Introduction:

Bicycles provide rapid access to areas not always accessible by motorized vehicles. Many EMS agencies use mountain bikes as Emergency Ambulance Service Vehicles (EASVs) in order to provide rapid first response capabilities at mass gatherings, sporting events, special events and in remote areas.

In addition to transporting an EMS provider, bicycles can carry a moderate amount of equipment allowing a provider to initiate care until the arrival of a more traditional first response vehicle or ambulance. Bicycles provide a way to transport a provider amongst large crowds with minimal disturbance and with lessened risk of injury to event participants and spectators.

Some agencies may choose to utilize bicycles for responses to areas where motor vehicle access is difficult or limited on a regular basis while others may only utilize them on selected occasions.

In addition to the obvious response advantages there is also a public relations advantage seeing EMS providers in the community in a manner other than inside an ambulance.

Policy Development:

Every agency that intends to utilize bicycles as EASVs to provide first response EMS should develop policies and procedures to include:

- Staffing patterns
- When bicycles will be used
- Equipment to be utilized, requirements and location
- Inventory control
- Communications equipment requirements and procedures
- Procedures for obtaining/simultaneous dispatch of an ambulance or other patient transport vehicle when required
- Medical Direction
**Equipment Selection:**

In selecting a bicycle for use in EMS, the agency should choose a medium to heavy duty mountain bike equipped in compliance with NYS V&TL §1236. (This section includes the minimum requirement for lights, reflectors and audible warning devices on bicycles.)

Bicycles should be fit to the person riding them. Each bike or rider should be equipped with a water bottle to provide the rider with adequate hydration. Bikes should also be equipped with a kickstand that will support the bike and all equipment attached to it.

Bike pedals should have cages and straps. Handle bars with bar ends will offer riders additional hand placements and help reduce rider fatigue.

It is strongly urged that all EMS agencies using bicycle units develop a policy that requires all persons wear an ANSI or SNELL Foundation approved bicycle helmet.

All riders should also wear eye protection and well padded cycling gloves.

Equipment racks and packs should be securely mounted to prevent equipment from shifting while riding and additional padding may be required to prevent damage to equipment and supplies. Depending on the amount of equipment and supplies being carried by the bike, panniers may or may not be used.

Additional equipment may include emergency warning lights, horns and sirens as the service chooses.

In addition to EMS supplies it is imperative that the bicycle carry minimal maintenance and repair equipment, ie. patch kit, portable pump and a tool kit/multi tool.

The agency should develop and implement a check sheet to be completed on a regular basis to require routine checks on tires (inflation/tread), brakes, shifters, chain lubrication, lights, communications equipment and any emergency warning equipment used.

Ideally, EMS providers should utilize teams of two providers working together as one first response unit. This will allow for a distribution of the equipment and the weight associated with it.

**For a BLS first response using a bicycle, the equipment required by Part 800.26 shall be carried. Services may request waivers through the normal process.**

EMS bike units may also carry a defibrillator, either manual or automatic, depending on the level of care to be provided by the bicycle rider and per medical director approval.
ALS services may also carry ALS equipment with the approval of their medical director and REMAC.

Bags of IV solutions, drip sets and related materials may be carried on the bicycles. However, syringes, needles, IV catheters and any medications should be carried on the person of the certified AEMT. These items should be carried in a fanny or back pack to protect them from theft. It should also be considered, depending on the type of event, whether to carry these items at all if doing so might put the provider in harms way from someone who might be attempting to forcibly take these items.

**Communications:**

As per DOH Bureau of EMS policy statement 98-02, *Radio Communications Systems for EMS Services*, bike units should be equipped with communications equipment that allows for communication with dispatch, other responding EMS units and medical control for the event or activity.

It is not advisable to depend solely on portable cellular telephones for any phase of the bike unit communications needs. This is particularly true in remote areas or at mass gatherings where local cell site capabilities might be overwhelmed by an influx of cellular users.

**Rider Selection:**

In choosing employees/members to staff a bike unit consideration should be given to the fact that it takes a considerable amount of stamina to operate a bike that is weighted down with EMS equipment for the duration of a special event or a tour of duty.

Also to be considered is the physical exertion of pedaling to a scene and then finding a situation that requires additional strenuous physical activity, i.e. doing CPR.

Prior to assigning employees/members to a bike unit consideration should be given to providing a comprehensive medical assessment of the employee/member by a physician. It is advisable to consider the creation of an agency policy requiring such an examination prior to assignment to a bike unit.

**Training:**

Since there are no specific training programs to prepare a person to provide EMS while on a bike, it is advisable to open up communications with local bike clubs or police bike units who might provide technical support on bike selection and riding technique.

Any training should include proper bike fitting, rider safety, an understanding of NYS Vehicle and Traffic laws relating to operating a bicycle, understanding cadence and gearing, proper nutrition for a rider and basic bicycle maintenance.