



STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Joe Manchin III
Governor

Martha Yeager Walker
Secretary

MEMORANDUM

TO: EMS Agency Officials
EMS Agency Medical Directors
Medical Command Centers

FROM: William D. Ramsey, M.D.,
State Medical Director

A handwritten signature in blue ink that reads "W.D. Ramsey".

DATE: July 28, 2008

SUBJECT: **Intraosseous access in the Adult Patient**

In an effort to keep West Virginia's EMS system current with the most up-to-date prehospital treatment modalities, the State Medical Policy and Care Committee (MPCC) regularly reviews protocols and looks for ways to improve the patient care available to the citizens of our State. During a recent review, discussion took place concerning the use of **intraosseous access (IO)** in the adult patient. This procedure has been shown to be a useful route of medication and fluid administration when peripheral IV access has been unsuccessful. The MPCC felt changes in the current protocol were warranted based on the most recent research findings.

The current *Medical Assessment and Management Procedures* protocol (4201) permits the consideration of the use of intraosseous access in the "critically ill and unconscious" patient per order of the MCP. The committee felt these conditions may have placed unneeded restrictions on the use of this procedure. After discussing findings from various research across the country, the MPCC believes this is a procedure which, when used appropriately, can be safely utilized in the critically ill patient, both conscious and unconscious, without MCP intervention. The indications for use of IO placement include those conditions in which the need for immediate vascular access is critical, such as cardiac arrest, hemodynamic instability, severe respiratory distress, the presence of sustained ventricular tachycardia, or other similar conditions and standard IV access cannot be obtained after two (2) attempts. The MPCC has reviewed the literature concerning acceptable sites for IO placement. At this time, **the only acceptable site approved by the MPCC is the proximal, anterior tibia.** Other

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Intraosseous access in the Adult Patient

Page Two

July 28, 2008

potential sites are being considered and may be approved at a later date. Therefore, the *Medical Assessment and Management Procedures* protocol (4201) has been revised to reflect these changes. A copy of the revised protocol is included with this memo.

The MPCC also reviewed and discussed the various IO devices available to the EMS provider. Based on the information available, **the only currently acceptable device approved by the MPCC for use in the adult patient is the EZ IO®**. This device allows the operator to control the pressure or force used during insertion, and thereby determine the exact depth of needle placement. Other similarly designed drill-type devices may be considered for approval at a later date. At this time, the addition of an EZ-IO will remain as an option on the Class C Ambulance Equipment list.

Quality assurance reviews surrounding the use of intraosseous access were also discussed. The MPCC believes the use of IO access, in any patient, should be reviewed by the agency medical director. This review should include examining the appropriateness of use, the physical placement process, and the patient outcome.

I believe these changes will be an important step in providing better patient care for those we serve. If you have any questions or need additional information, please do not hesitate to contact the Office of EMS. The point of contact for this change will be Deron Wilkes, Chief of Special Operations. He can be reached at 304-558-3956 or by email at deronwilkes@wvdhhr.org. Thank you for your assistance with this improvement to the EMS care provided in the State of West Virginia.

pc: Jerry Kyle
Deron Wilkes
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Regional Program Directors/Coordinators
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