



**Joint Committee on Rural Emergency Care (JCREC)
National Association of State Emergency Medical Services Officials
National Organization of State Offices of Rural Health
State Perspectives Discussion Paper on Development of Community Paramedic Programs**

State Emergency Medical Services (EMS) Offices and State Offices of Rural Health are both committed to the principle that rural EMS systems should be able to respond in a timely, appropriate manner whenever serious injury or illness strikes someone in need. In 2009 the National Association of State EMS Officials (NASEMSO) and National Organization of State Offices of Rural Health (NOSORH) created a Joint Committee on Rural Emergency Care (JCREC). This Committee is dedicated to advancing policy and practice to ensure access to timely, affordable, and high quality emergency care services in rural America. In 2010, the JCREC developed "Improving Access to EMS and Health Care in Rural Communities: A Strategic Plan"¹ which was approved by both Associations. This discussion paper is intended to further the community paramedicine elements of that Strategic Plan.

Statement of Purpose:

The concept of community paramedicine represents one of the most progressive and historically-based evolutions available to community-based healthcare and to the Emergency Medical Services arena. By utilizing Emergency Medical Service providers in an expanded role, community paramedicine increases patient access to primary and preventative care, provides wellness interventions within the medical home model, decreases emergency department utilization, saves healthcare dollars and improves patient outcomes. As the Community Paramedicine model continues to be adopted across the country, states and local communities need assistance in identifying common opportunities and overcoming challenges. This discussion paper offers insight into the historical perspective and future considerations for Community Paramedicine programs. As well, it advocates for the development of an implementation guide for states.

Community Paramedicine in Action

At 2:35 am on a cold November morning the Emergency Medical Dispatcher in the 9-1-1 center received a call from a man, frantic with concern about his wife. "Please send help! My wife is having a hard time breathing and I don't know what to do!" After surmising that the patient was conscious with labored breathing, the dispatcher alerted the appropriate response units to assist before walking the caller through further assessment questions and ways he can help his wife be more comfortable.

Kennedy was just finishing a patient care report to give to the emergency department when a call came over the radio, "Medic 1, Alleghany EMS, Hillsborough Fire; Respiratory Difficulty. 38-year-old female, 3415 Washo Drive. Patient conscious and alert. Code 3 ALS response, all others Code 2." Snapping the clipboard shut and grabbing the radio, Kennedy bundled up against the cold and hopped in Medic 1, her paramedic response car. While Kennedy navigated the long, dark country roads to get from the Critical Access Hospital in town out to Washo drive, she thought about the scenarios that could be unfolding. Knowing that even though the fire department and ambulance were not using lights and sirens, they would most likely get there before she did. They will have applied oxygen and gotten the patient comfortable and may be able to give a quick update on the radio if they had time.

The husband, Carl, watched nervously as the first responders worked with his wife. Several years ago, his wife had suffered from an infection of the lining of her heart that resulted in potential lifelong dependence on medications to keep her lungs from filling with fluid as a result of her weakened heart. Just yesterday they had decided with her primary care provider to reduce her "fluid pill" medication in an effort to try and wean her off slowly. It looked now that it hadn't worked. A knock at the door spun

him around and as he pushed the door open he saw the warm, comforting smile and an outstretched hand, "I'm Kennedy, a community paramedic, let's go check on your wife."

The brief update from the first responders confirmed Jen, the patient, was having difficulty breathing with just room air. On a mask that delivered a high concentration of oxygen, Jen still had labored breathing but was oxygenating well. Breath sounds confirmed fluid in the lungs and after the basic assessment, Jen was given nitroglycerin, put on a 12-lead ECG and an IV was established. Because the likely culprit of the current emergency was the reduction in the congestive heart failure medication, Kennedy determined that 80 mg of Lasix IV was the best next step. While she was waiting for the medication to take effect, an ECG and quick phone call to the medical control physician in the ED was made so they could consult on next steps.

Carl was just short of amazed. Within 20 minutes after the community paramedic had arrived, Jen was comfortable, off oxygen, breathing normally and saying she didn't want to go to the hospital. What a relief! She was OK, back to normal and instead of facing an hour ride to an emergency department and what has been a guaranteed two days in the hospital, this was now a minor blip in their day and a follow-up visit with their primary care doc tomorrow.

