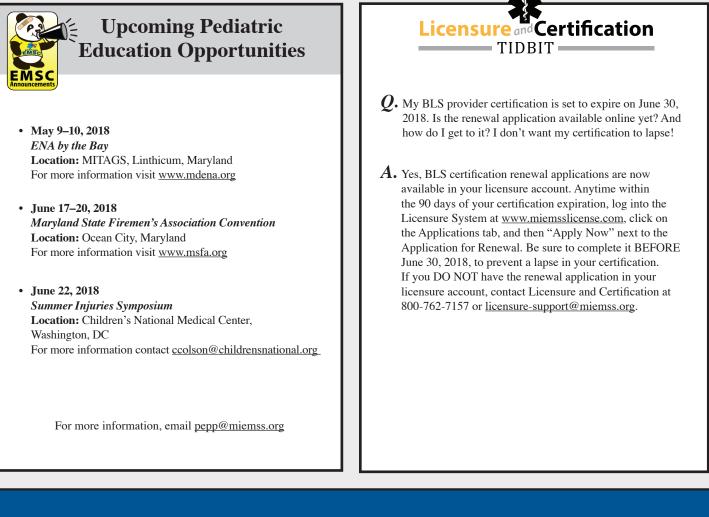








Distracted driving prevention and awareness events took place at a number of Maryland Trauma Centers in early April. Clockwise from top left, Meritus Medical Center, Suburban Hospital–Johns Hopkins Medicine, University of Maryland Prince George's Hospital Center, Johns Hopkins Bayview Medical Center, The Johns Hopkins Hospital, and the R Adams Cowley Shock Trauma Center. Johns Hopkins and Bayview photos courtesy of Susanne Ogaitis-Jones.



# EMS and Prevention Educational Conferences and Events

May 23–24, 2018 Maryland Resuscitation Academy Location: Howard County Public Safety Training Center, Marriottsville, Maryland REGISTRATION: ramaryland.org

June 11–12, 2018 *Point/Counterpoint XXXVII Trauma Conference* Location: Baltimore, Maryland **REGISTRATION:** www.mdcot.org/pcp-2018

June 16–22, 2018 Maryland State Firemen's Association Annual Conference and Convention Location: Ocean City, Maryland REGISTRATION: Coming Soon September 21, 2018 28th Annual Trauma Conference: Topics in Trauma Peninsula Regional Medical Center Location: Ocean City, Maryland REGISTRATION: Available starting August 8 For more information: 410-912-2844 or 410-543-7328

September 25, 2018 *Mid Atlantic Life Safety Conference* Location: Johns Hopkins Applied Physics Lab, Laurel, Maryland **REGISTRATION:** Coming Soon

# **MIEMSS' Sudden Cardiac Arrest Steering Committee Initiatives**

One of the ways the EMS and EMD components of the Sudden Cardiac Arrest (SCA) Steering Committee's initiatives is being addressed is through the Maryland Resuscitation Academy, which holds a two-day summit each spring and a one-day summit each fall. The summits are attended by EMS providers and EMS leadership to learn about improving optimal response and treatment to sudden cardiac arrest in the prehospital setting. A component for emergency medical dispatchers (EMD) was also added to the course to facilitate early dispatch and dispatch-assisted CPR instructions to bystanders prior to EMS arrival. The next summit is scheduled for May 23–24, 2018. Information about the Maryland Resuscitation Academy and registration can be found at <u>ramaryland.org</u>.

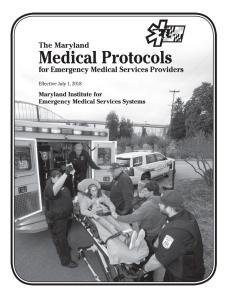
The SCA Steering Committee's public subcommittee continues to work to educate laypersons on recognizing sudden cardiac arrest and learning hands-only CPR. As in past years, MIEMSS has launched a hands-only CPR advertising campaign, including 30-second radio clips, MTA bus advertisements, and digital advertising. Hands-only CPR awareness events have been held at Aberdeen Ironbirds, Bowie Baysox, Frederick Keys, and Baltimore Ravens games.



