Stephen Meese Scholarship

- Advance Renal Nursing Excellence
- Share knowledge



Patient Reported Experience Measures (PREM's)

- Quality Improvement
- Implement change
- Improve delivery of Care
- Integral to Patient-Centred Care

Patient experience of needling in haemodialysis

Background – studies have shown pain, fear and anxiety are common concerns

Tool – Needling Patient Reported Experience Measure (NPREM)

Moore et al, 2025

Quality Improvement Project

AIM:

- To assess the feasibility and outcome of using the NPREM
- Improve experience of needling

Methods:

- Eligible patients were invited to complete the NPREM
- Consent obtained
- Two occasions 4-6 months apart

Sample

	n	%
Dialysis population at Austin Health	147	
Patients with an arteriovenous fistula	110	
Included	77	(70)
Declined	12	(11)
Excluded	21	(19)

Note. Reasons for exclusion: Medically inappropriate, language barrier, or unavailable

	n	%
Completed initial NPREM	77	
Completed follow-up NPREM	57	(74)
Unavailable	7	(9)
Death	4	(5.2)
Declined	4	(5.2)
Unwell	3	(3.9)
Change of treatment	2	(2.6)

- Male: 74%
- Age (mean): 68.7 years old
- Time on dialysis: ranges from 1 month to 30 years

About your needling experience

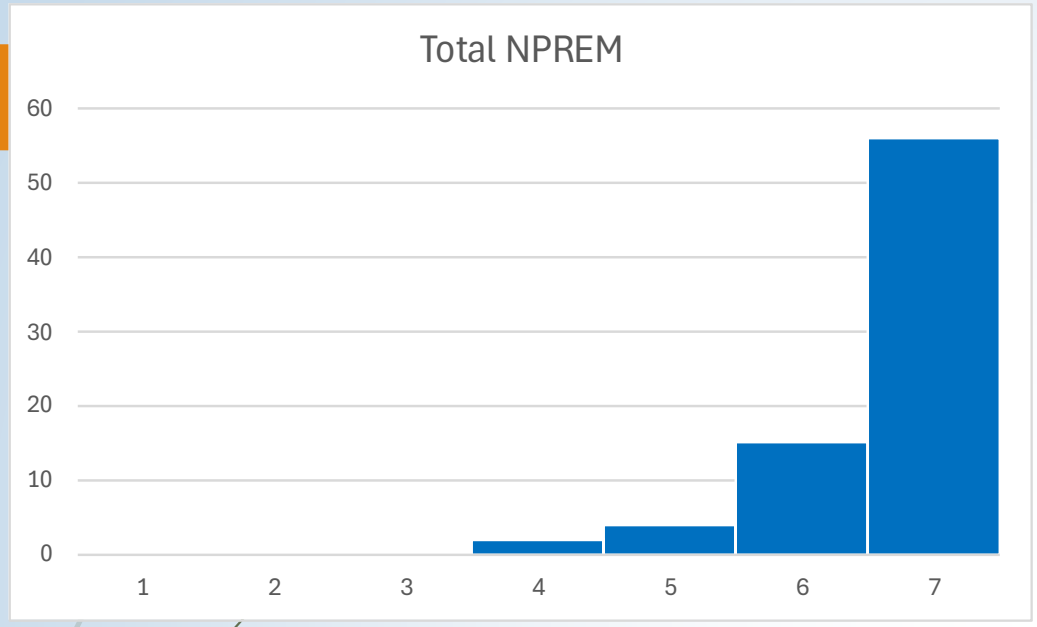
Needling is the placement of haemodialysis needles into your fistula or graft.

