



County of San Diego

NICK MACCHIONE, FACHE
AGENCY DIRECTOR

HEALTH AND HUMAN SERVICES AGENCY
EMERGENCY MEDICAL SERVICES
6255 MISSION GORGE ROAD, MAIL STOP S-555
SAN DIEGO, CA 92120-3599
(619) 285-6429 • FAX (619) 285-6531

NICK YPHANTIDES, MD, MPH
CHIEF MEDICAL OFFICER

October 23, 2020

EMS PROTOCOL GUIDANCE FOR EXPANDED STROKE WINDOWS, MIDAZOLAM, AND KETAMINE

Stroke Activation Window Extension

Based on the latest scientific evidence, County of San Diego (CoSD) [Stroke Receiving Centers](#) have extended the hospital stroke activation window to include possible stroke patients with a last known well (LKW) time up to 24 hours. While current EMS treatment protocol ([S-144](#)) identifies patients with a LKW time of < 6 hours for transport to a Stroke Receiving Center, EMS providers with suspected stroke patients with LKW < 24 hours should consider transporting to a Stroke Receiving Center. For patients in the 6 to 24-hour window who would be transported to a non-stroke center per current protocol, paramedics should contact their Base Hospital for a Base Hospital Physician Variation Order to transport to a Stroke Receiving Center instead.

Midazolam Administration Caution

Administering benzodiazepines to geriatric patients should be approached with caution. Current EMS treatment protocol ([S-142](#)) provides a standing order for the administration of midazolam 5 mg IM/IN/IV for the combative patient. When treating an elderly combative patient, someone with low body weight, or with suspected alcohol or other drug intoxication, paramedics should consider administering midazolam in 1 mg or smaller increments, waiting at least 2 minutes between doses to minimize the risk of respiratory depression. Use of non-invasive capnography monitoring is encouraged to help with early detection of potential inadequate ventilation.

Ketamine Not Approved for Sedation

Ketamine is not approved for use in agitated/combative patients in the CoSD. As per State authorization, CoSD EMS treatment protocols permit low-dose ketamine administration for pain management only ([S-141](#)).

Thank you for the outstanding care you provide to our patients, day in and day out. We recognize and appreciate your dedication during the special conditions of this pandemic.

Sincerely,

Kristi L. Koenig, MD, FACEP, FIFEM, FAEMS, Medical Director
Emergency Medical Services
County of San Diego Health & Human Services Agency