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Experiences with Screening, Brief Intervention, and Referral to Treatment (SBIRT) in Community Healthcare

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Abstract

Purpose: How do patients and providers view behavioral health screening as part of an integrative healthcare program in the clinical outpatient setting?

Methods: Stratified random sampling was used to recruit patients and healthcare providers through quota and census sampling designs respectively. The primary outcome measure was to determine the satisfaction of patients and providers in the outpatient clinical setting with regards to SBIRT.

Results: Surveys indicate a high level of satisfaction with behavioral health screens in the clinical setting while per-patient appointment time decreased by three minutes post-SBIRT implementation ($p = 0.001$).

Conclusion: Satisfaction with behavioral health screening by patients and providers with improved time efficiency makes SBIRT an effective and efficient tool to support integrative healthcare in a clinical setting.

Keywords: Behavioral health screening; SBIRT experiences; Time studies; Community health care; Alcohol abuse; Substance abuse; Depression; Embedded behavioral health workers; Integrative health care delivery

Introduction

The Screening, Brief Intervention, and Referral to Treatment (SBIRT) approach to early identification and intervention for unhealthy drinking was developed in response to recommendations made by the Institute of Medicine [1] and the World Health Organization (WHO) [2,3]. The Substance Abuse and Mental Health Services Administration (SAMHSA) indicate that the purpose of SBIRT is to identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs by identifying individuals exhibiting risky behavior. The primary goal is intervention prior to the need for more extensive and specialized treatment [4].

Providers have been slow to implement screenings and brief interventions for behavioral health issues for reasons such as lack of time, lack of training, provider discomfort and organizational factors such as lack of administrative support [5-7]. Medical providers of Ohio North East Health System, Inc., (ONE Health), a federally qualified community health organization providing primary healthcare to underserved populations, mirror these sentiments [8]. Universal implementation is a goal. However, providers believe questions about patient behavioral health status during a medical visit may impose vulnerability and uncomfortableness by their patients. They also indicate that behavioral health screening practices in the outpatient clinical setting are undesirable because of its time-consuming nature and the fact that many third-party payers do not reimburse for this service.

Data concerning patient perception towards behavioral health screening in the clinical setting is limited [9]. Most studies that are restricted to attitudes for alcohol screening reveal high patient satisfaction with the process [9-11]. Literature relating to provider SBIRT perception and time studies addressing SBIRT utilization in a clinical setting were not found. Thus, the purpose of this study is to improve the understanding of patients' and providers' specific experiences with SBIRT in a medical outpatient setting through surveys and a time analysis study. This information may help support an integrative healthcare model where behavioral health becomes an integral part of the healthcare delivery program alongside medical and dental outpatient services.

Methods

Patient survey

The study design for the patient survey, approved by the Northeast Ohio Medical University Institutional Review Board, is a quota sampling stratified by institutional center. A research assistant (RA) conducted direct, face-to-face, surveys with medical patients 18 years and older. These surveys were conducted in the clinical exam rooms immediately following patients' medical encounters at all three primary care offices operated by ONE Health. SBIRT screenings were self-administered to all medical patients 18 years and older. Positive screenings led to specific screening instruments consisting of PHQ-9, DAST, and/or AUDIT8. The RA received one-on-one preparation on motivational training and attended a one day conference on SBIRT prior to implementing the surveys. All three sites located in urban settings and federally designated as Medically Underserved Areas (MUA) and Health Professional Service Area (HPSA), had utilized the SBIRT process for at least six months. Patients were sequentially approached and a stratified random sampling (of patients) for survey

participation occurred until approximately 100 surveys at each site were completed. The results were entered electronically into a ONE Health designed Survey Monkey template throughout the course of the interview.

Provider survey and time studies

The study design employed for the provider survey is a census sampling design stratified by institutional center. All medical providers, part and full time—four physicians and four nurse practitioners—with at least six months of SBIRT clinical experience, were surveyed regarding their perception of the process. The questions were self-completed and anonymous utilizing a Survey Monkey template.

In addition to the surveys, a time analysis study was completed for the four full-time provider participants utilizing the NextGen electronic health records system. The system tracked patient visit entry and exit times during a six month SBIRT study period. This information was compared with the previous six month non-SBIRT period.

