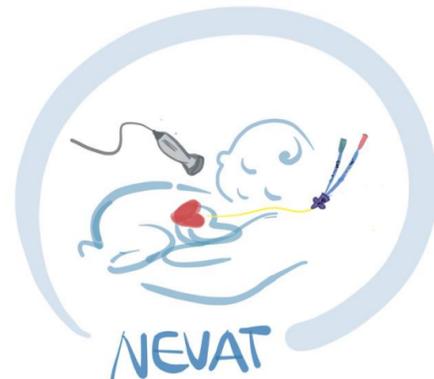


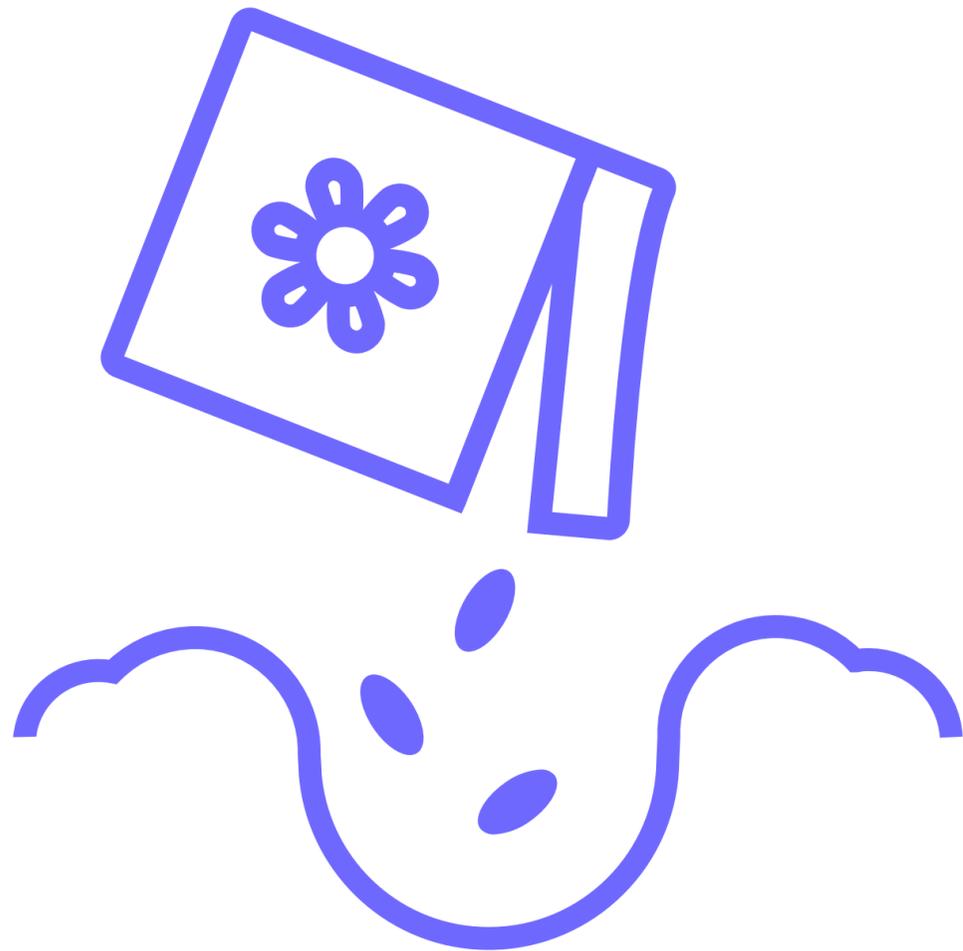
Vascular Access Management Plan - VAMP



**Based on The 7 Rights of
Neonatal Vascular Access**

Neonatal European Vascular Access Team

Introduction

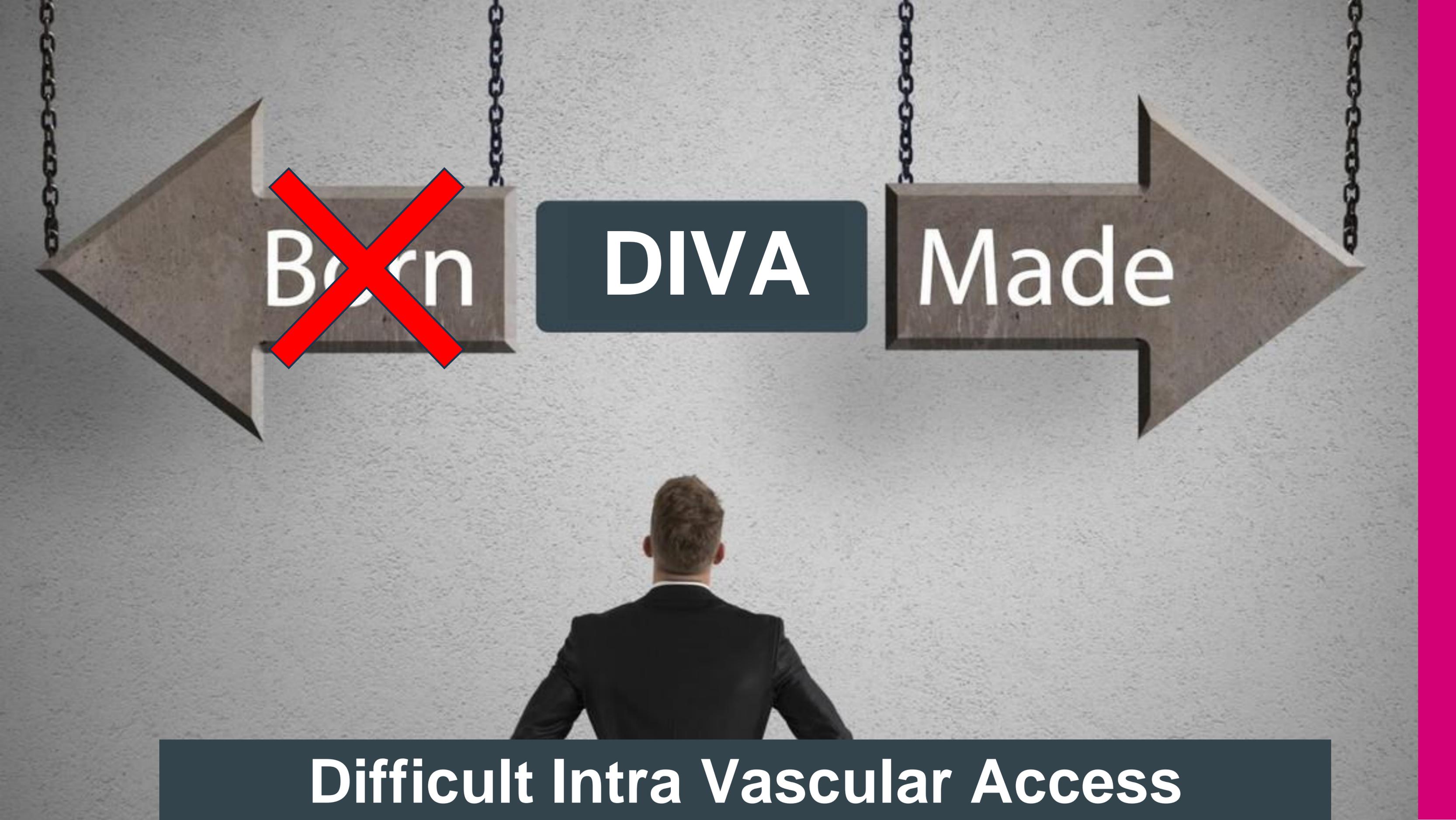


Vascular access devices (VADs) are considered essential for administration of fluids, nutrition, and medications in neonatal clinical settings.

Managing VA in neonates is challenging due to their unique physiological characteristics and the potential for serious complications.

How can a structured approach (the 7 Rights Framework) within a Vascular Access Management Plan (VAMP) improve patient safety and outcomes?





