

# An Analysis of 'Exercise is Medicine' Impacts and Utilization in a Student-Run Free Clinic

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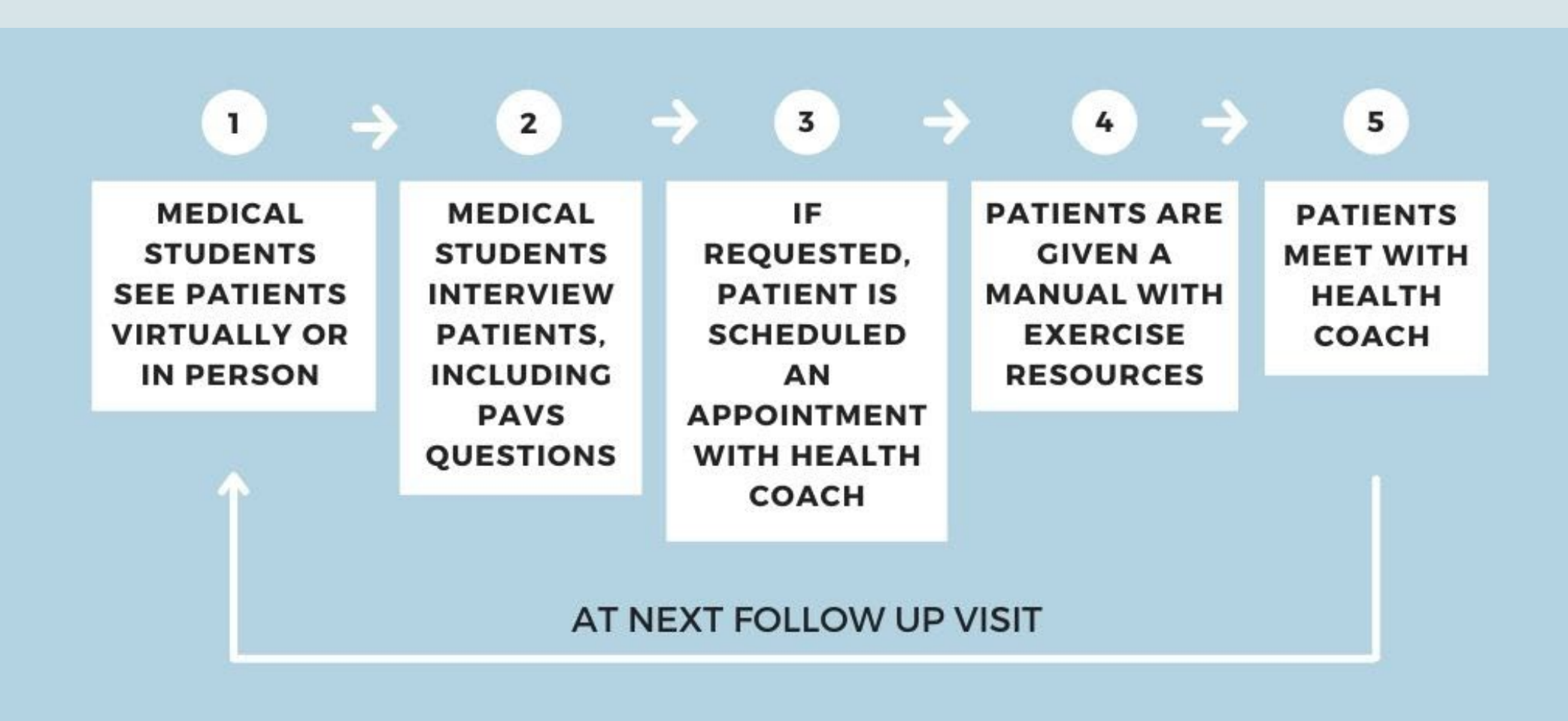
## Introduction/Background

- "Exercise Is Medicine" (EIM) provides provider decision support and health coach services for patients.
- EIM has been successfully implemented in UCSD primary care clinics, but data on its effectiveness and feasibility in a free clinic setting is lacking.
- The UC San Diego Student-Run Free Clinic Project (SRFCP) primarily serves low income, Hispanic, Spanish monolingual patients.
- We studied EIM implementation within the UC San Diego SRFCP from May 24, 2021 to October 5, 2021.

