

## Dental Practice-Based Research Network www.DentalPBRN.org

**DPBRN 18: Persistent Pain and Root Canal Therapy** 

**Results: Overall and by Region** 

Date prepared: January 28, 2012

Table 1: Practitioners and patients by DPBRN region

	AL	/MS	FL/	GA	М	N	PI	DA		SK	ТО	TAL
	N	%	N	%	Ν	%	Ν	%	N	%	N	%
Practitioners	10	16.1	14	22.6	26	41.9	5	8.1	7	11.3	62	100.0
Patients												
3 month	90	14.1	127	19.8	337	52.7	34	5.3	52	8.1	640	100.0
6 month	83	12.8	127	19.5	354	54.4	35	5.4	52	8.0	651	100.0

The report is based on 640 patients (90.4% of 708) from 62 practitioners who completed a 3 month follow-up of DPBRN Study 17 (Peri-operative Pain and Root Canal Therapy Study), and 651 (91.9%) who completed a 6 month follow-up of the study.

Unless otherwise stated, totals that do not sum to 640 for the 3 month follow-up or to 651 for the 6 month follow-up are due to missing data.

## **Patient Survey — 3 Months After Treatment**

1. How would you rate your tooth pain on a 0 to 10 scale at the <u>present time</u>, that is right now, where 0 is "no pain" and 10 is "pain as bad as could be"?

No Pain Pain as bad as could be 0 1 2 3 4 5 6 7 8 9 10

Table Q1: Level of pain	at prese	ent time	by DPE	BRN regi	on							
	AL	./MS	FL/GA		M	IN	F	PDA		SK	TO	TAL
	N	%	N	%	N	%	N	%	Ν	%	N	%
How would you rate yo	our tooth	n pain o	n a 0 to	10 scale	at the	presen	t time	e, that is	right	now, w	here 0	is "no
pain" and 10 is "pain a	s bad as	could b	e"?									
None (0)	84	94.4	118	92.9	282	84.2	27	79.4	46	88.5	557	87.4
Mild (1-3)	3	3.4	7	5.5	49	14.6	6	17.7	6	11.5	71	11.2
Moderate (4-6)	1	1.1	2	1.6	3	0.9	1	2.9	0	0.0	7	1.1
Severe (7-10)	1	1.1	0	0.0	1	0.3	0	0.0	0	0.0	2	0.3

- Overall, about 13% of responding patients reported having any pain 3 months after treatment.
- 2. Have you taken anything for the pain (over-the-counter or prescription medication, herbal, other) in the last 7 days?
  - a. Yes
  - b. No

Table Q2: Taken pain medication by DPBRN region

	AL/MS FL/GA		GA	М	N	Р	DA		SK	TOT	ΓAL	
	Ν	%	N	%	N	%	N	%	N	%	N	%
lave yo	u taken	anything	for the p	pain (ove	r-the-coเ	ınter or ı	prescrij	ption me	dicatio	n, herbal, o	ther) in	the
lave yo ast 7 da		anything	for the p	pain (ove	r-the-cou	ınter or <sub>l</sub>	prescri	ption me	dicatio	n, herbal, o	ther) in	the
•		anything 3.4	; for the <sub>l</sub>	pain (ove	r <b>-the-co</b> u 23	<b>inter or  </b> 7.0	prescri <sub>l</sub> 2	<b>ption me</b> 5.9	dicatio 0	<b>n, herbal, o</b> 0.0	ther) in 31	the 4

• About 5% of responding patients were continuing to take pain medication 3 months after treatment.

	,,	/MS	FL/0	JΑ	M	N	Р	DA		SK	TOT	AL
	N	%	N	%	N	%	N	%	N	%	N	%
Has your tooth months?	pain be	en prese	ent at le	ast 8 hou	urs a day	, 15 day	s or m	ore a m	onth o	ver the las	t 3 or m	ore
Yes	2	2.3	5	4.0	20	6.1	1	2.9	0	0.0	28	4.5
No	87	97.8	121	96.0	307	93.9	33	97.1	52	100.0	600	95.5
n the last 3 m ciated with yo cate the num	ur toot	:h that r	eceive	root c	anal the	erapy?	(Mark				oain	
2.	itional action itional	root car of the t x-rays:	nal trea cooth (to How r	tment(s ooth wa nany ap	is remo	ved)	у арро	ointmer	nts?			
2. 🔲 Antil		ation (p			over the	e counte	er)					
											_	