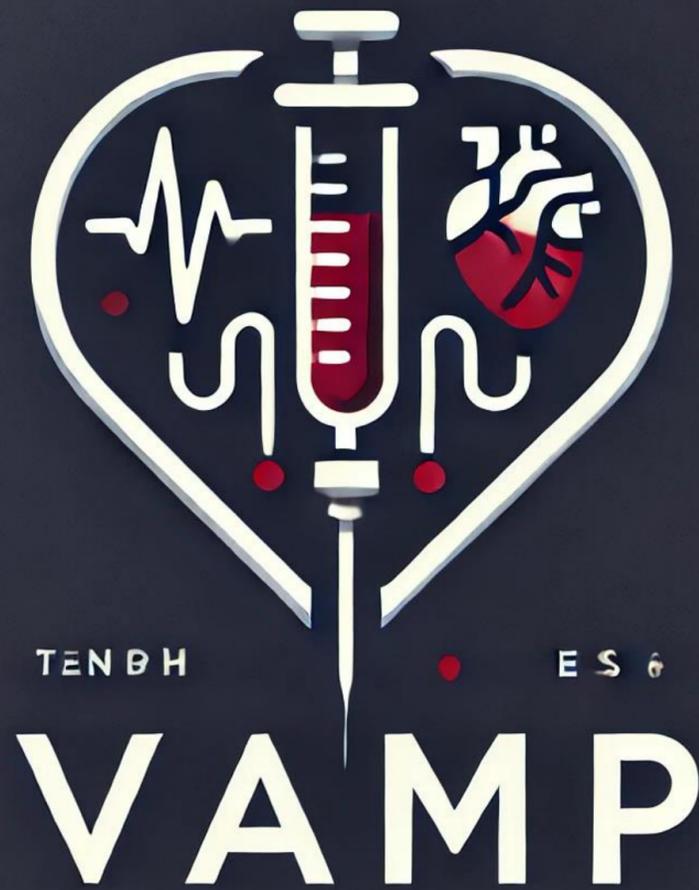
~~Born~~

DIVA

Made

Difficult Intra Vascular Access

Vascular Access Management Plan:



- A structured approach
- to assess patient needs and vessel health,
- ensuring the safe insertion,
- maintenance,
- and use of vascular access devices,
- while minimizing risks and complications,
- and optimizing treatment outcomes.

Case study Scenario 1

Patient 1: A preterm neonate, Bruno, born at 29 weeks gestation, weighing 1.1 kg, requiring Total Parenteral Nutrition (TPN) for 7 days due to prematurity and inability to tolerate enteral feeding.

Clinical Decision: The healthcare team decides to use a Short Peripheral Catheters (SPCs) to administer the 7 days of TPN. The decision is made on an ad-hoc basis, with the team opting for peripheral IV access as challenges arise, without a long-term strategy in place.

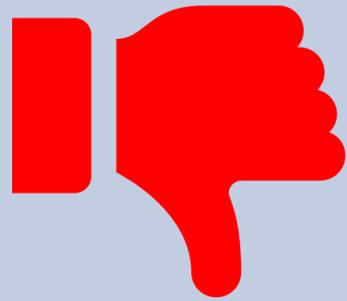
Case 1: SPC Insertion for 7 Days of TPN

Day	Attempts to insert	Indwell Time (Hours)	Complication	Outcome
Day 1	2	32	Phlebitis, redness at insertion site	Required replacement due to phlebitis
Day 2	3	30	Dislodgement	Required replacement after dislodgement
Day 4	2	28	Infiltration, swelling	Required replacement due to infiltration
Day 5	2	32	Signs of infection, redness	Required replacement due to infection risk
Day 7	2	32	Extravasation	Required replacement after extravasation



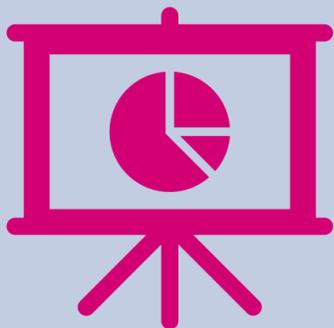
Total skin breaking procedures

- over the 7-day period, 5 SPCs were used,
- resulting in 11 skin-breaking procedures.



