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Mental Health Screening and Referral to Treatment in Dental Practices (MSDP)

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NIH National Institute of Dental and Craniofacial Research

The National Dental Practice-Based Research Network
The nation's network

THE UNIVERSITY OF ALABAMA

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Scientific Overview – Purpose

To collaborate with Dental PBRN affiliated practices to develop and test the feasibility of procedures for integrating mental health screening and referral to treatment procedures into dental care workflows.

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Scientific Overview – Aims

- Aim 1
  - Qualitative cross-sectional study
    - Focus Groups
    - Barriers and Facilitators
  - Analyze and report data

- Aim 2
  - Development of screening and referral procedures
  - Small pilot to test feasibility in Dental Practices' workflows
  - Analyze and report data

Slide 4

Focus Groups

- Participants
  - 17 dentists
  - 10 hygienists
  - 5 dental assistants/office staff

- Major Questions:
  - Identifying patient concerns
  - Responding to concerns
  - Workflow implementation
    - Strategies
    - Barriers
    - Facilitators

Slide 5

Major Themes

Practitioners and office staff:
- Discover patient mental health concerns through record review, patient/caregiver disclosure, and patient observation
- Respond to patients' mental health concerns by making the patient more comfortable, documenting the concern in the patient's chart, and directly addressing the mental health concern
- Want a systematic process for mental health screening and referral to treatment in their dental office
- Recognize potential barriers in implementing health screening and referral to treatment processes
- Desire training on mental health matters

- Also, an overarching theme emerged: developing a trusting relationship with patients.

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Pilot Study

- 5 Practices
- 18 practitioners
- Training began 05/16/23
- 36 patients
- Database locked 8/29/23

Clinical Screening Tools – The Study within the study

Questionnaire	Assesses	Questions
PHQ-2	Depression	2
GAD-2	Anxiety	2
C-SSRS	Suicide Risk	3-6
CAGE-AID	Substance Abuse	4

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Pilot Study Results

- 5 practices
  - 5 dentists
  - 3 hygienists
  - 9 dental assistants/office staff
- 36 patients
  - 31 completed post-visit survey

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Practitioner Demographic Characteristics

		Dentist N=5	Hygienist N=3	Staff N=9	Overall N=17
Sex (N)	Male	2	0	0	2
	Female	3	3	8	14
	Unknown/Missing	0	0	1	1
Age	Mean	57.8	51.3	32.1	43.8
	Range	41-68	42-61	20-60	20-68
Race* (N)	Black or African-American	2	1	6	9
	White or Caucasian	3	2	2	7
	Unknown or Not Reported	0	0	1	1

*No practitioners reported to be of Hispanic origin

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Patient Demographic Characteristics

		Patients (N=36)
Sex N, (%)	Male	5 (13.9)
	Female	31 (86.1)
Age	Mean (Range)	45.17 (21-77)
Race N, (%)	Black or African-American	17 (47.2)
	White or Caucasian	18 (50)
	Asian	2 (5.56)
	American Indian or Alaskan Native	1 (2.8)
	Prefer not to answer	1 (2.8)
Highest Level of Education N, (%)	High school or GED	7 (19.4)
	Some college/Associate's degree	15 (41.7)
	Bachelor's degree	5 (13.9)
	Graduate degree	9 (25)
Annual Household Income N, (%)	≤ $25,000	4 (11.1)
	$25,001 - $50,000	6 (16.67)
	50,001 - $100,000	11 (30.56)
	> $100,000	11 (30.56)
	Prefer not to answer	4 (11.1)
Type of Dental Insurance N, (%)	None	8 (22.2)
	Private	18 (50)
	Public/government	4 (11.1)
	Other	5 (13.9)
	Prefer not to answer	1 (2.8)