## Program Description

- Physical activity vital sign (PAVS) scores are automatically generated by the EMR when providers (medical students) input answers to three questions.
  1. Number of days per week of PA.
  2. Number of minutes per episode.
  3. If they want to schedule a free 15-minute phone call with a health coach.
- PA recommendations are automatically generated by the EMR based on the patient's PAVS score.
  1. Not exercising at all (0 minutes/week).
  2. Exercising but not meeting guidelines (0-149 minutes/week).
  3. At goal ( $\geq 150$  minutes/week).
- A Spanish-English bilingual health coach was trained to help patients assess barriers to PA, set goals, and affirm progress.

Figure 1. EIM workflow at the SRFCP



## Methods

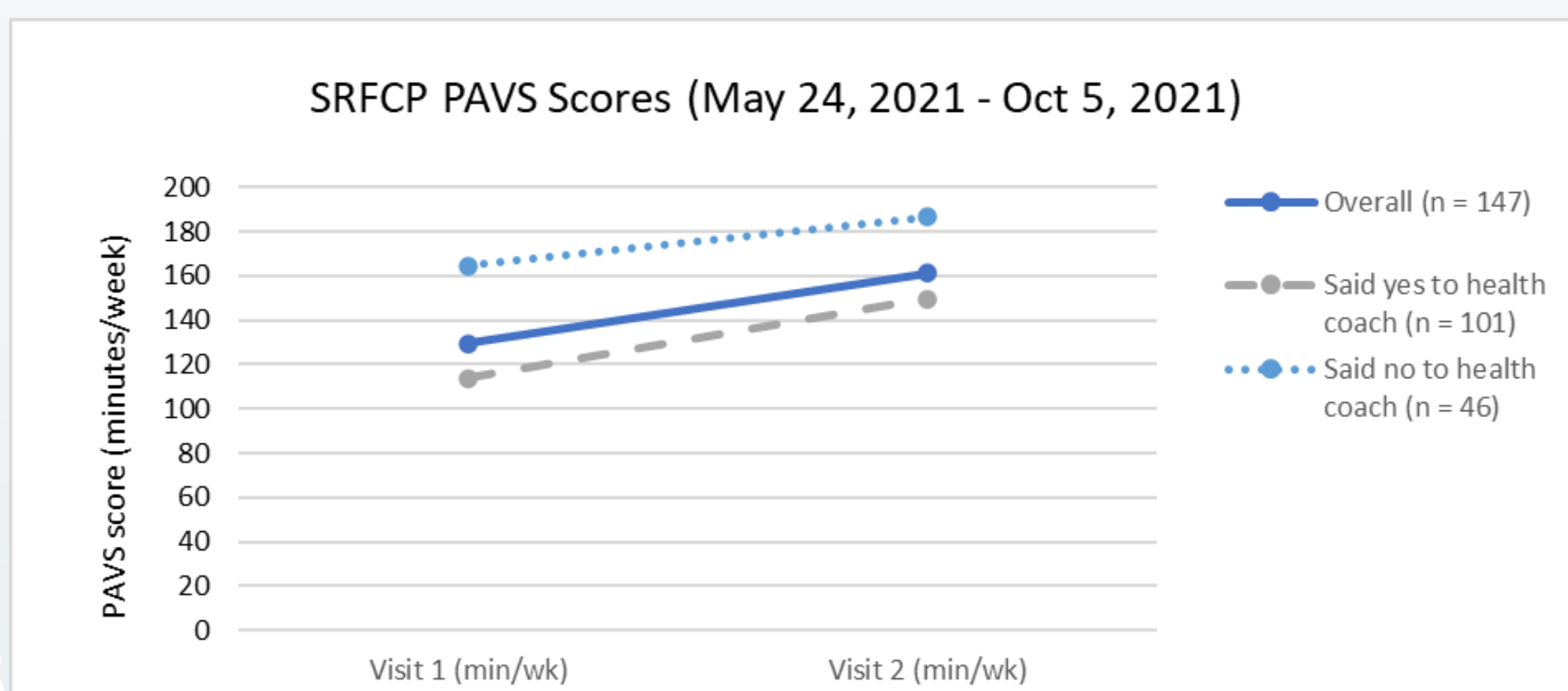
- Physical activity vital sign (PAVS) scores were collected for all SRFCP patient encounters from May 24, 2021 to October 5, 2021.
- For patients with two or more visits within the study time frame, a paired t-test was conducted to compare PAVS scores between their first and second visits.
- Provider-level data were collected from the EMR to evaluate program fidelity.
- A phone survey was conducted to measure patient satisfaction.
- A survey was conducted to measure provider (medical students) attitudes and knowledge regarding EIM before and after implementation.
- SPSS and Microsoft Excel were used for descriptive and statistical analyses.