Multiple complications

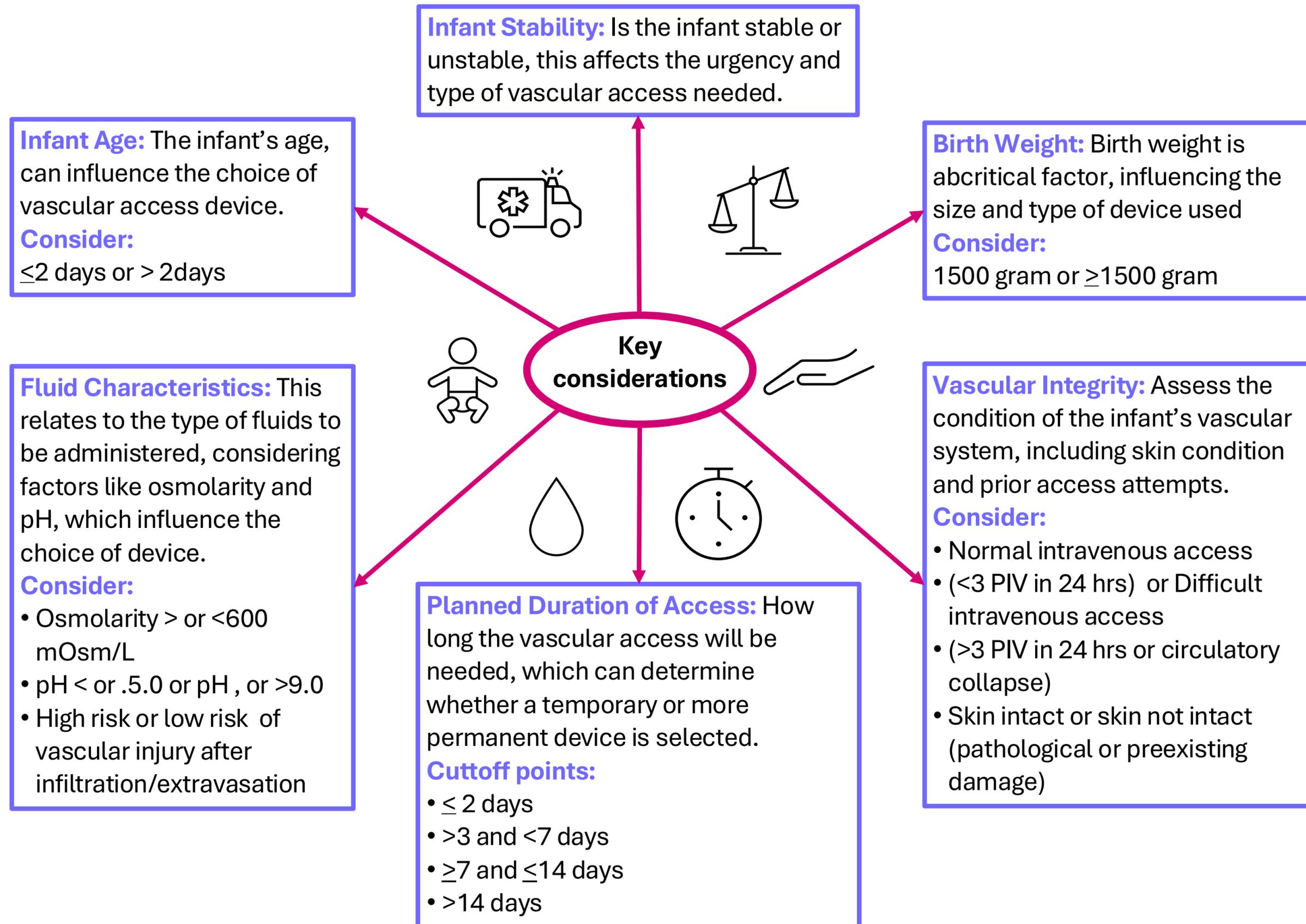
- phlebitis, infiltration and extravasation, and infection,
- leading to frequent replacements.