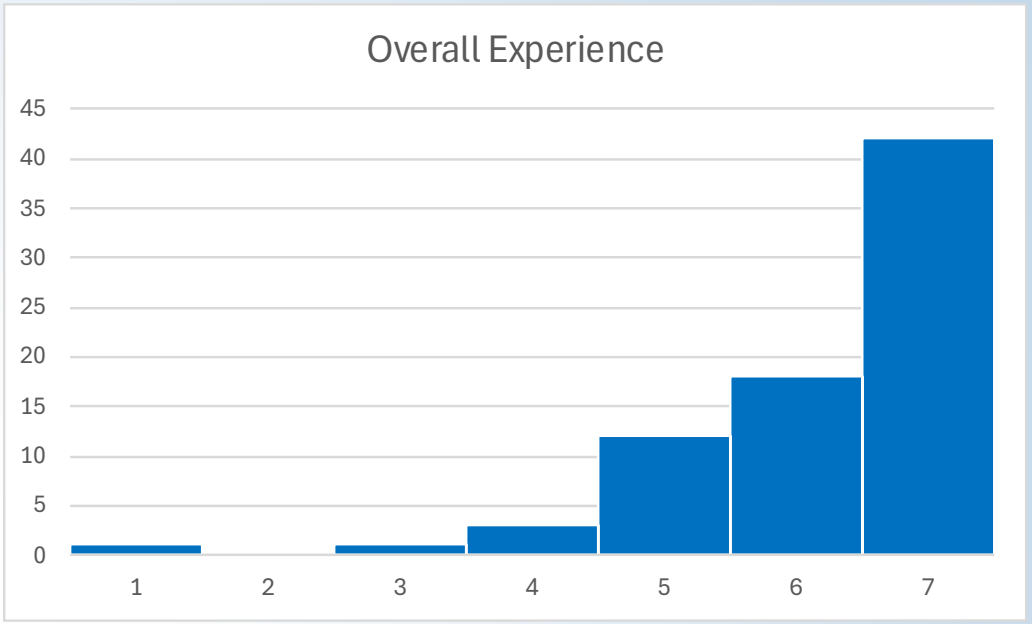
		Not at all painful						*Extremely painful*		
Q 1	Overall, how painful is needling?	1	2	3	4	5	6	7	Don't know	Not applicable

There are many other aspects that make up your needling experience. The following questions address these.

		Always						*Never*		
Q 2	I experience problems when the needles are inserted.	1	2	3	4	5	6	7	Don't know	Not applicable

		Not at all						*Completely*		
Q 3	I trust the dialysis team when it comes to my needling.	1	2	3	4	5	6	7	Don't know	Not applicable