Results

Patient survey

Table 1 indicates participation and refusal rates of the screening process during the test period. Ninety seven percent of patients voluntarily participated while only 3% refused, implying that the majority of patients accept this process.

Kept Medical Appointments[1]	Eligible SBIRT Screening[2]	Patients Refused SBIRT	%	Screenings Performed	%
3125	2568	86	3.35%	2482	96.65%
[1]Six month period from February 2014 through August 2014.					
[2]Medical Patients 18 years and older.					

Table 1: SBIRT screening rate.

Patients also verbalized the behavioral health screening as a positive experience (Table 2). Overall, they were satisfied with the process and were not upset at being asked questions related to behavioral health issues.

Descriptive Statistics 6/5/14-9/17/14 298 Patient Surveys				
Question Text	**Responses (freq, %)**			
1. Overall, how satisfied were you with the care you received today?	**Very Satisfied**	**Somewhat Satisfied**	**Not at all satisfied**	**Don't know**
	269 (90.27%)	27 (9.06%)	2 (0.67%)	0
Question Text	**Responses (freq, %)**			
2. Were you as involved as you wanted to be in the decisions about your care?	**Yes definitely**	**Yes somewhat**	**No**	
	283 (94.97%)	11 (3.69%)	4 (1.34%)	
Question Text	**Responses (freq, %)**			
3. Prior to seeing the doctor, you were asked questions about your alcohol/drug use and mood today. Were you upset by having to complete these questions?	**No**	**Yes**		
	280 (93.96%)	18 (6.04%)		
Question Text	**Responses (freq, %)**			
4. If questions about drug/alcohol use and mood can help doctors improve care, would you recommend that others complete them?	**No**	**Yes**	**Don't know**	
	5 (1.68%)	288 (96.64%)	5 (1.68%)	
Question Text	**Responses (freq, %)**			

5. Overall, how would you rate your experience completing these questions?	**Poor**	**Fair**	**Good**	**Very Good**	**Excellent**
	2 (0.68%)	14 (4.78%)	71 (24.23%)	64 (21.84%)	140 (47.78%)
Question Text	**Responses (freq, %)**				
6. How satisfied were you about the feedback provided about the results of these questions?	**Very Satisfied**	**Somewhat Satisfied**	**Not at all satisfied**	**Don't know**	
	213 (72.20%)	23 (7.80%)	0	62 (20%)	
Question Text	**Responses (freq, %)**				
7. Before today, when was the last time you were asked by a doctor about your drinking or drug use?	**Within the past 12 months**	**More than 12 months ago**	**I have never been asked**		
	192 (64.86%)	51 (17.23%)	55 (17.91%)		
Question Text	**Responses (freq, %)**				
8. Before today, when was the last time you were asked by a doctor about feeling down, depressed, or hopless?	**Within the past 12 months**	**More than 12 months ago**	**I have never been asked**	**Refused**	
	204 (68.92%)	40 (13%)	52 (17%)	2 (1.0%)	
Question Text	**Responses (freq, %)**				
9. Prior to your visit today, have you ever been told that you have depression?	**No**	**Yes**	**Don't remember**	**Refused**	
	150 (50.85%)	144 (48.81%)	1 (0.34%)	3 (0.01%)	
Question Text	**Responses (freq, %)**				
10. Prior to your visit today, have you ever been told by a doctor or nurse that you have an alcohol or drug problem (such as wine, beer, hard liquor, pot, coke, heroin, uppers, downers, hallucinogens, or inhalents)?	**No**	**Yes**	**Don't remember**	**Refused**	
	260 (88.14%)	34 (11.53%)	1 (0.34%)	3 (0.01%)	
Question Text	**Responses (freq, %)**				
11. Have you ever received counseling and/or treatment for alcohol, drugs or depression either before or today?	**No**	**Yes**	**Not Sure**		
	282 (95.27%)	14 (4.73%)	2		
Question Text	**Responses (freq, %)**				
12. How often do you need to have someone help you when you read instructions, pamplets, or other written material from your doctor or pharmacy?	**Never**	**Rarely**	**Sometimes**	**Always**	**Refused**
	261 (88.47%)	5 (1.69%)	24 (8.14%)	5 (1.69%)	3
Question Text	**Responses (freq, %)**				
13. Are you male or female?	**Male**	**Female**	**Refused**		
	98 (33.22%)	197 (66.78%)	3		
Question Text	**Responses (freq, %)**				
14. How old are you?	**Mean (SD)**	**Range (min-max)**			
	56 (4.76%)	18-80			

