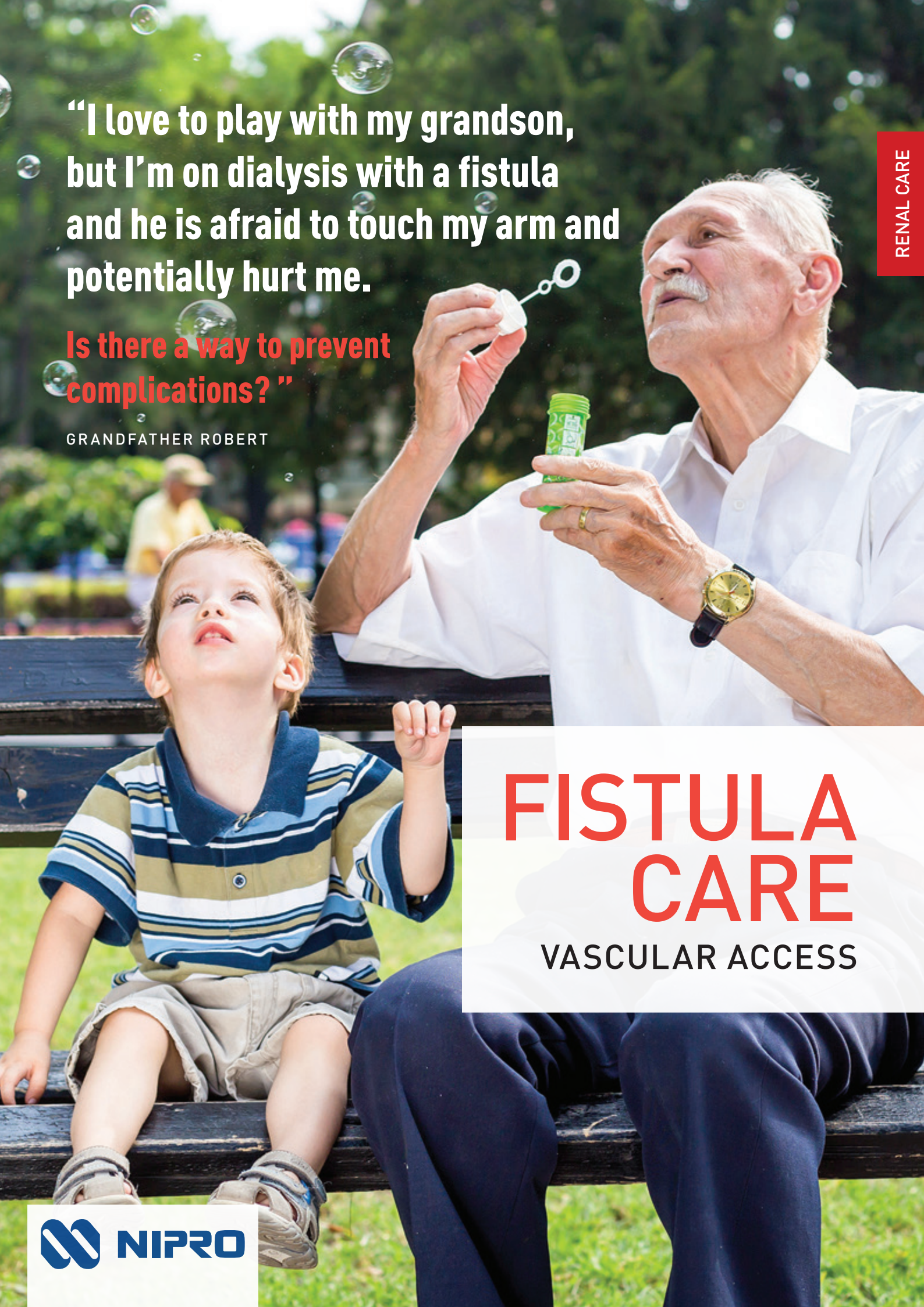


RENAL CARE

FISTULA CARE

VASCULAR ACCESS

NIPRO



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COMPLICATIONS IN VASCULAR ACCESS HAVE A DIRECT IMPACT ON PATIENTS, PROFESSIONALS, AND HOSPITALS AT LARGE.

Vascular access complications have been associated with as much as 10-15% of all inpatient stays among hemodialysis patients.[1]

The most predominant complications of arteriovenous fistulas in hemodialysis are:[2]

- Thrombosis 17-25%
- Stenosis 14-42%
- Aneurysms 5-6%

10-15% OF ALL INPATIENT STAYS

Patients

- Increased pain the in area of the fistula
- Increased wait time due to bleeding
- Increased return visits for testing and treatment
- Recirculation and loss of vascular access
- Reductions in quality of life and survival rate

Healthcare professionals

- Increased workload because of testing, surveillance, and treatments
- Increased pressure to perform
- Increased stress and the potential for risks such as needlestick injuries

Hospitals

- Increased costs in medical products for interventional treatment
- Increased costs related to time, personnel, and risks associated with increased demands for care

y-functioning fistula is the main indicator of a succe
ascular access are a serious reality. These complic
ns for dialysis patients.

WHAT ARE THE CONSEQUENCES & COSTS ASSOCIATED?

The following procedures are accepted as general practice:[3]

Monitoring vascular access

- Physical examination to detect early dysfunction
  - Character of pulse and sound
  - Presence and location of thrills
- Clinical parameters
  - Swelling of arm
  - Prolonged bleeding time
  - Cannulation problem

$ 571 TO $ 12,740 PER EPISODE

Surveillance

- Monitoring vascular access performance indicators
- Periodic measurements are required to make correct assessments
  - Blood flow delivered
  - Dialysis efficacy
  - Recirculation analyses
  - Bleeding time control
  - Venous pressure measurements

Diagnostic testing

- If physical monitoring and surveillance indicators confirmed abnormalities, a Doppler Ultrasound or a Fistulography may be required

COSTS ASSOCIATED

Direct costs related to arteriovenous fistula complications vary from **$ 571** to **$ 12,740**, depending on the severity of hospital intervention.[4, 5]

The goal is to prevent complications, without worrying about the costs.