The Lend-A-Hand, Save-A-Life advertising campaign for hands-only CPR includes bus tail banners, such as this one, on buses throughout Baltimore City.

# **2018 Medical Protocols for EMS Now Available**

MIEMSS is pleased to announce the release of the 2018 *Maryland Medical Protocols for Emergency Medical Services Providers*, which go into effect on July 1, 2018.



One copy of the abridged Pocket Protocols will be issued to each provider (EMR, EMT, CRT, and Paramedic). EMT students will also be given a copy of the abridged Pocket Protocols. The distribution of the abridged Pocket Protocols will be coordinated through the MIEMSS Regional Offices, MIEMSS Office of Licensure and Certification, and the State Office of Commercial Ambulance Licensure and Regulations. Additional copies of the abridged Pocket Protocols are available for sale from the Office of Licensure and Certification.

The full binder-size version of the 2018 Maryland Medical Protocols for Emergency Medical Services Providers is available in an electronic version. You can download and print the full version from the MIEMSS website (<u>www.miemss.org</u>). Full bindersized (3-hole-punched) versions, sets of replacement pages, and the full protocol in a smaller 5 x 7" spiral-bound size are available for purchase from the Office of Licensure and Certification. Please call 800-762-7157 for ordering information. As a reminder, all licensed ALS providers (CRT, Paramedic) must complete the Maryland ALS Update 2018 and all certified BLS providers (EMR, EMT) must complete the Maryland BLS Update 2018 training before July 1, 2018. This training is available on MIEMSS' Online Training Center (www.emsonlinetraining.org). Digital versions of the Maryland EMS Update 2018 for use in company-level drills are also available from your MIEMSS Regional Administrator.

Education and operational programs can download a zipped SCORM file version of the Maryland EMS Update 2018 for use in their own local learning management system. Please visit the MIEMSS Instructor's Comer to access and download this file. If you have any questions about the SCORM files, please contact Pete Fiackos at 410-706-3157.

If you have any questions or concerns that cannot be answered by the MIEMSS Regional Offices or Office of Licensure and Certification, please contact the Office of the Medical Director at 410-706-0880.

# **Stay Alert and Get Home Unhurt**

Drowsy Driving Prevention for EMS Providers

"On the way home from a night shift at my hospital, I needed to run an errand for my daughter's Girl Scout troop. I was driving on a big road in full sun, but someone stopped unexpectedly in front of me to let an ambulance go by. I must have dozed off, because I never saw that car stop. I plowed into them, and the next thing I knew, an ambulance was coming...for me."

#### Background

Drowsy driving is estimated by the National Highway Traffic Safety Administration to be a factor in more than 328,000 crashes a year; in a fifth of those crashes, someone is killed. Recent studies by the AAA Foundation for Traffic Safety indicate that 10% of crashes involve a drowsy driver, but there are factors that make certain people more likely to be in a drowsy driving crash.

Unsurprisingly, people using alcohol and/or sedating medicines are linked with a higher risk for drowsy driving, as are individuals traveling long, high-speed, or rural roadways, especially at night. Crash analysis also shows that younger drivers (ages 16-24 years) are 80% more likely to be in a drowsy driving crash, and even more so if they are male. A less well-known risk group includes people who have untreated sleep disorders, as they may not get enough sleep or have enough quality sleep. People who work shifts, especially at night or extended work hours, represent another group at high risk of drowsy driving. This group includes many health care providers.

Steele et al. (1999) surveyed nearly 1,000 emergency medicine residents and asked about their shift schedules, tolerance of night work, ability to overcome drowsiness, and involvement in motor vehicle crashes or near-crashes. Eight percent of residents reported having been in a crash and 58% reported involvement in a near-crash. Nearly 75% of the crashes and 80% of the near-crashes followed a night shift, and there was also a correlation between crashes and number of night shifts worked per month.

Studies by Czeisler et al. (2015) used driving simulators to evaluate night shift workers' daytime driving performance after working all night compared to driving after sleeping all night. They found that 37.5% of the workers had a near-crash event after working overnight compared to no near-crashes among those who had overnight sleep. The workers who drove after working all night experienced increased lane drift and emergency braking, inability to maintain control of the vehicle, increased slow eye movements and longer blink duration, and a higher risk of micro-sleeps after driving for 30 minutes.



