

PURPOSE:

To standardize vascular access and decrease the number of IV attempts.

Inclusion Criteria:

Patients who present to the ED in need of vascular access.

Exclusion Criteria:

Patients who present to the ED with trauma activation or need ALS team.

Peripheral Intravenous (PIV) Access Needed

Emergent PIV
(Patient needs PIV within 30 minutes)
Notify Attending

- 2 attempts by two separate experienced team members
- Consider IO access
- Consider using ultrasound (US) guided IV attempts

Urgent PIV
(Patient needs PIV within 2 hours)

- Needlestick Pain Prevention**
- Notify Attending if unable to obtain IV access after the below attempts to discuss next steps and IV alternatives

Difficult

- 2 attempts- US guided or 1 attempt by team member
- May use special techniques*

Not Difficult

- 2 attempts by maximum of 2 team members
- May use special techniques*

Notify Attending if unable to obtain IV access after the above attempts to discuss next steps and IV alternatives***

***Special Techniques**

- Hot packs
- Vein viewer
- Transillumination

****Needlestick Pain Prevention**

- Distraction/child life
- Sucrose
- LMX
- Pain Ease
- Buzzy
- Synera patch

*****IV Alternatives**

- IM route for medications
- Oral, NG, GT route for hydration/medications
- Intraosseous line placement

Vascular Access- Inpatient

PURPOSE:
To standardize vascular access and decrease the number of IV attempts.

Inclusion Criteria:
Admitted patients who need vascular access.

Patient needs peripheral IV access

EMERGENT
(Access required within 1 hour)

Consult MET
2 IV attempts by experienced RN/LIP/Vascular Access Team (VAT)
Examples of Emergent patients include but are not limited to:

- Sepsis
- Hypoglycemia
- Sensitive medication timing
- Positive blood culture in need of antibiotic

Vascular access obtained?

Daily Evaluation of IV Access
Daily vascular access assessment on rounds
IR consult as indicated

Team Huddle for IV Escalation EMERGENT
Consult Anesthesia, Transport, IR, etc... for immediate consideration of ***IV alternatives/next steps

NON-EMERGENT
(Access required within 4 hours)

Difficult IV Access

2 IV attempts by experienced RN
OR
2 IV attempts by VAT
Examples of difficult IV access include but are not limited to:

- Chronic disease process
- History of multiple IV sticks
- Central lines in past

2 IV attempts by primary RN.
If unsuccessful reassess need for IV and/or IV alternatives*** with physician team.

Vascular access obtained?

Team Huddle for IV Escalation NON-EMERGENT
Consider the following:
Consult Anesthesia, Transport, IR, MET RN, etc...for consideration of ***IV alternatives/next steps

Daily Evaluation of IV Access
Daily vascular access assessments on rounds
IR consult as indicated

Special Techniques

- Hot packs
- Vein viewer
- Transillumination

Needlestick Pain Prevention

- Distraction/Child Life
- Sucrose for infants
- Elamax
- Pain Ease
- Buzzy
- Synera patch

*****IV Alternatives**

- IM route for medications
- Oral, NG, GT route for hydration/medications
- Intraosseous line placement

Vascular Access- Perioperative Area

Inclusion Criteria:

Patients presenting to the Operating Room who need vascular access.

Patient needs peripheral IV access

Pre-op RN attempts IV access (max 2 attempts)

If pre-op RN unsuccessful, Anesthesia resident and/or Attending attempt IV access

If IV access has not been obtained within 6-10 attempts, discuss options with surgeon performing case and parent:

- Cancel case
- Continue to attempt IV access
- Consider placing a central line

Needlestick Pain Prevention

- May use **sucrose** for patient who is not NPO
- May use **Pain Ease spray**
- **Lidocaine (LMX) 4% cream**- apply 1 application topically as needed for painful procedure. For use in patients ≥ 4 months of age. Apply 30 minutes prior to procedure.
- **Lidcaine-prilocaine (EMLA) 2.5-2.5% cream**- apply 1 application topically as needed for painful procedure. Apply to site 1-3 hours prior to procedure. Cover with bio-occlusive dressing.
- **Lidocaine-tetracaine (synera) 70-70 mg**- apply 1 patch topically as needed for painful procedure. For use in patients ≥ 3 years of age. Apply to site 20-30 minutes prior to procedure.

Considerations

Consider central venous access for patients with one or more of the following:

Therapy/Indication	Anticipated Duration
Difficult IV access (per definition)	ALL
Non-irritating medications/fluids	>72 hours
Irritants/vesicants	>48 hours
PPN/TPN	>72 hours
Calcium	>1 dose
Transfusions	>48 hours
Multiple medications and/or compatibility issues	ALWAYS CONSIDER
Frequent venous blood sampling	>48 hours
Concern for Renal Failure/venous preservation	>24 hours

References

<https://www.chop.edu/clinical-pathway/iv-access-improvement-project-clinical-pathway>
<https://www.chop.edu/clinical-pathway/vascular-access-inpatient-clinical-pathway>

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