Before leaving the home, Kennedy assured and confirmed that if Jen started to have any problems to call 9-1-1 and they would be right back. Jen and Carl were so grateful to get the help and to avoid the hassle and overwhelming bills of the ED. It was hard to explain what Kennedy felt other than to say she was content feeling that she had made a meaningful difference. She knew that her intervention had met Jen's needs, exceeded the Carl's expectations and provided for the highest quality, most cost-effective intervention that could be provided. Kennedy was actually looking forward to future interactions with Jen, her primary care doc and her partners in community health that all work together to ensure that folks like Jen received coordinated, wellness-focused care.

Executive Summary

While "community paramedicine (CP)" is a relatively new term, first described in this country in 2001² as a means of improving rural EMS and community healthcare, it is not a new concept in practice, either here or in other parts of the world.

Note: In much of the world, paramedic is a general term used to identify all levels of Emergency Medical Technician (EMT). For the purposes of this discussion paper, 'community paramedicine' or 'CP' will be used to describe generically programs that specifically utilize any level of EMT (basics to paramedics) to provide community paramedicine and community health services.

The *EMS Agenda for the Future*³, released in 1996, presented the vision that EMS will be community-based and fully integrated with the overall health care system. The agenda additionally described that EMS of the future would have the ability to not only provide acute illness and injury care, but also identify health risks and provide follow-up care, treatment of chronic conditions and community health monitoring. The *Rural and Frontier EMS Agenda of the Future*⁴, released in 2004, further reinforced a community health role for EMS with a vision that recognized EMS providing not only a rapid response, but also filling roles as a community resource for prevention, evaluation, triage, referral and advice⁵. Both documents make numerous references to community health roles where EMS is integrated with other elements of the health care delivery system. As such, the concept of community paramedicine embraces EMS providers who are utilized in an expanded role as part of a community-based team of health services and providers.

This discussion paper summarizes the current status of community health and community paramedicine programs and present a synopsis of some of the opportunities and challenges state EMS offices will face as these programs are contemplated in local communities. This Discussion Paper advocates for the development of a guide for states to refer to as community paramedicine and

community health programs emerge, either locally or statewide. Much information about community paramedicine can be found at <http://communityparamedic.org>. However, the “information tab for policy makers” is virtually blank and this Discussion Paper is meant to provide context for discussions in this area and assist states with implementation of community paramedicine programs.

Background:

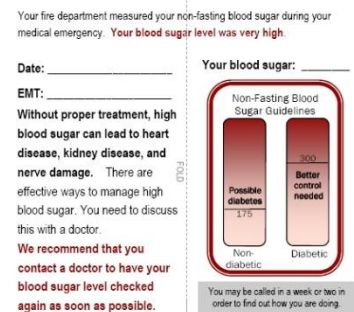
The original intent of EMS systems was to provide patient care for acute or emergency events. However, studies show that 10-40% (or more) of ambulance service responses are for non-emergent events. Many times, patients who lack access to primary care utilize EMS to access emergency departments for routine health care services. While these patients could be more appropriately cared for in primary care offices or alternate locations, the current healthcare and reimbursement infrastructure systems do not support other appropriate, cost-effective EMS transport alternatives.

After some 30 years of development of the current model of providing prehospital care, the future of EMS may be much different. The erosion of the volunteer model in many rural areas, generational changes in the overall workforce, continued budget challenges and national changes in healthcare are challenging rural EMS infrastructure--- and demanding innovational strategies.

Emergency medical services of the future, whether it includes community paramedicine or not, will not likely involve an initial patient contact with two EMT responders in a \$150,000 ambulance and an automatic ride to the emergency room for many calls. Future calls may begin with a priority dispatch system which can triage and send a variety of resources, including community paramedics, who then provide a more comprehensive triage followed by treat and release to primary care or other appropriate treatment options.