Table 1. Demographics + Baseline PAVS

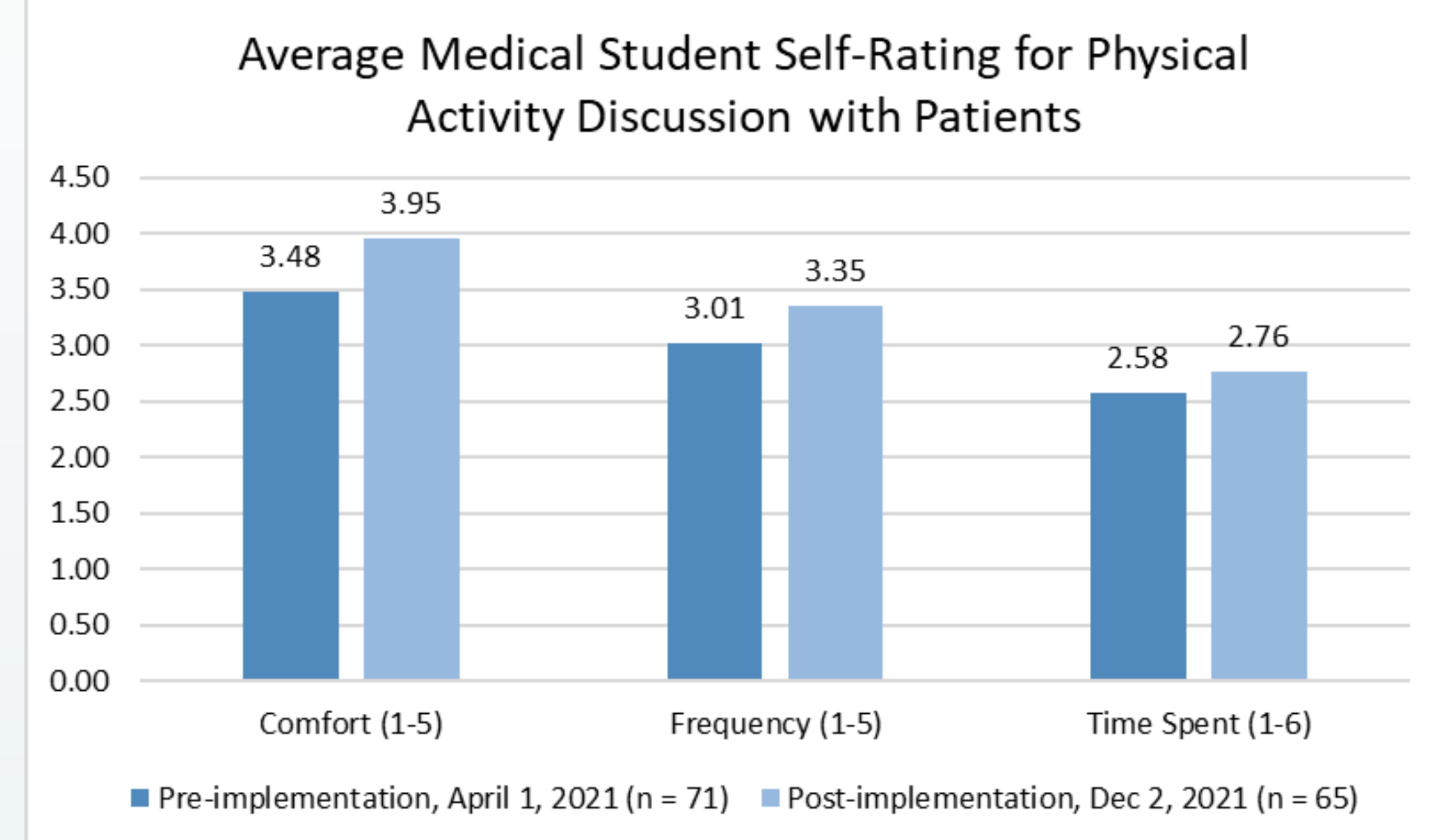
Demographic and Diseases	Total Patients		Health Coaching Offer - YES		Health Coaching Offer - NO		P-value
	Patients	Baseline PAVS	Patients	Baseline PAVS	Patients	Baseline PAVS	
	Number (%)	Mean (SD)	Number (%)	Mean (SD)	Number (%)	Mean (SD)	
<b>Overall</b>	256 (100)	132.89 (121.28)	146 (57)	121.92 (116.55)	110 (43)	147.45 (126.88)	0.096
<b>Age (mean (SD))</b>	56.74 (10.05)		56.91 (10.14)		56.61 (10.06)		
<b>18-39</b>	8 (3.1)	46.88 (64.42)	4 (2.7)	40 (46.90)	4 (3.6)	53.75 (85.77)	0.788
<b>40-64</b>	191 (74.6)	138.56 (125.38)	110 (75.3)	126.95 (117.87)	81 (73.6)	154.32 (134.04)	0.136
<b><math>\geq 65</math></b>	57 (22.3)	125.96 (110.31)	32 (21.9)	114.84 (116.04)	25 (22.7)	140.20 (103.07)	0.394
<b>Gender</b>							