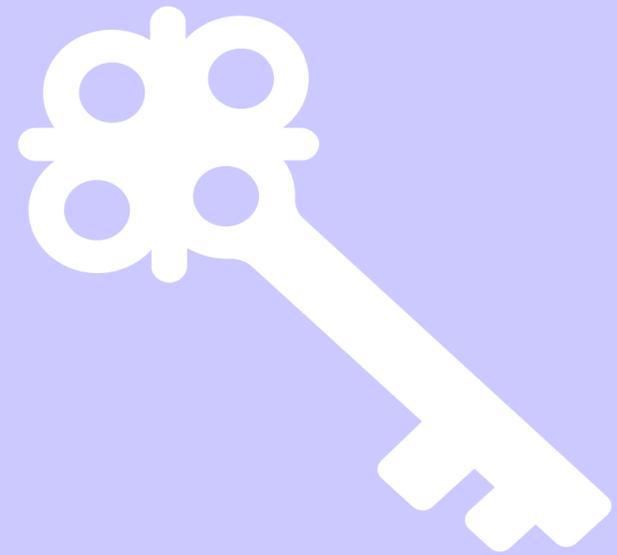
Outcome

- frequent need for new SPCs
- causing distress and increased the risk of long-term complications

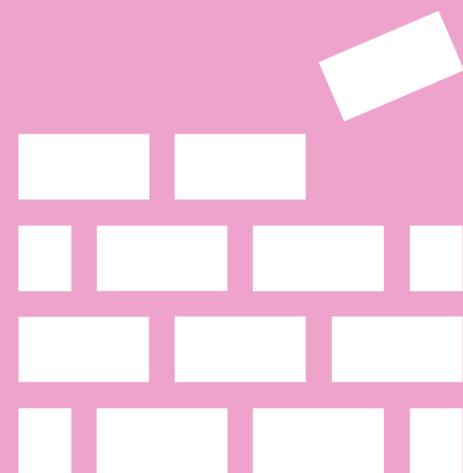
Factors to Consider



How to build a VAMP



Key Components



Building blocks

Key components

1

**PRELIMINARY
ASSESSMENT**

2

**INSERTION VASCULAR
ACCESS**

3

**UTILIZATION AND
MONITORING**

Key components with building blocks

1

PRELIMINARY ASSESSMENT

- Reviewing infant medical history
- Assessing the degree of urgency, infant clinical stability or deteriorating, impact of behavioural cues and ability to tolerate procedure
- Factoring in parents' opinions
- Undertaking systematic evaluations of skin and vascular health and suitability and other risk factors for complications (e.g., prematurity, low birth weight, existing pathology).

Key components with building blocks

2

INSERTION VASCULAR ACCESS

- Site selecting, applying appropriate skin disinfection and non-touch antiseptic technique protocols and care bundles
- Providing effective pain relief and comfort measures
- Using technological aids for vascular assessment and to assist with site selection and insertion
- Insertion technique - influenced by device and route choice
- Confirming correct device placement and functioning.