Historically, there are numerous examples of programs in which EMS and community health providers have been utilized to provide emergency care as well as assure access to primary care. While the Red River project in New Mexico is often noted as one of the most well known demonstration of this concept, other models include the following:

- Seattle/King County SPHERE (Supporting Public Health with Emergency Responders) – In this King County program, EMS is utilized to help prevent future 9-1-1 calls by identifying potentially life-threatening conditions whenever a patient is seen by responders. Instead of a quick assessment and release of a patient who called 9-1-1 for a transient event, a blood pressure, blood sugar or other assessment is conducted. Patients are provided a card with the results of the assessment and they are encouraged to follow up with their primary care physician. The patient receives a follow-up call a month later to help assure that the physician contact was initiated.
- Winnipeg, Canada – Instead of an automatic trip to the ED, paramedics respond to thousands of non-life threatening 9-1-1 calls to triage and evaluate the patient’s medical needs. Based upon the assessment, patients are provided appropriate treatment on scene and protocols are then implemented to transport patients to not only ERs, but also to urgent care clinics, primary care physicians and other alternate sites when appropriate. The paramedic can make decisions to arrange transport by ambulance, in the paramedic response vehicle and even by taxi or stretcher vehicle. The paramedic union president is quoted as saying "The idea is to have medics out in the community engaging people with problems and find the best place in health care for them instead of a system of 'you call, we haul'."



- Alaska Community Health Aide Program – Staffed by selected Alaska natives in remote communities, not necessarily paramedics, this program was began as a strategy to use village workers to distribute antibiotics to combat a tuberculosis epidemic back in the 1950's. It became a federally funded program in 1968 and today over 550 Community Health Aides/Community Health Practitioners are employed by 27 tribal health organizations in 178 rural/frontier communities. CHA/Ps are the patients' first contact within the network of health professionals in the Alaska Tribal Health System.
- Nova Scotia, CN – The Islands of Long and Brier are only accessible by ferries. Transport to the closest hospital is a 50-minute trip with the regional hospital another hour away. The island residents recognized the need for primary and emergency care and launched a multi-phase imitative. The first phase provided 24/7 emergency paramedic coverage based from an abandoned physician's clinic. Next, the paramedic role was expanded to provide flu shots, blood pressure and diabetic clinics and other primary care. Lastly, the paramedics were integrated with a nurse practitioner to provide more comprehensive and complex care. The traditional paramedic role was expanded to include home visits for injury and fall prevention as well as primary care patient assessments and evaluation.
- MedStar, TX Alternative Destination/Alternative Transport Program – A collaborative effort of MedStar, the emergency physicians board and public health, the overall goal of this program is to help assure the right patient, receives the right care, at the right time and the right setting. Patients in this program receive better healthcare at reduced cost to the patient and the community. Patients with chronic or non-acute conditions are treated by Advanced Practice Paramedics who bring preventative services to patients most at risk for medical emergencies. The program reduces health care expenditures by reducing the probability of providing acute emergency medical care for at risk and medical underserved patients.
- Wake County EMS, Raleigh, NC – In addition to providing increased community resources for acute care, paramedics in this program also provide preventative care to some high-risk patient populations, and seek further care for those patients who may be better served at locations other than local hospital emergency departments. These paramedics are part of a health care team that improves emergency response, mitigates the need for some responses and provides care to some patients that have limited access to any other care.
- Minnesota Community Paramedic Program – The pilot of this program was funded by the Minnesota Department of Public Health and Office of Rural Health. The first course consisted of hand-picked, experienced paramedics interested in providing an expanded role in their communities. As part of their education, each community paramedic conducted a community analysis to determine gaps in health care. These paramedics then molded their practice to needs ranging from provision of mobile clinics for Native American populations, free clinics for communities, 'chase car' enhancement of local EMS response, critical access hospital staffing and regional/national disaster response.
- Western Eagle County Ambulance District, Eagle, CO –Championed by the local EMS service manager and the local public health department, the goal of this program is to take the current EMS resource and link it with existing health care services to provide EMS and public health services. In addition to physician-directed treatment delivered directly to patients in their homes, paramedics utilize expanded training in assessments, blood draws, wound care, diagnostic monitoring and other procedures. Assessment and treatment findings are linked with other appropriate health services in order to increase health care at a savings.



In their varied states and provinces, these are examples of community paramedicine programs in which EMS providers are used to not only provide emergency care but also expand their roll to address primary care needs and direct patients to the most appropriate level of definitive care. There are many more examples of community paramedicine being conducted in the U.S. and communities will continue to look at CP to help bridge the gap between the health care needs and the resources available to meet those needs. Currently, most U.S. programs are pilots or local programs born out of necessity. It is important for states to assess the opportunities and challenges to development of these programs and this paper is a brief discussion of several areas to be considered and developed into a *state community paramedicine guide*.