Table Q5: Methods of pain management by DPBRN region

	AL/MS N %		FL,	/GA	Ν	1N	P	DA		SK	ТО	TAL
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
In the last 3 months, which of the f	ollowir	g treat	ments	have	you so	ught to	mar	nage pa	in as	sociate	ed with	า
your tooth that received root canal	therap	y?										
Additional dental tx												
Additional root canal tx	0	0.0	2	1.6	13	3.6	3	8.6	5	9.6	23	3.4
Tooth extraction	1	1.0	0	0.0	7	1.9	0	0.0	0	0.0	8	1.2
Additional x-rays	0	0.0	3	2.3	15	4.1	0	0.0	3	5.8	21	3.1
Medications/Supplements												
Pain Medication	1	1.0	5	3.9	56	15.3	7	20.0	1	1.9	70	10.3
Antibiotics	0	0.0	5	3.9	15	4.1	0	0.0	1	1.9	21	3.1
Herbal/botanical	0	0.0	1	0.8	4	1.1	0	0.0	0	0.0	5	0.7
Appt w/ medical doctor	0	0.0	2	1.6	11	3.3	1	2.9	0	0.0	14	2.2
Alternative												
Chiropractic tx	0	0.0	0	0.0	6	1.6	0	0.0	0	0.0	6	0.9
Acupuncture	0	0.0	0	0.0	3	0.8	0	0.0	0	0.0	3	0.4
Other	2	2.0	1	0.8	9	2.7	2	5.7	0	0.0	14	2.2
None of the above	87	96.7	112	88.2	264	78.6	24	70.6	39	75.0	526	82.3

- Of the various modalities to manage pain, use of pain medication was most common, reported by 10% of patients; ranged from lows of 1%-4% (in AL/MS, SK, FL/GA) to highs of 15-20% (MN and PDA).
- 82% of responding patients had NOT used any type of medication, regular or alternative treatment modalities to manage pain associated with receipt of root canal therapy; ranged from about 71% (PDA) to 97% (AL/MS).

## **Patient Survey — 6 Months After Treatment**

1.	How many days in the past month have you had pain in the area that was treated with a root canal?

Table Q1: Number of days pain was present in last month by DPBRN region

Days (If no pain, please write "0/0")

	AL	/MS	FL/C	6A	М	V	P[	DA	9	SK	TOT	AL
	N	%	N	%	N	%	N	%	N	%	Ν	%
How man	ny days	in the pa	st month	have you	ı had paiı	n in the a	rea tha	t was tr	eated v	vith a roo	t canal?	
>=1	4	4.8	7	5.5	43	12.2	6	17.1	12	23.1	72	11.1
ZERO	79	95.2	120	94.5	311	87.8	29	82.9	40	76.9	579	88.9
Among >	=1											
Mea	n	3.2		7.0	8.2	<u> </u>	10.3	3	15	.6	9.2	
(SD)		2.5		10.6	8.7	7	11.1	1	11	.6	9.7	

- Six months after obturation was completed, 11% of patients reported having pain at least one day in the prior [6<sup>th</sup>] month. This varied considerably across region, from around 5% (AL/MS, FL/GA) to 23% (SK).
- Among the 11% reporting pain on any day in prior month, the average number of days had pain was 9.2; this also differed by region, from 3.2 (AL/MS) to 15.6 (SK).
- 2. Have you taken anything for the pain (over-the-counter or prescription medication, herbal, other) in the last 1 month?
  - a. Yes
  - b. No

Table Q2: Taken pain medication by DPBRN region

	AL	/MS	FL/	GA	М	N	Р	DA		SK	ТОТ	AL
	N	%	N	%	N	%	Ν	%	N	%	N	%
Have yo	u taken	anything	for the p	ain in the	last 1 m	onth?						
Yes	2	2.4	3	2.4	25	7.2	4	12.1	3	5.8	37	5.8
No	80	97.6	124	97.6	324	92.8	29	87.9	49	94.2	606	94.3

<sup>\*</sup>Note: 3 patients who reported zero days having pain in past month, took something for pain in prior month.

• Approximately 6% of patients overall were still taking pain medication 6 months after treatment; ranged from 2% (AL/MS, FL/GA) to 12% (PDA).

## IF PAIN WAS NOT PRESENT IN THE PAST ONE MONTH, SKIP TO QUESTION #12

Questions 3 – 11 below based on 75 patients: 72 who reported pain at least one day and additional 3 who did not report pain but were taking something for pain

3. How would you rate your tooth pain on a 0 to 10 scale at the <u>present time</u>, that is right now, where 0 is "no pain" and 10 is "pain as bad as could be"?