Key components with building blocks

3

UTILIZATION & MONITORING

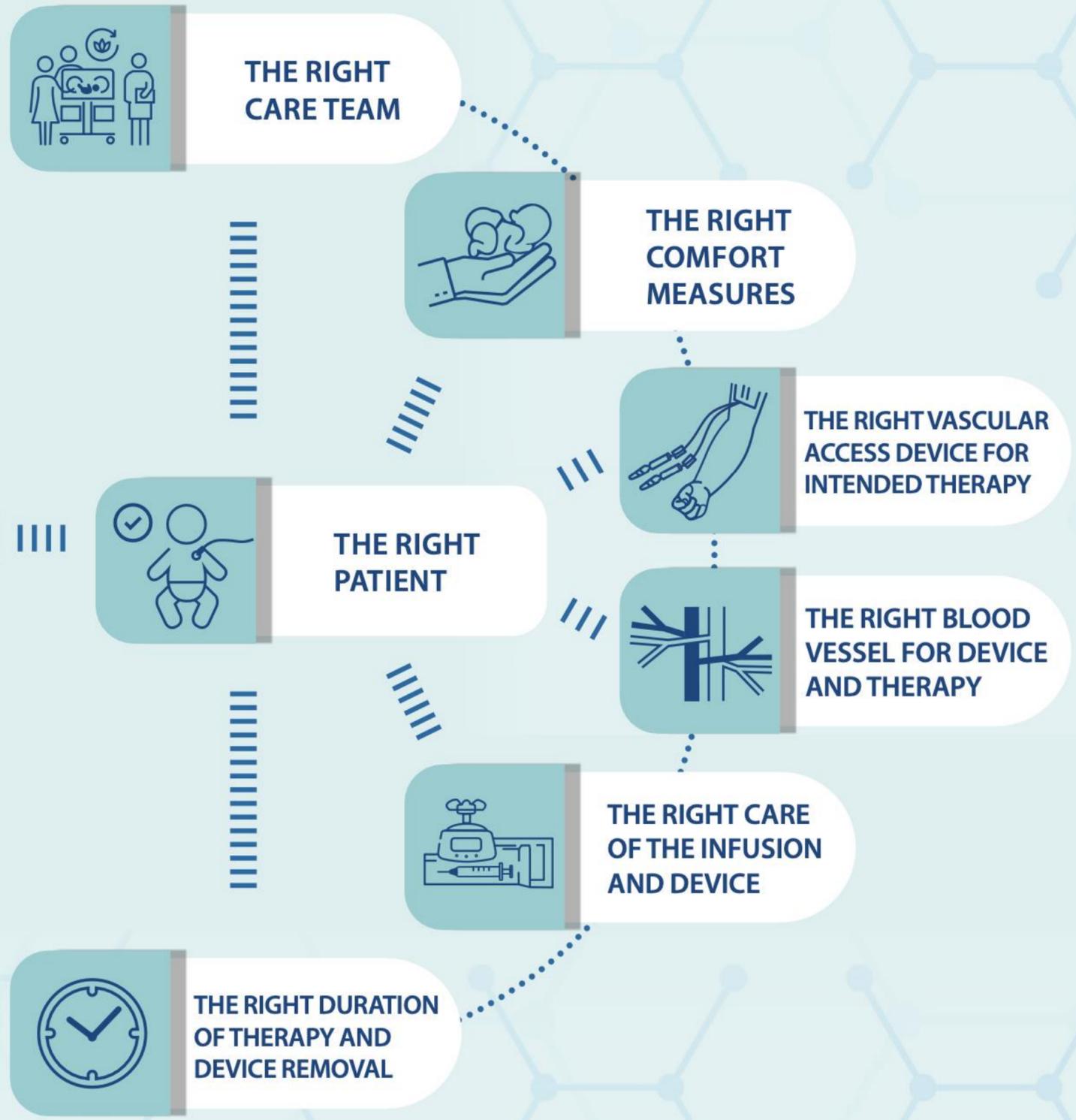
- Post-insertion care and management of the device guidelines and care bundles
- Infusion management – safe use of infusion pumps, regular review and adjustment as needed
- Monitoring for and managing complications – observation, technological aids and protocols.



7 RIGHTS OF VASCULAR ACCESS



Fundamentally every baby is entitled to receive care based on the best evidence, vascular access is no exception. Let's elevate neonatal vascular access care by prioritising the integration of best practices.



In collaboration with



Case study Scenario 2

Patient 2: A preterm neonate, Jenny, born at 29+1 weeks gestation, weighing 1.2 kg, requiring Total Parenteral Nutrition (TPN) for 7 days due to prematurity and inability to tolerate enteral feeding.

Clinical Decision: This time, the healthcare team follows a structured Vascular Access Management Plan (VAMP). Based on the plan, they recognize the need for prolonged and stable intravenous access due to the 7-day TPN requirement. Given the neonate's small size, fragility, and the high complication rate associated with multiple peripheral IV insertions, they decide to use ultrasound to insert a neonatal Peripherally Inserted Central Catheter (n-PICC) from the start.

Case 2: PICCC Insertion for 7 Days of TPN

Day	Attempts to insert PICC	Indwell Time (Days)	Complication	Outcome
Day 1	1	7	None during the observed period	Successful PICCC insertion, stable access for full 7 days of TPN



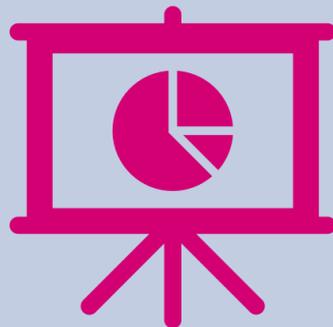
Total skin breaking procedures

- over the 7-day period, 1 PICC was used,
- resulting in 1 skin-breaking procedure.