*No patients reported to be of Hispanic origin

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Participant Survey Process

Respondent	Survey	Questions	Content	Delivery
DOP	PBRN Survey	24	Demographic characteristics of DOP and their respective practices	Web-based, required for enrollment in Network
	Pre-Study Survey[†]	24	Current referral practices Attitudes toward mental illness	Web-based, prior to patient recruitment
	Post-Visit Survey	6	Time spent on patient screening and follow-up Potential workflow disruption DOP's perception of patient's response to the screening	Web-based, after each study-related patient encounter
	Post-Study Survey	35	Feasibility and acceptability of procedures Attitudes toward mental illness Perceptions of the process	Web-based, within 2 weeks of final study-related patient encounter
Patients	Demographic Survey	11	Patient demographic characteristics Type of dental insurance Type of health insurance	Tablet, at check-in after consent
	Mental Health Screeners	10-14	PHQ-2 GAD-2 CAGE-AID C-SSRS	Tablet, at check-in after consent
	Post-Visit Survey	12	Perceptions of referral process Receipt of referral Intention to act on referral Suggestions for improvement	Web-based, 1-7 days after visit, invitation sent within 24 hours

* NOTE: "Pre-study survey" was the term used to describe the survey given to DOP prior to the intervention. No participant took this survey prior to consenting to participate.

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## Pilot Study Results: Screening Results

Practitioner(s) followed-up with all patients who screened positive

38.9% N=14

0.612 N=22

16.7%, n=6
22.2%, n=8
5.6%, n=2
16.7%, n=6

- Screened Negative
- Screened Positive*
- Pt recognized referral
- Pt did not recognize referral
- Pt unsure about receiving referral
- Pt did not respond
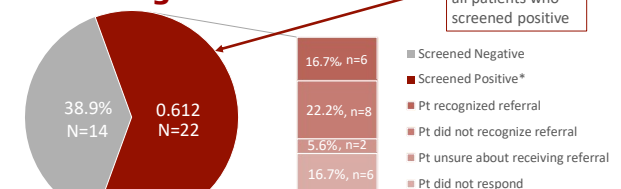
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Patient Screening Results

Screenings	N (%)
Did not meet study follow-up threshold	14 (38.9)
Met study follow-up threshold on any measure	22 (61.1)
PHQ	15 (41.7)
GAD	18 (50.0)
CAGE-AID	4 (11.1)
C-SSRS	2 (5.6)

*Fourteen patients met study threshold on more than one measure
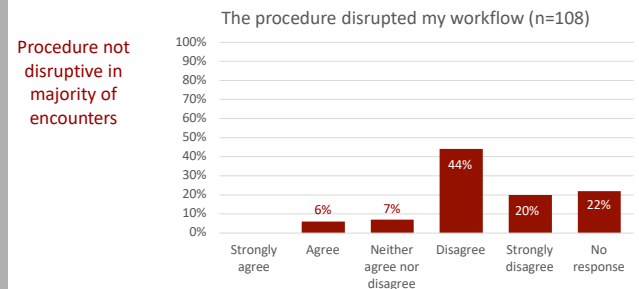
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Patient Responses to Referrals
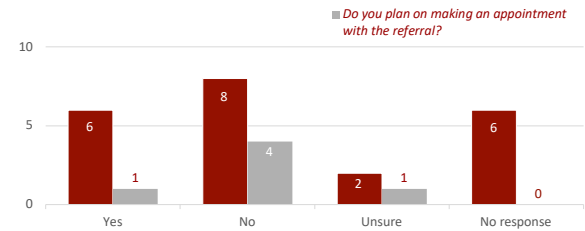
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Level of Disruption and Average Minutes to Resume Workflow Across Encounters

The procedure disrupted my workflow (n=108)	Number of Provider/Patient Interactions				Time to resume workflow (n=84)
	Dentist (SD)	Hygienist (SD)	Staff (SD)	Total (%)	Ave. min. (SD)
Strongly agree					
Agree	4	1	1	6 (5.6)	10.8 (5.8)
Neither agree nor disagree	3	4	1	8 (7.4)	4.9 (3.7)
Disagree	20	12	16	48 (44.4)	7.3 (5.9)
Strongly disagree	9	3	10	22 (20.4)	2.5 (2.5)
No response		16	8	24 (22.2)	
Total Responses/Interactions	36/36	20/36	28/36	84/108	
Avg. min. to resume workflow (n=84)	5.3 (6.2)	7.4 (5.8)	6.1 (4.3)		6.1 (5.5)