Funding and Reimbursement

There are increasing concerns about shrinking healthcare reimbursements and budget shortfalls. The primary goal of community paramedic programs is to save healthcare dollars by reducing illness and injury and prevent unnecessary ambulance transports, emergency department visits and readmissions through more efficient use of existing resources.

Opportunities:

Community paramedicine is not without data showing cost savings. After five years, the Nova Scotia program demonstrated a 40% reduction in emergency room visits and a 28% reduction in clinic visits. A U.S. program that focused on preventing readmissions of frequent flyers quotes a 64% reduction in 9-1-1 visits and \$1 million savings in health care costs. These examples need to be validated and collected into a comprehensive package that can be presented to policy makers and tax payers.

Challenges:

The case for this has not yet been made such that insurance providers universally are implementing reimbursement for CP services.

Hospitals and physicians are not necessarily proponents for community paramedicine as they depend upon patient contacts and volume to fund their operations. However, the proposed changes to a reimbursement scheme which limits reimbursement for a patient's disease through Accountable Care Organizations, Value Based Purchasing and Bundled Payment mechanisms may represent an opportunity for a role such as community paramedics to be extremely valuable.

Regulation of Community Paramedicine Programs & Community Paramedics

Are states prepared to sufficiently provide for or allow the regulatory oversight and support necessary for the expanded role that community paramedicine may practice?

Opportunities:

EMS provides a triad of health care, public safety and public health services. As noted in the above examples, community paramedicine does not necessarily change the scope of EMS practice. Community health services are already provided by EMTs in the current scope of practice. While CP seems to emphasize the role of EMS providing primary care in the patient's home, it is already an environment and role in which EMTs already practice. Much of the infrastructure and regulation is likely already in place in states to allow community paramedicine.

Challenges:

Currently, state regulations may only allow CP providers to practice in a prehospital environment with a skill set designed for acute responses to medical diseases or traumatic injuries. In most deliberations about community paramedicine, participants are careful to characterize that CP providers provide an expanded role, not an expanded scope. This expanded role is often depicted as the ability for CP providers to perform an expanded assessment and medical history and to develop care plans; use of non-traditional medications such as vaccines; and expanded treatments for chronic diseases such as diabetes.

Additionally, community paramedicine services are related more to primary care and public health roles than the traditional 9-1-1 response. For example, a CP provider may perform home visits to follow up on the health of patient with diabetes, mental health challenges and other issues. The CP role may also include injury prevention activities such as conducting home safety assessments for falls and other hazards.

All of these regulatory issues need to be considered by states early-on if a community paramedic program is to be successfully implemented.

Expanded Role of Community Paramedics

Every day, EMTs encounter patients who require assistance with non-emergent conditions. As well, many patients have chronic and secondary conditions that have precipitated the emergency call such as loneliness, mental health, lack of home care and other special needs.

Opportunities:

The community paramedic is generally described as an expanded role and, with few exceptions, does not incorporate new skills or an expanded scope of practice (suturing being one exception in a model CP curriculum). The idea of expanded role or non-traditional settings is not a new concept. EMS has long been active in emergency rooms and clinics, as wildland fire medics, in industrial sites and with other roles with specialized practices.

Community paramedicine is not a new practice, but rather a specialty much like emergency medicine is a specialty. As other health care professionals choose a specialty for a variety of reasons, EMTs may choose CP. For example, an 'aging' paramedic may choose to extend their EMS career by choosing a community paramedicine practice may be less physically demanding on their health and family life.

Challenges:

Several pilot CP programs are preemptively responding to patients with these conditions in order to prevent more serious illness and to negate emergent calls requiring advanced care and transport. The CP provider may gather a more detailed medical history and perform expanded examinations as needed. A CP may utilize current skills to administer vaccines. In a CP program, the paramedic may provide prenatal, preventative and chronic care, x-rays, wound dressing with local anesthetics and mental health assessments.

An emergency nurse is not necessarily a public health nurse and an emergency physician is not necessarily a primary care physician. A 9-1-1 paramedic may not necessarily want to be a community paramedic and it would be problematic for states, EMS services and communities to not consider this. Current pilot programs are hand-picking EMTs who have an interest in this area. Some programs are rotating EMTs between roles; for example working one month on 9-1-1 and one month in a CP role. Others are integrating CP duties into typical shift downtimes. The challenges of these models will need to be considered in a statewide rollout of community paramedicine.

