



# Vascular access- how is BC doing?

BC Kidney Days 2014 - on behalf of the Provincial Vascular Access Services Team

# Provincial Vascular Access Services Team (PVAAT)

- Provincial multidisciplinary interregional vascular access services team
  - Focuses on improving VA outcomes
  - Interdisciplinary (nurses, nephrologists, surgeons, interventional radiologists, unit clerks, allied health)
  - Provincial strategies with Initiatives tailored to local needs, implemented locally

Overarching PVAAT Goal = More fistulas/grafts, fewer catheters

# How was BC doing in 2010?

	<b>Fistula/Graft</b>
<b>Incidence</b>	<b>23%</b>
<b>Target</b>	<b>≥50%</b>
<b>Prevalence</b>	<b>61%</b> <b>(55% fistula 6% graft)</b>
<b>Target</b>	<b>≥80%</b>

Incidence: Oct 1/09 – Mar 31/10

Prevalence: as of Mar 31/10

# Changing the organizations that deliver care

- Redesign care based on BEST PRACTICE
- Use IT to improve access to information and to support clinical decision making
- Improve WORKFORCE knowledge and skills
- Develop effective TEAMS
- COORDINATE care among services and settings
- MEASURE performance and outcomes

# PVAST – Group discussion of major barriers

## **System Barriers**

ie. wait times for surgery

## **Patient**

ie. last access, refusal, awaiting transplant,  
inadequate vessels

## **Provider**

ie. reluctant to refer before HD start, lack of data on  
fistula creation before dialysis start

# PVAST – Setting the stage

## Practice guidelines:

- Best practices in VA clinics
- Referrals & transfers
- Urgency criteria for VA radiology & surgical intervention

## Nursing teaching materials:

- VA workshop (5 modules, 4 hours)
- Cannulation skills (novice, skilled & advanced, self-paced)
- Buttonhole cannulation (self-paced)
- Vein preservation

# PVAST – Supports to ensure best practice

- VA Clinic(s) / VA Nurse(s)
- Nephrologist designated as lead for VA
- Regular VA rounds to review complex VA issues & to develop “access” care plans (nephrologist, radiologist, surgeon & VA nurse)
- Forum to review system-related VA issues & make improvements (nephrologist, radiologist, surgeon, VA nurse & OR manager)
- “Protected” OR & radiology time for VA &/or waiting times consistent with the surgical & radiology urgency criteria
- Formalized mechanisms to work with CKD clinics to proactively identify patients & initiate education early
- Formalized process to match advanced cannulators with complicated & new accesses, including appropriate education for nurses re VA accesses & cannulation

# How to promote vein preservation?

- Engaged VA RN's, MD's (nephrologists, internists, radiologists), and all IV therapists in BC
- Developed provincial guidelines, tools
  - Target GFR < 30 mL/min, HD, PD, Tx
- Educational campaign
  - Do's and Don'ts for renal patients
- Flagging of patients
  - Wristbands, Wallet cards
  - Posters, Hospital computer system