<b>Female</b>	189 (73.8)	133.12 (126.86)	116 (79.5)	121.77 (120.38)	73 (66.4)	151.16 (135.43)	0.121
<b>Male</b>	67 (26.2)	132.24 (105.85)	30 (20.5)	122.50 (102.24)	37 (33.6)	140.14 (109.44)	0.502
<b>Ethnicity</b>							
<b>Hispanic</b>	235 (91.8)	132.77 (120.75)	134 (91.8)	120.41 (116.07)	101 (91.8)	149.16 (125.41)	0.071
<b>Non-Hispanic</b>	21 (8.2)	134.29 (132.89)	12 (8.2)	138.75 (125.85)	9 (8.2)	128.33 (149.35)	0.864
<b>DM</b>							
<b>Yes</b>	143 (55.9)	135.94 (114.39)	80 (54.8)	112.13 (97.79)	63 (57.3)	166.19 (126.97)	0.005
<b>No</b>	113 (44.1)	129.03 (130.39)	66 (45.2)	133.79 (135.71)	47 (42.7)	122.34 (123.66)	0.648
<b>HTN</b>							
<b>Yes</b>	159 (62.1)	122.92 (116.07)	90 (61.6)	116.33 (106.34)	69 (62.7)	131.52 (127.95)	0.415
<b>No</b>	97 (37.9)	149.23 (128.89)	56 (38.4)	130.89 (131.83)	41 (37.3)	174.27 (121.92)	0.102