Lastly, if you've seen one community paramedic program, you've seen one community paramedic program. By design, CP programs are encouraged to first conduct a community assessment gaps in health care needs and then to build local programs that fill those gaps. As such, states will be challenged with the regulation and oversight of local programs that may provide very diverse services. ~~In a 2004 case study, Tennessee quoted the Rural/Frontier EMS Agenda for the Future which advocates integrating EMS into community healthcare as their justification for utilizing paramedics to provide sex education to high school students!!~~

Community Paramedic Education

A community paramedic's education should prepare EMTs to meet identified community health needs and should address gaps revealed by a community assessment. As such, CP education should be standardized, but capable of being tailored for each community.

Opportunities:

Several partners, including Creighton University in Nebraska, Dalhousie University in Nova Scotia, Mayo Clinic in Minnesota, the North Central EMS Institute and state offices of rural health in Minnesota and Nebraska, came together and studied community health education programs such as from Alaska and Australia. This consortium created a curriculum for community health in the States.

This Community Healthcare and Emergency Cooperative group provides the curriculum to accredited colleges and universities. These institutions can then customize this standardized curriculum for individualized certification programs. This curriculum provides direction on educating about primary care, expanded emergency care, public health, disease management, prevention and wellness and mental health.

This curriculum is conducted in two phases:

- Phase 1 – Approximately 100 hours of foundational skills in advocacy, community outreach and community health assessments, public health and development of prevention and primary care strategies.
- Phase 2 – Clinical skills (ranging from 15 hours to 146 hours depending on the students previous knowledge and background) that is supervised training by the program medical director and other health care providers.

Challenges:

The ~~the~~ community paramedicine model has been in existence around the world for some time, this US version of the curriculum is still new. It will need to be evaluated and updated as necessary to accommodate expanded roles identified as more CP programs are implemented. Otherwise, the 'standardized but customizable' format of CP could propagate a wide variety of education programs across states and even among institutions within states. The educational program described may need to be further credentialed in order to be accepted into any college or university curriculum offering.

Community paramedicine is designed to meet the particular needs of communities and it can meet an important role particularly in rural communities where primary care access is a critical issue. This is seen in the Alaska Community Health Aid program that targets community members to meet those needs. Emphasis on educating EMTs in rural areas through a college curriculum presents an 'educational paradox' where the people who most need the education may not be able to access necessary resources.

Medical Direction and Control of Community Paramedic Programs

As with traditional delivery of prehospital care, community paramedic programs must also be physician-driven.

Opportunities:

In well developed, mature CP programs, the community paramedic can be the eyes and ears of primary and emergency care physicians and an extension to their practices. Community paramedicine presents opportunities to decrease unnecessary ER visits and decrease the acuity of patients needing emergency or primary care. EMS is a delegated practice and nothing in a community paramedic's expanded role is designed to change that.

Challenges:

Expanding medical oversight of paramedics to public and community health roles may present challenges. In more urban systems, offline medical direction has traditionally been provided by physicians with an emergency background. Online medical direction has been provided by emergency room physicians. Community health is designed to link the patient with their primary care physician. Therefore, a community paramedic may evaluate a patient and decide that the patient's care may be best met by transport to an urgent care clinic or to their primary care physician's office (maybe even by taxi or some other means). Given this expanded role, will traditional online medical control be comfortable directing patients to alternate sites without ever seeing the patient themselves?

Community paramedicine is intended to fill gaps in rural communities where medical control and primary care may be provided by the same physician and the above scenario less likely. However, there may be a 'medical direction paradigm' in rural areas where CP is needed most but also where physicians are neither educated nor have the support to provide oversight for these expanded services.

To ensure community paramedics are effective, they must be an integral part of the medical home concept where patients are cared for by a physician who leads the medical team and all aspects of preventive, acute and chronic needs of patients. EMS has proven it can be an effective member of this medical team. Everything in the continuum of care from how the CP provider participates in the development and implementation of a patient's care plan, where to get the orders and, how to provide documentation in the patient medical record, will present new challenges for community paramedics and medical directors.