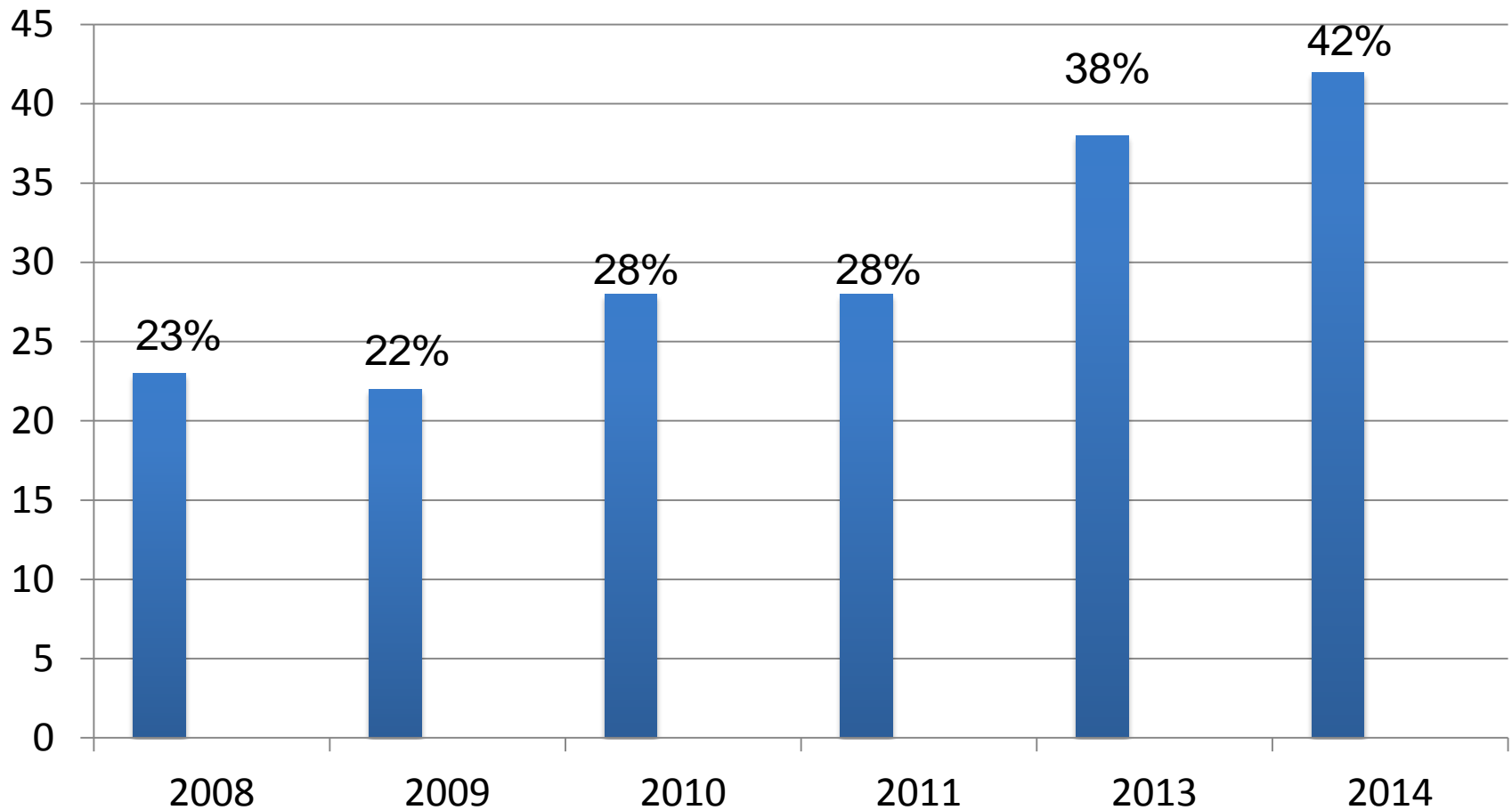
# PVAST – Show me the data

- Provincial summaries distributed q6 mo
  - Incidence and Prevalence rate reports
  - Why catheter report (characteristics of patients who started HD with a catheter where the “system” might have influenced the type of access; referral source, demographics/co-morbidities; # AVF attempts)
  - Wait time reports
  - Fistula failure report (Current & cumulative fistula failure & patency rates, searchable by surgeon)
  - Bacteremia rate (broken down by type of access)
- Many of these reports available at a health authority or program level

# Vascular Access Incidence and Prevalence Reports

Indicator	Details	Oct 1/13 - Mar 31/14							Apr 1/13 - Sept 30/13
		IHA	FHA	VCH-VGH	VCH-SPH	VIHA	NHA	BC	BC
Fistula / graft incidence	Prior status CKD	12%	53%	48%	63%	26%	20%	42%	38%
	Prior status CKD, PD, transplant	10%	38%	38%	48%	21%	22%	33%	33%
Fistula/graft prevalence		57%	61%	69%	72%	59%	50%	63%	62%
Surgical wait times	Receipt of booking to procedure (avg wks)	4.5	3.6	7.2	2.8	18.9	10.8	6.7	6.4
	Receipt of booking to procedure (median wks)	3.0	3.0	5.0	0.5	11.0	10.5	3.0	3.0
	% above target wait time	66%	34%	60%	22%	74%	75%	49%	46%
Infection rate	Fistula (rate/365 d)	0.027	0.014	0.004		0.000	0.000	0.009 N=8	0.005 N=4
	Graft (rate/365 d)	0.000	0.034	0.000		0.038	0.000	0.019 N=2	0.019 N=2
	Catheter (rate/365 d)	0.048	0.062	0.095		0.084	0.054	0.070 N=36	0.094 N=50
Primary fistula failure rate	Fistulas created in 2012/13 (0.5 - 1.5 yrs follow-up, as of Sept 30/13)	16%	13%	14%	14%	14%	27%	15%	
	Fistulas created in 2008/09, 2009/10, 2010/11 & 2011/12 (1.5 – 5.5 yrs follow-up, as of Sept 30/13)	25%	18%	19%	26%	17%	23%	21%	

# Sustained improvements in VA incidence rates in BC!



# Current BC data – Incidence and Prevalence

As of March 2014	BC total	Health Authority Ranges
Fistula Incidence	42%	12 – 63%
Fistula Prevalence	63%	50 – 72%

# Fistula infection rates remain low in BC

Access Type	T9: Oct 1/13 - Mar 31/14		
	All except Home HD	Home HD	Total
Fistulas (rate / 365 days)	.009 (7/280,438)	.012 (1/29,214)	.009 (8/309,652)
Grafts (rate / 365 days)	.020 (2/35,636)	0 (0/2,238)	.019 (2/37,874)
Catheters (rate / 365 days)	.071 (33/168,675)	.059 (3/18,699)	.070 (36/187,374)

CSN Guideline
<0.01 episodes per pt year
<0.1 episodes per pt year
<0.5 episodes per pt year

# Areas of continued focus

- The wait time for 49% of VA procedures performed between Oct 1, 2013 and Mar 31, 2014 were longer than the provincial target
  - Range between 22% and 75% province wide
- Ongoing use of these reports to lobby for dedicated OR time, fistula creation outside the OR, etc.

# Acknowledgements & Questions