Table Q3: Level of pain at present time by DPBRN region

	AL/MS		FL/GA		MN		F	PDA		SK	TO	ΓAL
	N	%	Ν	%	N	%	Ν	%	Ν	%	N	%
How would you rate your t	ooth pai	n on a 0	to 10	) scale a	t the	present	time	, that is	right	now, wh	nere 0 is	"no
pain" and 10 is "pain as ba	d as coul	d be"?										
None (0)	3	75.0	3	42.9	23	52.3	3	50.0	2	18.2	34	47.2
Mild (1-3)	1	25.0	4	57.1	14	31.8	2	33.3	9	81.8	30	41.7
Moderate (4-6)	0	0.0	0	0.0	7	15.9	1	16.7	0	0.0	8	11.1
Severe (7-10) - <i>none</i>												

- Among patients who indicated any pain in the past month, namely, the 6<sup>th</sup> month after treatment completed, 47% reported no current pain, 42% pain of mild intensity, 11% of moderate and none of severe intensity.
- 4. In the past month, how intense was your <u>worst tooth pain</u> rated on a 0 to 10 scale where 0 is "no pain" and 10 is "pain as bad as could be"?

Table Q4: Intensity of worst pain by DPBRN region

	AL,	/MS	F	L/GA	1	MN		PDA		SK	TC	DTAL
	Ν	%	Ν	%	Ν	%	Ν	%	N	%	N	%
In the past month, how into	ense was	your wo	rst t	ooth pai	n rate	d on a 0	to 1	0 scale v	vher	e 0 is "no	pain	" and
10 is "pain as bad as could I	oe"?											
None (0)	0	0.0	0	0.0	1	2.3	0	0.0	0	0.0	1	1.4
Mild (1-3)	3	75.0	4	57.1	24	54.6	2	33.3	8	72.7	41	56.9
Moderate (4-6)	1	25.0	2	28.6	10	22.7	3	50.0	3	27.3	19	26.4
Severe (7-10)	0	0.0	1	14.3	9	20.4	1	16.7	0	0.0	11	15.3

• Overall, about 57% of patients who indicated any pain in the past month reported their worst pain in the past month as being mild, 26% as moderate, and 15% as severe.

5. In the past month, <u>on the average</u>, how intense was your tooth pain rated on a 0 to 10 scale where 0 is "no pain" and 10 is "pain as bad as could be"? (That is, your usual pain at times you were experiencing pain.)

No Pain Pain as bad as could be 0 1 2 3 4 5 6 7 8 9 10

Table Q5: Intensity of pain on the average by DPBRN region

	AL/MS		FL/GA		MN			PDA		SK	TO	TAL	
	N	%	Ν	%	N	%	N	%	N	%	N	%	
In the past month, on th	e average,	how int	ense	was yo	ur toc	th pain	rate	d on a 0	to 10	scale wh	ere 0 is	"no	
pain" and 10 is "pain as	bad as cou	ld be"?	(That	t is, your	usua	l pain at	tim	es you w	ere e	xperienci	ing pain	ı.)	
None (0)	0	0.0	0	0.0	4	9.1	1	16.7	0	0.0	5	6.9	
Mild (1-3)	4	100.0	5	71.4	28	63.6	3	50.0	10	90.9	50	69.4	
Moderate (4-6)	0	0.0	2	28.6	10	22.7	2	33.3	1	9.1	15	20.8	
Severe (7-10)	0	0.0	0	0.0	2	4.6	0	0.0	0	0.0	2	2.8	

- Among patients who indicated any pain in the past month, about 69% of patients reported the average intensity of their pain as being mild, 21% as moderate, and 3% as severe.
- 6. About how many days in the past month have you been kept from your usual activities (work, school or housework) because of tooth pain?

  Days (If none, please write "0/0")

Table Q6: Number of days in past month tooth pain affected usual activities by DPBRN region

	AL	-/MS	FL/	GA	М	N	F	PDA		SK	ТОТ	AL	
	Ν	%	N	%	N	%	Ν	%	Ν	%	N	%	
Kept from your usual activities because of tooth pain for at least one day in past month.													
Yes	0	0.0	1	14.3	3	6.5	0	0.0	0	0.0	4	5.3	
No	4	100.0	6	85.7	43	93.5	6	100.0	12	100.0	71	94.7	

• Among patients who indicated any pain in the past month, 5% of patients (n=4) reported that the pain kept them from their usual activities for at least one day in the past month.