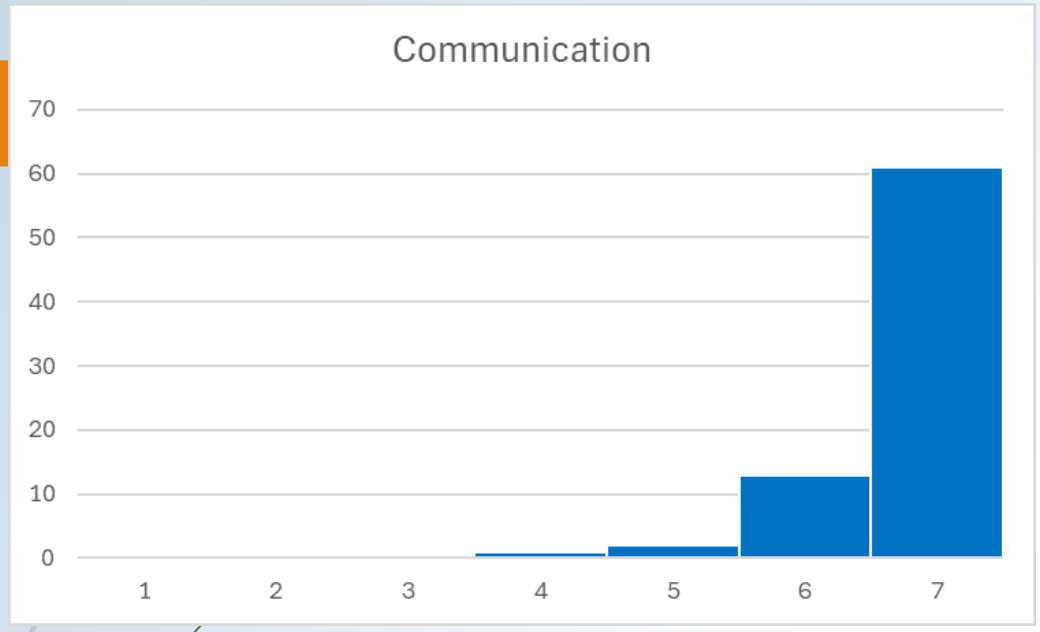


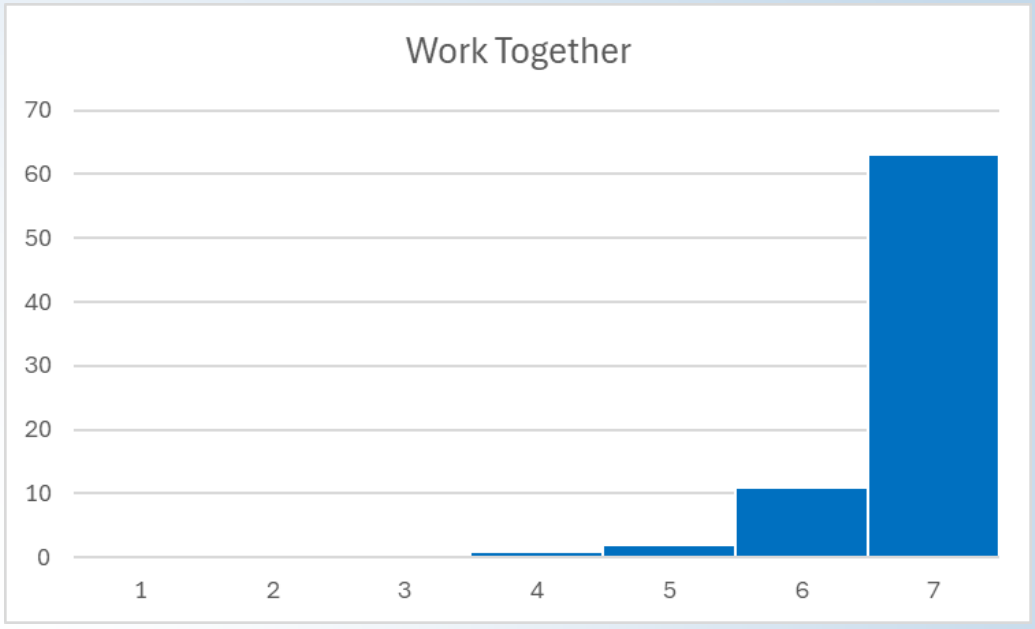
Results

	Total NPREM	Overall Experience
Average	6.2	6.2
Median	6.4	7
SD	0.7	1.1
Min	3	1
Max	7	7
Number of pts rating 6 or 7	56	60
% scoring 6 or 7	72.73	77.92

Themes

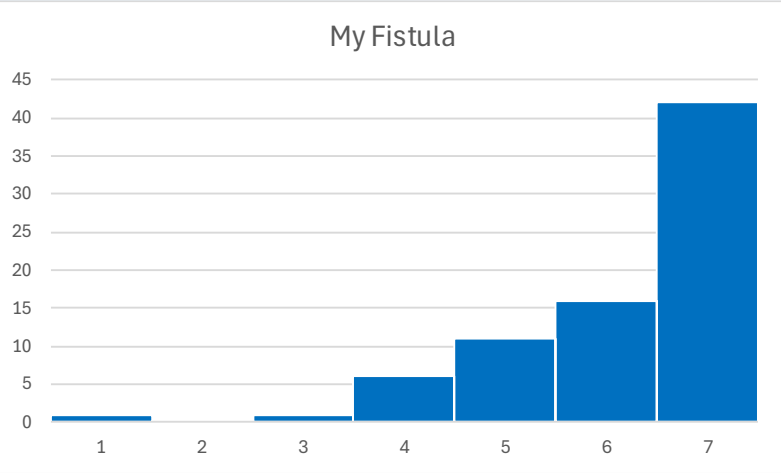

My Personal Experience
Communi-cating with the Team
Steps in Needling
My fistula and Needling
Working Together