Challenge – Support from Nursing and other Health Professions

Key recommendations of agenda documents and Institute of Medicine reports is that EMS needs to be more integrated with the other elements of the health care system. Community paramedicine represents an opportunity to effect such integration.

Opportunities:

Approached correctly, the introduction of community paramedicine should be viewed as an opportunity not a challenge or a threat to other providers. Particularly in rural communities where health resources are limited, extending the role of the paramedic into different settings and partnering with public health should be viewed as a benefit to the patient. As long as communities continue to understand that community paramedics have a unique education and background and that nursing also has a unique education and background – and that each can compliment rather than compete with each other – potential conflicts should be negligible.

Currently, CP programs have found ways to foster such partnerships and have not created disagreements and conflict. For example, the Colorado pilot program is a partnership under the leadership of the EMS manager and the public health nurse designed to meet both EMS and public health goals.

Challenges:

Implementation of community paramedicine may meet resistance or face opposition from nursing, public health and other health professionals in engaged in providing community or public health. The role of community paramedics lies within much of what EMS is already doing in an environment they are already functioning within. By design, a CP program should begin with an assessment of a community's health needs and implementation of CP should be to fill gaps in a community's needs. As such, potential conflicts over concerns that the CP role overlaps or infiltrates into other areas of practice can instead result in constructive partnerships like the one in Eagle Colorado.

States may need to begin open early discussions, provide education, and develop partnerships with professional groups and advocates to best ensure a community paramedicine program.

Data, Performance Improvement and Outcomes Evaluation

States will need to enhance current information systems to not only plan for the development of community paramedicine programs but also to justify the continued implementation and viability of such programs.

Opportunities:

CP should not continue without a vision about what data is needed to evaluate programs and any benefits and outcomes associated with them. The National EMS Information System (NEMSIS) has been accepted as the standard electronic medical record (EMR) data set for EMS by all 50 states. Adoption of community paramedic programs may necessitate new or modified NEMSIS fields and other documentation. The Health Resources and Services Administration (HRSA) Office of Rural Health Policy contract in late 2010 for development of an evaluation framework and tool for community paramedic programs represents an excellent strategy towards this end.

Challenges:

How and what services a CP program provides is dependent upon an assessment of a community's health care needs and gaps. There currently is no state model for such an assessment. Development of a community assessment tool will help states and the communities develop the need for CP programs and help more consistent implementation of programs. Over time, refinement of an evaluation tool can also maintain a focused development of CP programs nationally and around the world to prevent any potential creep in scope of practice. If there is not a need in a community that cannot be met by utilizing EMS providers in the expanded role of CP, then other solutions must be sought.

Currently, CP programs in the US are typically funded through grants and CP as pilot or demonstrations projects and services are not reimbursed by insurance providers. If CP is to become financially viable, CP programs will need to institutionalize documentation of services provided and their effectiveness – whether the result is better patient outcomes, decreased costs to healthcare or other measures.

Linking the patient information community paramedics collect at the home to the patients' permanent health record at their primary care physician's office or medical home will be a new challenge. The

typical patient care record used now to document the care provided to a patient in a response for emergency help will not likely be appropriate to documenting community health services. Community paramedicine providers will need to be part of the development and delivery of a patient's care plan and services provided will need to be integrated into a patient's entire health record. Linking CP providers to electronic health records and the use of technologies such as telemedicine will be key strategies to be considered.

Summary:

As it has done since its formal inception in the U.S. in 1973⁶, Emergency Medical Services will continue to evolve and develop to meet the needs of our society. All healthcare will continue to be challenged by health care reform, workforce issues, cost containment and reimbursement models, rapidly expanding technology, educating the next generation of providers and many other issues. Because EMS is the healthcare link between public safety and public health, it remains the safety net for patients and will face these challenges at an accelerated rate due to its proximity and value to community-based efforts.

Community paramedicine is a dynamic part of the future of EMS and this Discussion Paper lays out the numerous opportunities and challenges that states will grapple with as community paramedicine programs are contemplated by their communities. The development of a State Guide for Community Paramedicine to more comprehensively address issues, challenges and potential solutions will be an effective resource. The JCREC's mission is to educate and lead on issues such as community paramedicine. As such, the JCREC will continue to engage our organizations and partners to develop the guide and examine strategies that can help the states that choose to initiate community paramedicine.

References:

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