A study by Huffmyer et al. (2016) evaluated 29 anesthesiology residents on a driving simulator, comparing their driving performance after six consecutive night shifts with their performance at the beginning of a day shift that was not post-call. They found that after six night shifts the residents had significantly more difficulty controlling all driving variables, including lane position, steering, and speed; had significant increases in reaction time and lapses of attention; and were more likely to be in a crash.

-Jen, emergency physician in Maryland

"After working overnight, I was so tired at times that I'd drive home in the left-hand lane because I knew I'd hit the rumble strips and wake up before I hit the Jersey barrier."

-Joe P., DC area paramedic

### **Preventing Drowsy Driving**

As many research studies indicate, health care workers, especially those who work variable shifts, extra hours, and/or night-shifts, are especially vulnerable to drowsy driving. So, what can be done to prevent health care workers from experiencing drowsy driving?

The solution to crashes, injuries, and deaths due to drowsy driving is for people to get more sleep, but how this can occur for people with busy lives is a lot more complicated. Health care environments and the culture of providers who care about their patients and their communities is not always conducive to regular, daytime work shifts; this is not likely to change. As a health care worker, do your best to prioritize sleep for yourself, much as you might prioritize healthy eating or exercise, by adjusting your home and work schedules to encourage seven or more hours of uninterrupted sleep. Be aware of your body's physical limits after working long hours and, to the extent possible, adjust what you do after work, such as taking a bus to get home. If you are able, use vacation days to catch up on sleep.

Drivers need to reduce their risk factors for drowsy driving, but of equal importance is prevention measures initiated at the institutional level, such as naps during extended shifts. For instance, in a study by Geiger-Brown and Lipscomb (2010), nurses on the night shifts at two hospitals were offered the opportunity to take a 30-minute nap, and were surveyed before and after the nap. A high level of sleepiness as measured on the Karolinska Sleepiness Scale was present at the beginning of the naps, while after the naps, the nurses expressed how helpful it was, and they reported being less sleepy on their respective drives home.

A different worksite strategy for addressing inadequate sleep involved researchers testing if an at-work sleep health program would improve firefighters' health and safety compared to standard practice Continued on page 6

# **Stay Alert and Get Home Unhurt** *Drowsy Driving Prevention for EMS Providers*

#### Continued from page 5

or no program. Earlier research had shown a correlation between long shifts and burnout, injuries, and errors compared to shorter shifts in first responders (Brigham and Women's Hospital, 2017). In this study, half the firefighters in a mid-sized fire department randomly received the sleep education and sleep disorder screening, and half did not. The researchers then tracked disability days, injuries, and other measures for 12 months. They found a nearly 50% reduction in long-term disability days among those participating in the program plus reductions in risk of injury compared to the other firefighters (Lockley, 2017). While this study didn't examine driving behaviors before or after the program, its results suggest a way for worksites to reduce the incidence of drowsy driving.

### Recommendations from NASEMSO for mitigating fatigue for EMS providers:

- Reliable and/or valid fatigue survey instruments should be used to measure and monitor fatigue in EMS providers.
- EMS personnel should work shifts shorter than 24 hours in duration.
- EMS workers should have access to caffeine as a fatigue countermeasure.
- EMS providers should receive education and training to mitigate fatigue and its risks, both for new employees and every two years. The education should address circadian rhythms, the core elements of sleep, strategies to mitigate fatigue, and information about the dangers of fatigue.
- EMS providers should have the opportunity to nap on duty on all shifts that are 12 hours or longer, or overnight, to reduce fatigue. They suggest that shorter naps might be better and rest is not the same as napping.

For more information, visit www.emsfatigue.org.