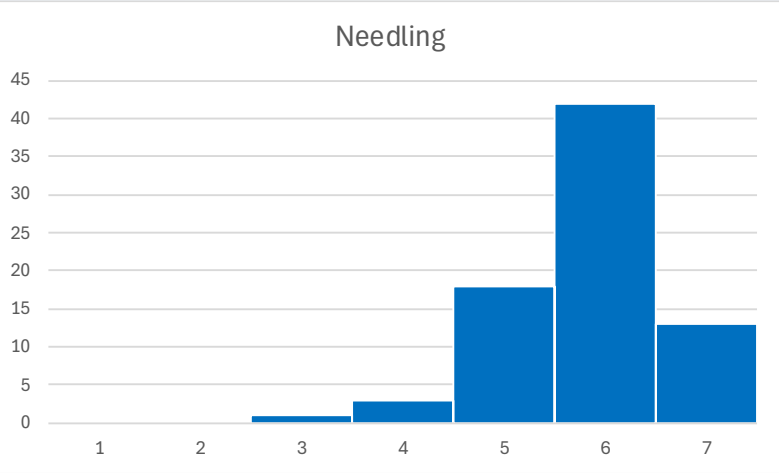


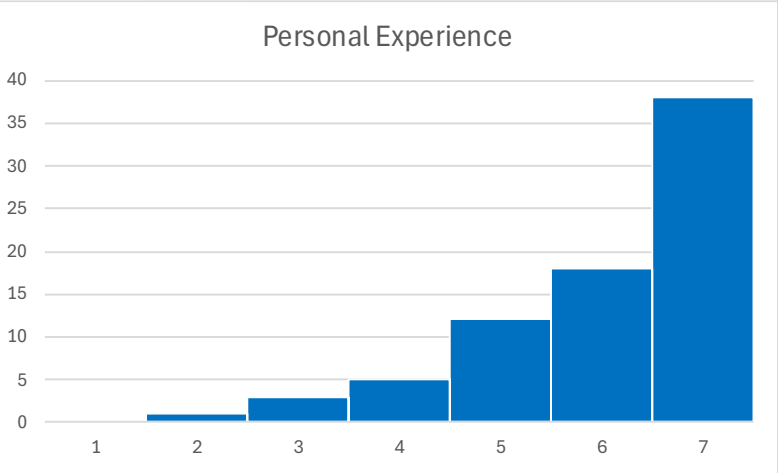


Results

	Theme Communication	Theme My Fistula	Theme Needling	Theme Work Together	Theme Personal Exp
Average	6.5	5.9	5.4	6.6	5.7
Median	7	6.3	5.4	6.8	6
SD	0.7	1.3	0.9	0.7	1.2
Min	3.2	1	2.2	3.2	2
Max	7	7	7	7	7
Number of pts rating 6 or 7	61	50	15	67	43
% scoring 6 or 7	79.22	64.94	19.48	87.01	55.84







Results

	Theme Communication	Theme My Fistula	Theme Needling	Theme Work Together	Theme Personal Exp
Average	6.5	5.9	5.4	6.6	5.7
Median	7	6.3	5.4	6.8	6
SD	0.7	1.3	0.9	0.7	1.2
Min	3.2	1	2.2	3.2	2
Max	7	7	7	7	7
Number of pts rating 6 or 7	61	50	15	67	43
% scoring 6 or 7	79.22	64.94	19.48	87.01	55.84

Results – Greatest variance

Item Number	Text	SD
Q8	Involved in Decisions about my Needling	2.1
Q16	I am nervous before needling	2.0
Q20	My fistula is difficult to needle	2.0
Q22	Experience varies greatly from session to session	2.0
Q24	Previous experiences still affect me	1.9
Q9	My frame of mind affect needling	1.8
Q1	Experience of needling is painful	1.6
Q14	I worry who will be available to needle me	1.6

Comparison of Baseline and Follow-up

	Total NPREM		Overall Experience		Theme Communication		Theme My Fistula		Theme Needling		Theme Work Together		Theme Personal Experience	
Time	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
Mean	6.2	6.3	6.2	6.4	6.5	6.4	5.9	6	5.4	5.5	6.6	6.6	5.7	5.9
Median	6.4	6.4	7	7	7	6.8	6.3	6	5.4	5.4	6.8	6.7	6	6.2
SD	0.7	0.6	1.1	0.9	0.7	0.7	1.3	1.1	0.9	0.7	0.7	0.6	1.2	0.9
Min	3	4.2	1	3	3.2	4.8	1	2	2.2	3.8	3.2	4	2	2.7
Max	7	7	7	7	7	7	7	7	7	7	7	7	7	7

Individual results

- 6 participants with Total NPREM scores between 3 and 5
- Multiple themes with scores less than 4

- 3 males in their early 70's
  < 3 months of having fistula needled
  history of depression / anxiety
  all had psychiatry input

- 2 males in their 40's / 50's
  Stresses and challenges balancing work, family and dialysis




Difficulty needling
Complications
Positive Experience
Good education
Appreciative
Experience Improved
Self needling
Pain
Itch
Anxiety
Communication
Poor education
Numb
No local – one less needle
Bleeding
Nervous
Fear
Bad experience
No longer need local
Nurse Skill
Fistula intervention
Prefer cream as needles hurt

Psychometric properties of the NRPEM

- Internal consistency
  - Chronbach's a = 0.893
- Test-retest reliability
- Good Content and Face validity
- Predictive validity for identifying patients likely to experience negative outcomes at follow up was good (AUC = 0.8286)

Spearman's Correlations (Test-Retest: Time 1 – Time 2)

	Spearman's rho	p
Total NPREM score	0.561	< .001
Overall experience	0.081	0.558
Communicating with the team	0.198	0.148
My Fistula and needling	0.526	< .001
Steps in needling	0.164	0.228
Working together	0.456	< .001
My personal experience	0.525	< .001

Future

- Importance of understanding our patient's experiences
- Use of a tool - NPREM
- Adapt to the needs and population at Austin Health
- Evaluate the predictive and discriminatory validity

Key References

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