7. In the past month, how much has tooth pain interfered with your daily activities rated on a 0 to 10 scale where 0 is "no interference" and 10 is "unable to carry on any activities"?

No interference Unable to carry on any activities  $0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10$ 

Table Q7: Pain interfered with daily activities by DPBRN region

	AL	/MS	FL/GA		MN		PDA		SK		TOTAL			
	N	%	Ν	%	N	%	Ν	%	N	%	N	%		
In the past month, how m	uch has to	ooth pa	in int	erfered	with	your da	ily ac	tivities r	ated	on a 0 to	10 scal	е		
where 0 is "no interference	where 0 is "no interference" and 10 is "unable to carry on any activities"?													
None (0)	3	75.0	4	66.7	30	68.2	3	50.0	8	72.7	48	67.6		
Minimal (1-3)	1	25.0	0	0.0	13	29.6	2	33.3	3	20.0	19	26.8		
Moderate (4-6)	0	0.0	2	33.3	1	2.3	1	16.7	0	0.0	4	5.6		
Severe (7-10)- <i>none</i>														

- For patients reporting any pain the past month, about 68% reported no interference with daily activities due to pain, 27% reported minimal interference, and nearly 6% reported moderate interference.
- 8. In the past month, how much has tooth pain interfered with your ability to take part in recreational, social and family activities where 0 is "no interference" and 10 is "unable to carry on any activities"?

No interference Unable to carry on any activities  $0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10$ 

Table Q8: Pain interfered with recreational and family activities by DPBRN region

	AL/MS		FL/GA		MN		PDA		SK		TO	TAL
	N	%	Ν	%	Ν	%	Ν	%	Ν	%	N	%
In the past month, how m	uch has t	ooth pair	ı inte	erfered v	with y	our abil	ity to	take p	art in	recreation	nal, so	cial
and family activities where	e 0 is "no	interfere	ence'	' and 10	is "u	nable to	carr	y on any	/ activ	/ities"?		
None (0)	4	100.0	4	66.7	33	75.0	3	50.0	10	90.9	54	76.1
Minimal (1-3)	0	0.0	1	16.7	10	22.7	3	50.0	1	9.1	15	21.1
Moderate (4-6)	0	0.0	1	16.7	1	2.3	0	0.0	0	0.0	2	2.8
Severe (7-10) - <i>none</i>												

• Among patients who indicated any pain in the past month, 76% reported no interference with recreational activities, 21% reported the pain had minimal interference, and about 3%, indicated moderate interference.

9. In the past month, how much has tooth pain interfered with your ability to work (including housework) where 0 is "no interference" and 10 is "unable to carry on any activities"?

No interference Unable to carry on any activities  $0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10$ 

Table Q9: Pain interfered with ability to work (including housework) by DPBRN region

		<u>.                                      </u>							<u> </u>				
	Al	_/MS	F	L/GA	ſ	MN	PDA		SK		TOTAL		
	N	%	Ν	%	Ν	%	Ν	%	N	%	N	%	
In the past month, how m	nuch has t	ooth pair	ı inte	erfered v	with y	our abil	ity t	work (	incluc	ling hous	ework)	)	
where 0 is "no interference" and 10 is "unable to carry on any activities"?													
None (0)	4	100.0	5	83.3	36	83.7	2	33.3	8	72.7	55	78.6	
Minimal (1-3)	0	0.0	0	0.0	7	16.3	4	66.7	3	27.3	14	20.0	
Moderate (4-6)	0	0.0	1	16.7	0	0.0	0	0.0	0	0.0	1	1.4	
Severe (7-10) - <i>none</i>													

• Among patients who indicated any pain in the past month, 79% reported no interference with work, 20% reported minimal interference, and 1% reported moderate interference.

10. Has your tooth pain been present for at least 8 hours a day, 15 days or more a month, over the last 3 or more months?

a.  $\square$  Yes

b. No [If no, skip to Question 12.]

Table Q10: Pain present at least 8 hours per day by DPBRN region

	Al	AL/MS		FL/GA		MN		PDA		SK	TOTAL	
	N	%	N	%	N	%	N	%	N	%	N	%
Has your tootl months?	n pain beer	present a	t leas	st 8 hour	s a day	, 15 day	s or m	nore a mo	onth, o	ver the la	ist 3 or n	nore
Yes	0	0.0	2	28.6	10	22.7	2	33.3	3	27.3	17	23.6
No	4	100.0	5	71.4	34	77.3	4	66.7	8	72.7	55	76.4

• Among patients who indicated any pain in the past month, about 24% of patients reported pain being present 8 hours per day, 15 days per month (persistent pain).