Another strategy to reduce drowsy driving is regulating the hours one can work. For example, the Accreditation Council for Graduate Medical Education prohibits medical residents from working more than 80 hours per week, more than 24 consecutive hours on duty (for 1st year residents; more senior residents may work additional 4 hours to ensure a safe transition of care), or more than six consecutive night shifts. However, there are no set guidelines for practicing physicians, and only some states regulate nurses' and EMS providers' limits on their work time. Maryland's Department of Labor, Licensing, and Regulation describes conditions when nurses can and cannot work overtime, but they may open the door to long, "justified" shifts. Geiger-Brown and Lipscomb (2010) found that nurses left work at the end of their typically 12-hour scheduled shifts less than 20% of the time. Research shows that more than half of EMS personnel report severe mental and physical fatigue while at work, poor sleep quality, and poor recovery between shifts. Additionally, half of EMS personnel obtain less than 6 hours of sleep per day (Patterson & Martin-Gill, 2018). Recently the National Association of State EMS Officials (NASEMSO) along with researchers at the University of Pittsburgh teamed up to examine issues related to fatigue in EMS workers as part of a large project to develop guidelines for mitigating fatigue. Their recommendations are likely to help prevent drowsy driving among EMS providers, and are listed to the left. Another resource for shift workers is the online training from the National Institute for Occupational Safety and Health at https://www.cdc.gov/niosh/topics/workschedules/default.html.

### **Getting Home Safely**

If you must work overnight shifts and extra hours, and are justifiably tired, how do you know if you are too tired to safely drive? It is not so easy to determine, as being tired makes it hard to judge just how tired you really are. In 2016 the National Sleep Foundation's Consensus Panel stated, "Individuals who have slept less than 2 hours in the prior 24 hours are too sleep deprived to get behind the wheel of a vehicle." Additionally they stated that "most healthy drivers would be impaired with only 3-5 hours of sleep during the prior 24 hours." But many drivers are unsafe even with sleep deficits of 6-7 hours, and drowsy driving can occur when additional events are factored, such as a high-stress work day.

Continued on page 7



# **Stay Alert and Get Home Unhurt** *Drowsy Driving Prevention for EMS Providers*

### Continued from page 6

How do you get home safely if you are too tired to drive? Use a for-hire service or car pool with a co-worker. If you must drive, having someone in the car to talk with helps, as does drinking a caffeinated beverage at least 20 minutes prior to driving. Absolutely do not take any sedating medicines or drink alcohol prior to driving.

If you are driving and find yourself experiencing any of these conditions, you are likely too tired to drive safely:

- · Yawning or trouble keeping your eyes open
- · Nodding off or trouble keeping your head up
- · Forgetting the most recent miles traveled
- · Missing your exit
- · Trouble maintaining your speed
- Drifting out of your lane or hitting a rumble strip

### References

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If this occurs, find a safe place to pull off the road and take a 20-minute nap. Opening the car windows, turning up the air conditioner, and listening to loud music are not reliably helpful.

Jen, the physician who dozed off and crashed, luckily did not suffer serious injuries. "Driving home in 'automatic mode' because you are so sleepy might be ok when the road is clear and nothing unexpected happens," she says. "But it just takes one little thing—like that car that stopped in front of me, and then 'automatic mode' fails and the crash and its results can be catastrophic. Drowsy driving is dangerous driving."

This article was contributed by Maryland EMS for Children's Child Passenger Safety and Occupant Protection Health Care Project. Contact <u>cps@miemss.org</u> or visit <u>http://www.miemss.org/home/drowsydriving-awareness</u> for additional information.



### International IV Fluid Shortages

Following the catastrophic damage associated with Hurricane Maria that hit Puerto Rico in September 2017, there has been a significant decrease in all forms of IV fluid (e.g., Lactated Ringer's, normal saline, D5W) availability. This has led the Food and Drug Administration to reach out to Baxter and alternate pharmaceutical supply companies to try and meet the demand. This shortage has led to a rise in prices for IV fluids, including Lactated Ringer's. This shortage is likely to continue into May of this year.

MIEMSS recommends that all EMS providers use saline locks for standard IV access and save the Lactated Ringer's for severe traumatic resuscitation or required fluid challenges due to hypotension. Please do not hesitate to contact the Office of the State EMS Medical Director at 410-706-0880 if you have questions.

### **Trauma Injury Prevention Coordinators Collaborative**

Established in 2012, the Trauma Injury Prevention Coordinators Collaborative (TIPCC) is composed of Level I and II Trauma Centers from the greater Washington, DC metro area. Its members include Howard University Hospital, The George Washington University Hospital, MedStar Washington Hospital Center, INOVA Fairfax Medical Campus, and University of Maryland Prince George's Hospital Center. This group recently came together for the Distracted Driving Awareness and Prevention Month event held at University of Maryland Prince George's Hospital Center. (see photo on page 2).