## Change in PAVS Score

	PAVS scores (May 24, 2021 - October 5, 2021)			
	Visit 1 (min/wk)	Visit 2 (min/wk)	Mean change	P-value
<b>Overall (n = 147)</b>	129.59	161.22	31.63	<b>0.003</b>
<b>Said yes to health coach (n = 101)</b>	113.76	149.65	35.89	<b>0.005</b>
<b>Said no to health coach (n = 46)</b>	164.35	186.63	22.28	0.261



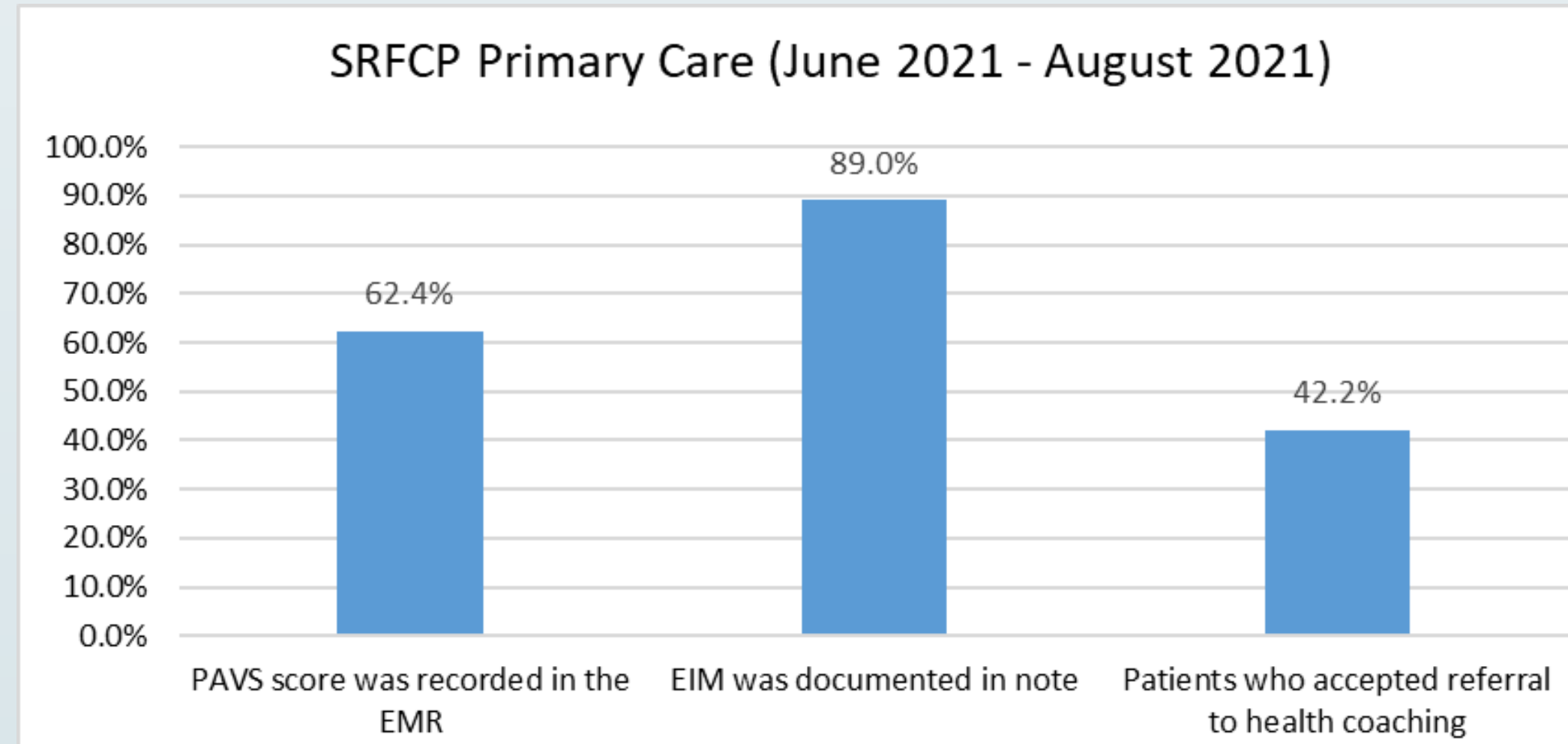
## Provider (Medical Student) Attitudes



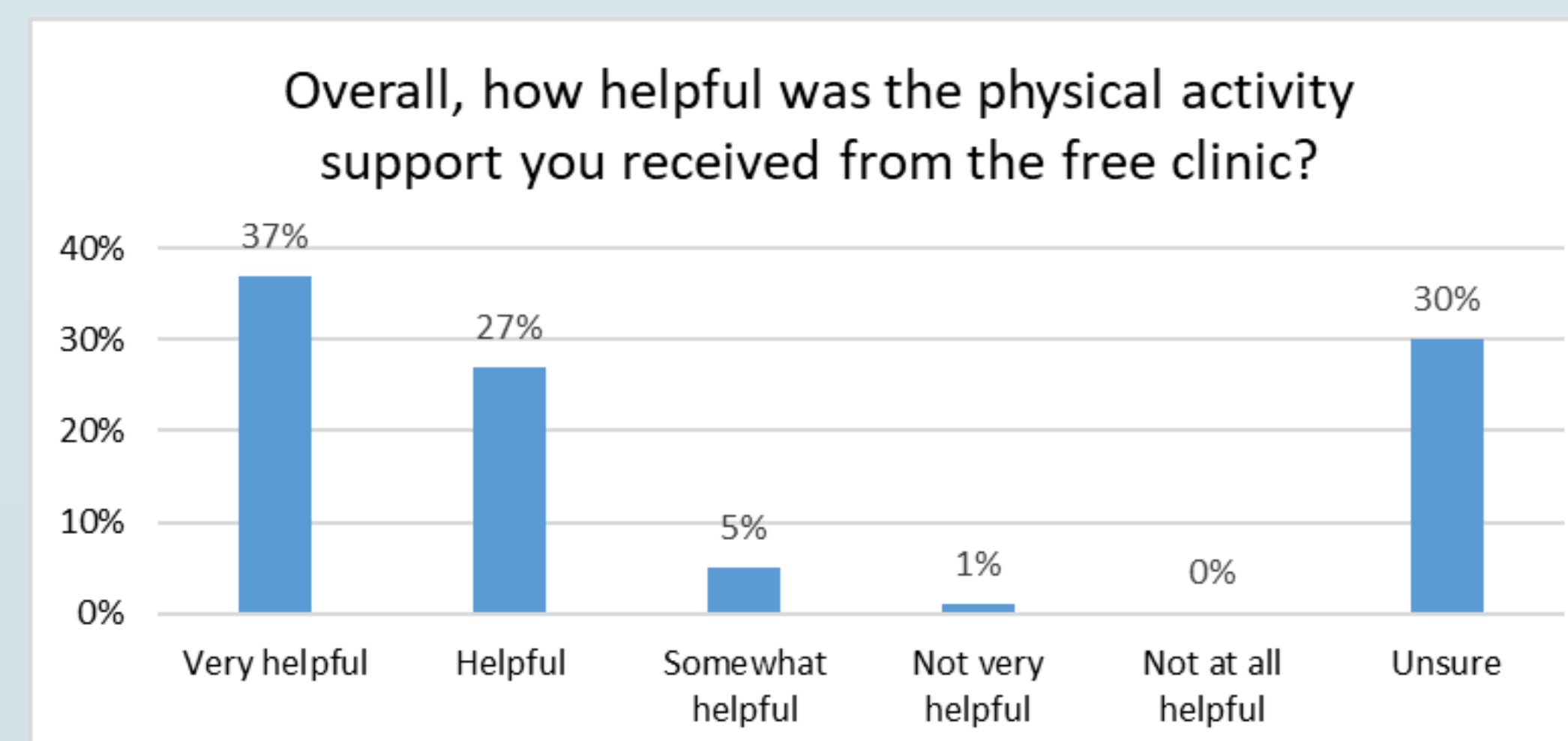
## Results

- Mean PAVS score increased overall by 31.6 minutes/week or 24.4% (129.6 vs 161.2, p=0.003).
- PAVS score was recorded in 62.4% of all SRFCP primary care visits between June 1, 2021 and August 31, 2021.
- 64% of patients surveyed (n = 101) from July 12, 2021 to August 16, 2021 reported that the PA support they received from the SRFCP was helpful or very helpful, 5% somewhat helpful, 1% not very helpful, 0% not at all helpful, and 30% were unsure.
- Medical student ratings for comfort, frequency, and time spent in discussing PA with patients increased between April 1, 2021 and December 2, 2021.

## Provider-level Program Fidelity



## Patient Satisfaction



## Conclusions

- Overall data support the feasibility and effectiveness of EIM in student-run clinics.
- Patient and provider (medical student) satisfaction are generally positive to EIM services offered at the SRFCP.

## Acknowledgements

Thank you to all who were involved with this project: the SRFCP medical student and community volunteers, physician volunteers, Spanish language interpreter volunteers, EMR programming team, data analyst, health coach, and to our patients who graciously trust the SRFCP with their care.