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Practitioner Perceptions: Disruption

Procedure not disruptive in majority of encounters

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Practitioner Perceptions: Time

Procedure not disruptive in majority of encounters regardless of time till workflow resumed
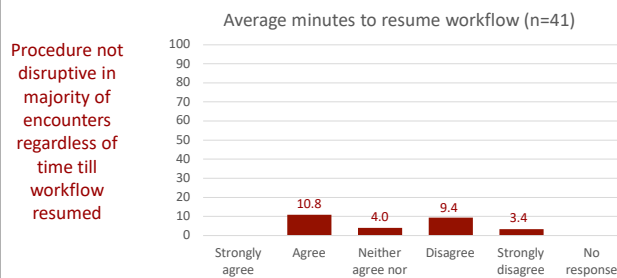
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Practitioner Perceptions: Value

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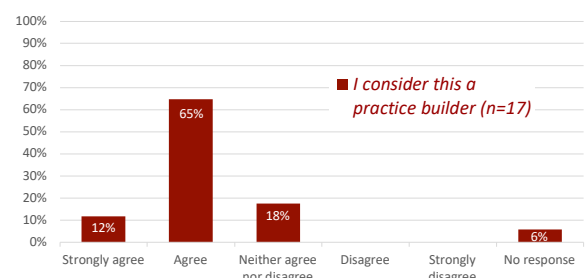
Perceptions: Practitioner and Patient

- Practitioners: This is beneficial for my patients (n=17)
- Patients: I find this process beneficial (n=36)

Strongly agree: 29% / 8%
Agree: 59% / 58%
Neither agree nor disagree: 6% / 17%
Disagree: 3%
Strongly disagree:
No response: 6% / 14%
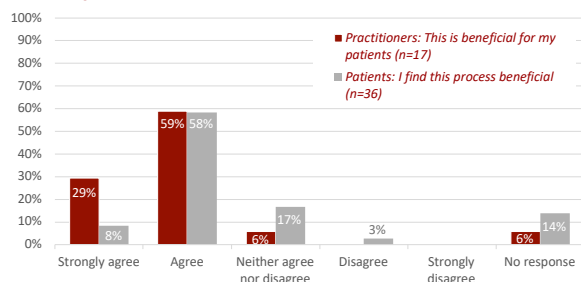
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Publication – Focus Groups

Berryhill, M. B., Culmer, N., Smith, T., Kopycka-Kedzierawski, D., Gurganus, R., & Curry, G. (2024). Perceptions of mental health screening and referral to treatment in National Dental-Practice Based Research Network practices: A qualitative study. *Journal of Public Health Dentistry, 82*(2): 124-135.

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Manuscript – Feasibility Study

Smith, T. B., Berryhill, M. B., Culmer, N., McBurnie, M., Kopycka-Kedzierawski, D., Gilbert, G., Barton, D., & Machen, C. Mental Health Screenings in Dental Settings: Feasibility and Outcomes from a National Dental PBRN Study. *The Journal of the American Dental Association.* (revise and resubmit).

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Additional Publications

- Culmer, N. P., Smith, T. B., Berryhill, M. B., Gurenlian, J., Simpson, L., Ogden, S., ... & Greenwood, C. (2024). Mental health screening and referral to treatment in dental practices: A scoping review. *Journal of Dental Education, 88*(4), 445-460.

- Culmer, N. P., Smith, T. B., Berryhill, M. B., Kopycka-Kedzierawski, D., Greenwood, C., Rengering, C., Howerton, A. A Review of Mental Health Curricula in Predoctoral Dental School Programs. *Journal of Dental Education.* (revise and resubmit).

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Discussion

- More than 60% of participating patients (n = 22) met the study threshold in at least one of the screening measures
- DOP reported minimal workflow disruptions
- Need to clarify the word "referral," especially for patients
- More research needed on
  - Patient follow-up on referrals
  - Larger sample
  - Variety/diversity of workflows, settings, and screening tools
- Overall, a public health benefit, with early detection and intervention

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