The mission of TIPCC is to reduce traumatic injury through community education and outreach. In addition, they seek to increase the knowledge of health care professionals who work in injury prevention. TIPCC hosts an annual injury prevention conference for health care and community outreach professionals, which is held in May in conjunction with the celebration of National Trauma Awareness Month. Past themes have included sports injury and alcohol/drug use and its effects on health and recovery. Community health events sponsored by TIPCC include car seat safety, motor vehicle safety, bike safety and helmet use, concussion prevention, sports safety and hydration, fall prevention in the elderly, pedestrian safety, alcohol and drug use, and youth violence prevention. More information about the collaborative can be found on its website, <u>www.dcinjuryprevention.com</u>.



The Trauma Injury Prevention Coordinators Collaborative (TIPCC), composed of representatives from Trauma Centers in the greater Washington, DC metro area, pose with partners during the April 4, 2018, Distracted Driver Awareness event at University of Maryland Prince George's Hospital.

## **MSFA Holds Annual Hope Awareness Cancer Walk**

On Sunday, April 22, 2018, the Maryland State Firemen's Association (MSFA) held their Annual Hope Awareness Cancer 5K Walk in Annapolis. The MSFA Cancer Support Network raises funds to assist Maryland firefighters and auxiliary members, as well as their families, who are battling cancer.

The Mission of the MSFA Cancer Support Network Committee is to help volunteer fire, rescue, and emergency services personnel and their families who are dealing with cancer by providing them with positive efforts through support and to share resources needed to be a survivor. One of the resources available is a kit intended to help the patient or supportive friends/family keep track of all medical material, such as appointments, medications, and doctor's information. Also included in the resource kit are a journal and other useful items that will help keep the patient's information at their fingertips. For more information about the Cancer Support Network and its resources, visit <u>www.msfa.org/content/cancersupport</u>.

This year's event consisted of a 5K walk through downtown Annapolis, starting at 8:30 am at the Maryland Fire-Rescue Services Memorial on Calvert Street. Participants from across the state represented Maryland's emergency services community and their family members. This is the MSFA's third annual cancer walk, and had the best attendance to date.



Left, officers of the Maryland State Firemen's Association (MSFA) and Ladies Auxiliary to the Maryland State Firemen's Association (LAMSFA) show their support at the 2018 Hope Cancer Awareness Walk in Annapolis. Right, dozens of participants gather for a photo before embarking on their walk through downtown Annapolis



# Advanced Disaster Life Support Course

(Requires Successful Completion of the BDLS Course)

Course Date and Time June 28 and 29, 2018 8:00 am – 5:00 pm <u>Course Location</u> Maryland Fire and Rescue Institute 4500 Campus Drive College Park, MD 20742

Register at: <u>http://register.ndlsf.org</u> (Use Chrome or Firefox web browser)

### THERE IS NO CHARGE TO ATTEND THE COURSE

**The Advanced Disaster Life Support**<sup>™</sup> (**ADLS**<sup>®</sup>) **course** is an intense 2-day course for 50 students that allows participants to demonstrate competencies in mass casualty management. The ADLS Course requires students to apply knowledge learned in the Basic Disaster Life Support<sup>™</sup> (BDLS<sup>®</sup>) course. Successful completion of the BDLS course is a prerequisite for attendance at the ADLS course. The ADLS course target audience includes physicians, nurses, physician assistants, emergency medical technicians (EMTs), paramedics, pharmacists, allied health professionals, and students in health professional schools.

### Questions: Contact Chris Hyzer Telephone 410-706-0881

chyzer@miemss.org

Sponsored by Maryland Regional NDLS Coalition Johns Hopkins CEPAR, Maryland Fire and Rescue Institute (MFRI), Maryland Institute for Emergency Medical Services Systems (MIEMSS), The R Adams Cowley Shock Trauma Center and the University of Maryland Baltimore County (UMBC)

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Governor Larry Hogan Lt. Governor Boyd Rutherford

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