11.	If yes,	what	do yo	ou think	was t	:he	cause	of t	this	tooth-	type	pain	(please	mark	only	ONE
	respons	se)?														

AMONG the 17 patients who indicated persistent pain, only overall numbers are indicated below:

a.	dental disease / infection (e.g., toothache)	n=3
b.	dental treatment (e.g., root canal therapy)	n=7
c.	trauma (e.g., traffic accident, injury, fall)	n=1
d.	llness (e.g., cold, sinus infection, ear infection)	n=0
e.	$\square$ other pain(s) (e.g., headaches, TMJ/TMD)	n=0
f.	stress	n=0
q.	don't know	n=6

- 12. Please rate how your feelings of fear about having a root canal compared to the actual experience.
  - a. ☐ does not apply I was not afraid.
  - b. the experience was *better* than I feared.c. the experience was about what I feared.

  - d.  $\square$  the experience was *worse* than what I feared.

Table Q12: Feelings of fear comparison by DPBRN region

	AL	./MS	FL/GA		MN		PDA		SK		TO	TAL
	N	%	Ν	%	N	%	N	%	Ν	%	Ν	%
Please rate how your feelings of fear about having a root canal compared to the actual experience.												
Doesn't apply	28	34.2	50	39.7	96	27.6	12	34.3	17	33.3	203	31.6
Better than feared	47	57.3	64	50.8	193	55.5	20	57.1	17	33.3	341	53.1
About what I feared	7	8.5	9	7.1	46	13.2	3	8.6	16	31.4	81	12.6
Worse than feared	0	0.0	3	2.4	13	3.7	0	0.0	1	2.0	17	2.7

• When comparing feelings of fear to the actual experiences, overall more patients reported better than feared at 53%; SK was lower with 33% indicating better than feared.

13. In the last 3 months, which of the following treatments have you sought to manage pain associated with your tooth that received root canal therapy? (Mark all that apply and indicate the number of treatments in the last 3 months.)

A. Additional dental treatment(s):
<ol> <li>Additional root canal treatment(s): How many appointments?</li> </ol>
2.   Extraction of the tooth (tooth was removed)
3. Additional x-rays: How many appointments?
B. Medication(s) or supplement(s):
1.  Pain medication (prescription or over the counter)
2. Antibiotics
3. Herbal/botanical
C. Appointment(s) with a medical doctor: How many appointments?
D. Alternative, complementary, or non-traditional health therapies:
1.  Chiropractic care: How many appointments?
2. Acupuncture or acupressure: How many appointments?
3.
E. None of the above.

Table Q13: Methods of pain management by DPBRN region

	AL	./MS	FL,	/GA	Ν	1N	Р	DA	,	SK	ТО	TAL
	Ν	%	N	%	N	%	N	%	N	%	N	%
In the last 3 months, which of the f	ollowin	g treat	ments	have	you so	ught to	mar	nage pa	in as	sociate	d with	1
your tooth that received root cana	l therap	y?										
Additional dental tx												
Additional root canal tx	0	0.0	0	0.0	10	2.7	3	8.6	3	5.8	16	2.4
Tooth extraction	0	0.0	3	2.3	4	1.1	0	0.0	1	1.9	8	1.2
Additional x-rays	0	0.0	1	0.8	12	3.3	1	2.9	5	9.6	19	2.8
Medications/Supplements												
Pain Medication	2	2.0	3	2.3	36	9.8	5	14.3	4	7.7	50	7.4
Antibiotics	0	0.0	2	1.6	7	2.0	0	0.0	0	0.0	9	1.4
Herbal/botanical	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	1	0.2
Appt w/ medical dr	0	0.0	1	0.8	5	1.4	1	2.9	0	0.0	7	1.0
Alternative												
Chiropractic tx	0	0.0	0	0.0	2	0.6	0	0.0	0	0.0	2	0.3
Acupuncture	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	1	0.2
Other	0	0.0	1	0.8	1	0.3	0	0.0	0	0.0	2	0.3
None of the above	78	94.0	121	95.3	308	87.0	29	82.9	42	80.8	578	88.8

- Of the various modalities to manage pain, use of pain medication was most common, reported by 7% of patients; ranged from lows of 2%-3% (AL/MS, FL/GA) to 14% (PDA).
- Nearly 90% of responding patients had NOT used any type of medication, regular or alternative treatment modalities to manage pain associated with receipt of root canal therapy.