BECAUSE EVERY LIFE DESERVES AFFORDABLE CARE

ssful hemodialysis, but complications
ations are the first cause of hospital

IS THERE A WAY TO PREVENT COMPLICATIONS?

Clinical Practice Guidelines recommend different procedures for the prevention of vascular access complications: [6-9]

Aseptic techniques:

- For manipulation, connection and disconnection

Cannulation techniques:

- Buttonhole technique
  - Reduces pain
  - Reduces aneurysms
  - Lowers vascular access failure
  - Facilitates access for self-cannulation
  - Improves appearance of the fistula
- Plastic fistula needles
  - Safe cannulation during fistula maturation
  - Decreases risk of perforation
  - Allows higher mobility
  - Better option for patients allergic to metal
- Needle specifications
  - Needle gauge depending on the blood flow rate
  - Needle length adapted to any fistula depth
  - Rotating hub allows rotation without moving the needle wings
  - Back eye

Recommended needle gauge	Blood flow rate	Color
17 gauge	< 300 ml/min	
16 gauge	300-350 ml/min	
15 gauge	350-450 ml/min	
14 gauge	> 450 ml/min	

Surveillance of vascular access:

- KDOQI recommends surveillance, at least once a month, to diagnose and prevent the progression of stenosis or thrombosis
  - Flow measurement
  - Recirculation

NIPRO'S TOTAL SOLUTION:

Nipro is a global market leader with a wide range of products to prevent vascular access complications.

More choices mean more opportunities for success.

Nipro is also the only company to have a unique, patented BioHole™ stick for maturation of the tunnel. BioHole™ is available in standard needle, single needle and catheter needle.

ASEPTIC TECHNIQUES:

1. On-Off kit, customized on request
2. Prefilled syringes of 0.9% NaCl to minimize potential contamination
3. Nipro Safe Derm - Fix IVN
4. Pushban™



On-Off kit



Prefilled syringe



Safe Derm



Pushban

CANNULATION TECHNIQUES:

5. BioHole needle & single needle
6. BioHole catheter needle
7. BioHole Buttonhole stick
8. AVF catheter needle



BioHole Single Needle



BioHole Catheter Needle



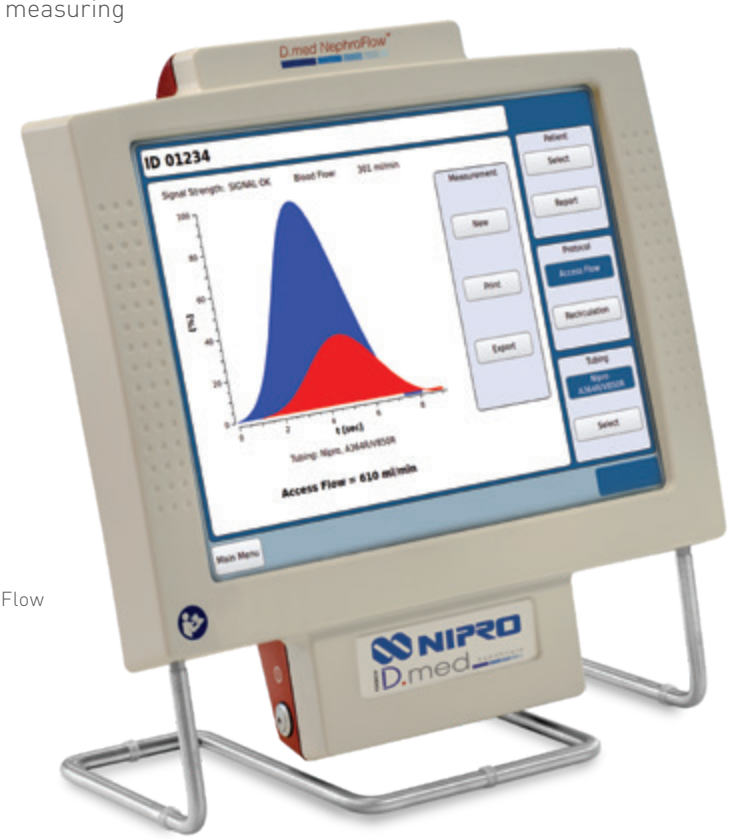
BioHole Buttonhole stick



AVF catheter needle

SURVEILLANCE OF VASCULAR ACCESS:

9. D.med NephroFlow™ assures adequate treatment by measuring recirculation and access flow



D.med NephroFlow

BECAUSE EVERY LIFE DESERVES AFFORDABLE CARE

1. Rosas SE, ET AL . 2012 Jan;255(1):181-6.
2. Stolic R. Med Princ Pract. 2013;22(3):220-8.
3. NKF KDOQI Guidelines. 2006
4. Tessitore N, ET AL. – Nephrol Dial Transplant 2008; 23:3578-84
5. Sands JJ, ET AL. – ASAIO J 1994; 40:M886-M888
6. CANNT-VA Guidelines-2016Jan4-NP Recommendation Nr 8
7. Renal association clinical practice guidelines on vascular access for Haemodialysis. Nephron Clin Pract 2011; 118
8. Cannulation technique influences arteriovenous fistula and graft survival. HYPERLINK "https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4184025/" Kidney Int. 2014 Oct; 86(4): 790–797
9. Needles and cannulas for arteriovenous fistula access: More options promote better Outcomes. National Kidney Foundation.2016

Please contact your local representative for more information

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