Improving Colorectal Cancer Screening Compliance among Patients with Diabetes

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Background

- Colorectal cancer (CRC) is the second leading cause of cancer-related deaths, yet preventable through adherence to screening guidelines
- Minority patients with type 2 diabetes face a. 21-30% higher risk of developing CRC
  - They are less likely to comply with routine CRC screening
- This study aimed to identify factors associated with CRC screening compliance at a community health center

Methods

- African American and Hispanic patients aged 45-75 with type 2 diabetes were identified using electronic health records (EHR)
- Data collected included:
  - CRC screening compliance (yes/no)
  - Number of clinic visits in the past year
  - Sociodemographic factors (age, race, ethnicity, gender, education, poverty level, marital status, insurance status, HbA1c)
  - Comorbidities and compliance with other routine health screenings
- Chi-squared tests were used to compare compliant versus non-compliant patients

Aims:

Understand the barriers and challenges contributing to low CRC screening and diet education at the clinic level patient-care-team and clinical protocols).

Results

Table 1: Compliance with CRC Screening

		Compliance							
		Total (N=421)			**Compliant (N=178)**		**Non-Compliant (N=243)**		
	N	**Median**	**Inter-Quartile Range**	**Median**	**Inter-Quartile Range**	**Median**	**Inter-Quartile Range**	**P value**
Number of Clinic Visits	416	9.0	9.0	10.0	9.0	7.0	8.0	<0.001

Results

Table 2: Chi-Squared Test Comparing Compliant versus Non-Compliant Patients

		Total (N=421)		Compliance				
		Column		Compliant (N = 178)		Non-Compliant (N = 243)		
		#	%	#	Row %	#	Row %	P value
Language	English	257	61.2	92	35.8	165	64.2	0.001
	Spanish	163	38.8	86	52.8	77	47.2	
Overweight/Obese (BMI ≥ 25)	No	52	13.4	12	23.1	40	76.9	0.001
	Yes	336	86.6	159	47.3	177	52.7	
Compliance w/ Pneumonia Vaccine (65+)	Non-compliant	29	34.1	4	13.8	25	86.2	<0.001
	Compliant	56	65.9	34	60.7	22	39.3	
Compliance with Mammogram	Non-compliant	82	51.9	25	30.5	57	69.5	
	Compliant	76	48.1	42	55.3	34	44.7	0.002
Diagnosis of Any GI Condition	No	365	86.7	144	39.5	221	60.5	0.003
	Yes	56	13.3	34	60.7	22	39.3	
Diagnosis of Hypertension	No	318	75.5	119	37.4	199	62.6	0.001
	Yes	103	24.5	59	57.3	44	42.7	
Diagnosis of Any CVD condition	No	285	67.7	105	36.8	180	63.2	0.002
	Yes	136	32.3	73	53.7	63	46.3	

Discussion

Results:
- Patients who were CRC compliant had a higher number of visits than non-compliant patients.
- Maintaining regular visits is a potentially important factor in maintaining CRC compliance.
- Patients who speak Spanish, had higher BMIs, were mammogram compliant, previously diagnosed with any GI condition, hypertension diagnosis, or diagnosis of any CVD condition were more likely to be CRC compliant.
- Patients (65+) with pneumonia vaccine compliance were more likely to also be CRC compliant, with higher statical significance.
- Compliance with mammogram screening, diagnosis of GI condition, diagnosis of hypertension, diagnosis of CVD condition made no difference in compliance with CRC screening

Discussion:
- Patients with higher BMIs and those who had more than 5 visits at Kedren each year were more likely to be non-compliant with colorectal cancer screening, and patients with only overweight or obese BMIs more compliant compared to those with healthy BMIs.
- Depression scores were higher on average for non-compliant patients, though this was not statistically significant

Limitations
- Natural bias from the convenience sampling. Results may not be transferable to other populations.
- Smaller sample size.

Conclusions:
- Addressing multiple clinical and sociodemographic factors may help improve compliance with CRC screening.
- Increased clinic visits and awareness of comorbid risks play key roles in CRC screening compliance.
- Strategies to enhance patient engagement with healthcare providers may improve screening rates.
- Routine clinic visits should be leveraged to promote CRC screening in high-risk populations.
- Future research is needed to explore additional influencing factors and develop tailored interventions.

References

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