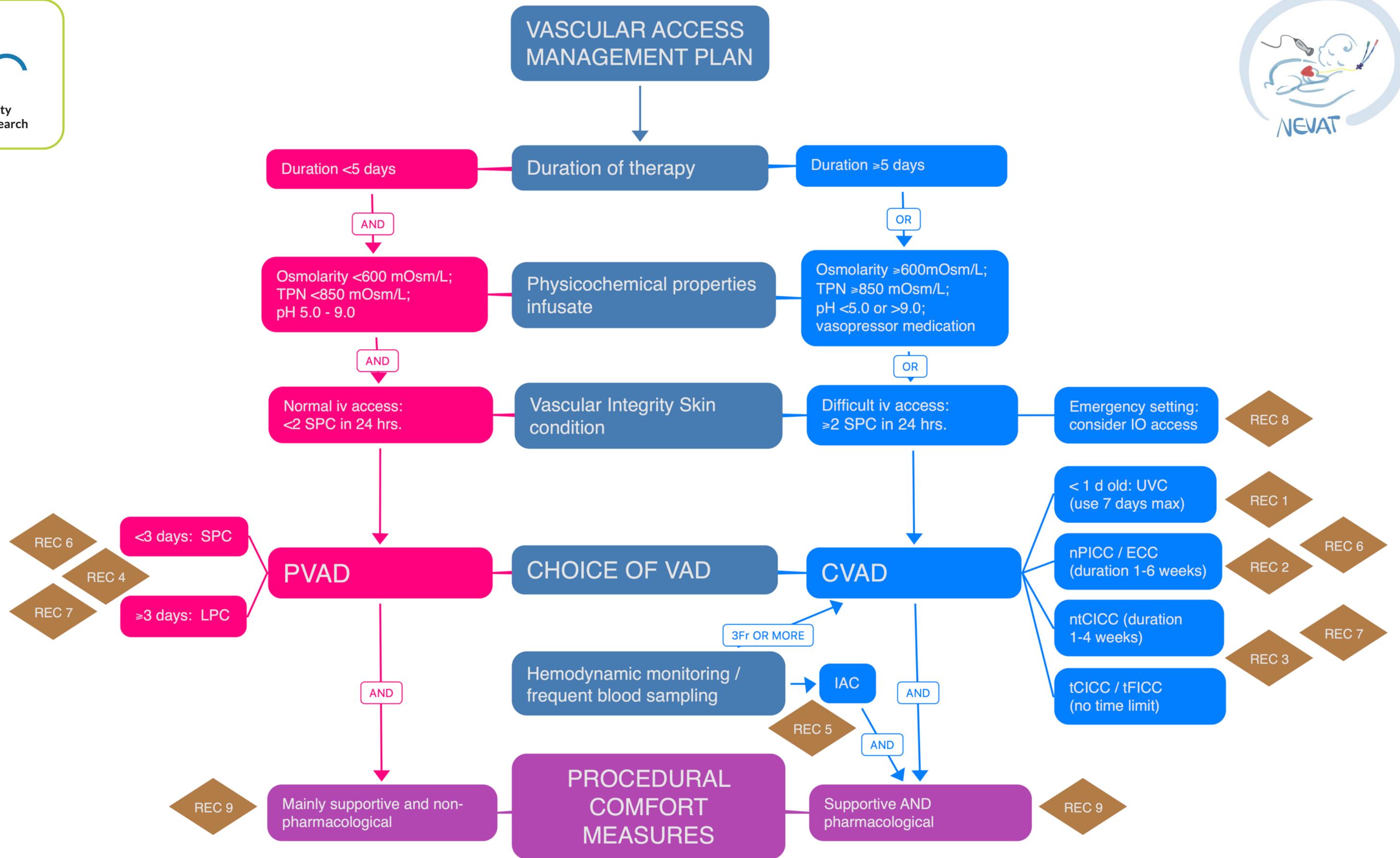
Complications

- ZERO complications,
- thanks to the stable and reliable PICC access.

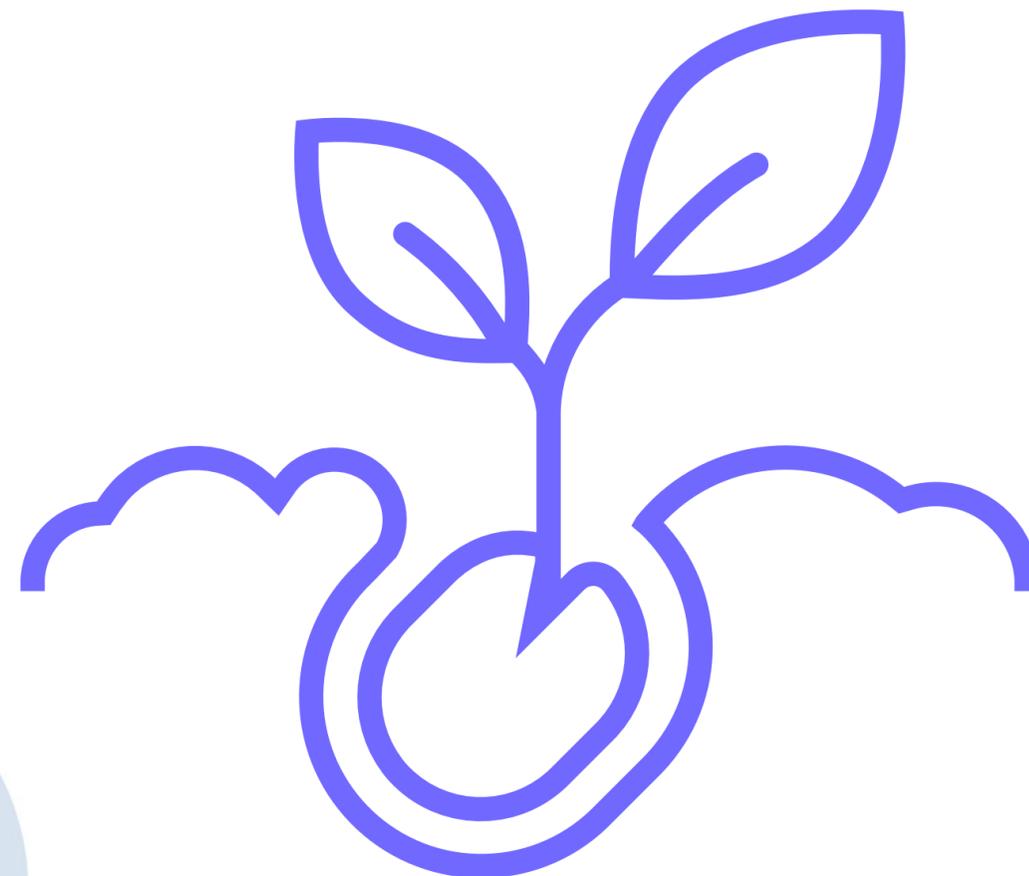
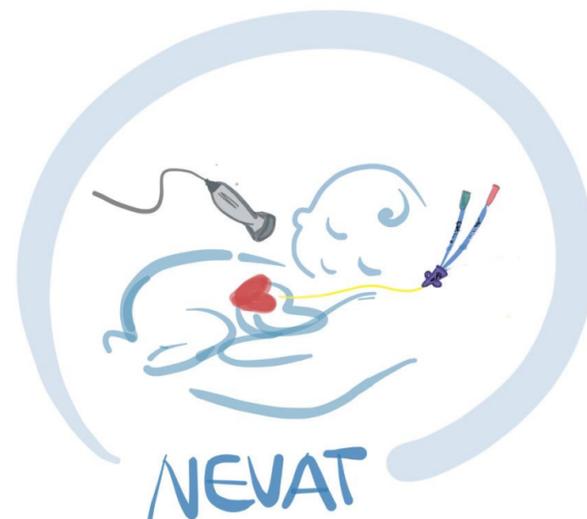


Outcome

- continuous, uninterrupted access for TPN,
- improving the neonate's comfort and reducing the risk of complications



Thank you



<https://neonat.org>

QUESTIONS

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