Question Text	**Responses (freq, %)**				
15. Do you speak English at home?	**No**	**Yes**	**Refused**		
	2 (0.68%)	292 (99.32%)	4		
Question Text	**Responses (freq, %)**				
	Unchecked	**Checked**			
16. What is your race/ ethnicity?_American Indian or Alaska Native		12(4.15%)			
16. What is your race/ ethnicity?_Hispanic		10 (3.46%)			
16. What is your race/ ethnicity?_Asian or Pacific Islander		5 (1.73%)			
16. What is your race/ ethnicity?_White		155 (52.0%)			
16. What is your race/ ethnicity?_African American or Black		116 (40.14%)			
Question Text	**Responses (freq, %)**				
17. What is the highest education level you have completed?	**Did not complete high school**	**High school**	**Some college**	**College degree or higher**	**Don't know**
	39 (13.27%)	131 (44.56%)	76 (25.85%)	48 (16.33%)	4 (0.01%)
N = 298 from June 2014 through September 2014					

Table 2: Summary of patient survey results.

The majority of patients surveyed indicated they had been asked by their doctor within the past 12 months about depression (69%), alcohol (65%) and substance use (65%). The majority have never been diagnosed or advised of having a substance use or alcohol problem (88%) yet, almost half indicated that their doctor previously "told" them they had depression (51%). Despite this, the majority (95%) of patients stated they never received any type of intervention or counseling for alcohol, drugs or depression during their medical visits.

Provider survey and time studies

Table 3 presents providers' perspectives of the screening process. Providers note that SBIRT aided in their behavioral health diagnostic abilities and enabled them to be more engaged in the process. Contradicting the patient survey results, 37.5% of providers believed patients were uncomfortable with being asked behavioral health questions. In addition, 87.5% of providers speculated that time spent with patients would increase because of the added screening tool leading to an increased amount of time required for a medical visit.

	Responses (freq, %)		
Question Text	**Yes**	**No**	
1. Do you believe the SBIRT process helped in the overall delivery of health care to your patients?	8 (100.00%)	0 (0.00%)	
2. Do you think the SBIRT process should be an integral part of the medical delivery process?	7 (87.50%)	1 (12.50%)	
3. Did you find the SBIRT process to be cumbersome?	4 (50.00%)	4 (50.00%)	

4. Do you believe that patients, overall, benefitted because of SBIRT?	6 (75.00%)	2 (25.00%)	
5. Do you think that patients were more open to discuss their behavioral health issues with you because of SBIRT?	7 (87.50%)	1 (12.50%)	
6. Did you find yourself more apt to make the diagnosis of behavioral health because of SBIRT?	6 (75.00%)	2 (25.00%)	
7. Did you think patients were uncomfortable with the process?	3 (37.50%)	5 (62.50%)	
8. Do you feel that you were more open to discuss behavioral health issues because of this process?	7 (87.50%)	1 (12.50%)	
9. Did you provide more intervention discussion or counseling because of the SBIRT?	8 (100.00%)	0 (0.00%)	
10. Do you feel comfortable with discussing behavioral health issues with your patients?	8 (100.00%)	0 (0.00%)	
11. Would the availability of onsite counselors be beneficial to the SBIRT Process?	8 (100.00%)	0 (0.00%)	
		Responses (freq, %)	
12. How do you feel the SBIRT process changed the amount of time you spent with the patient?	**Increased**	**Decreased**	**No Change**
	7 (87.50%)	0 (0.00%)	1 (12.50%)
	More Engaged	**Less Engaged**	**No Difference**
13. Has your engagement with the patient changed?	5 (62.50%)	0 (0.00%)	3 (37.50%)

Table 3: Summary of provider survey results.

Comparisons for the pre-implementation versus the post-implementation epochs are noted in Table 4. Median time spent with the patients decreased by three minutes post-intervention (p = 0.001). One provider's patient-interaction time increased by a median time of nine minutes; two providers' times decreased by five minutes while one remained unchanged.

Variable		**Study epoch**		**P-value**
		Pre-SBIRT Implementation (n = 4648)	**Post-SBIRT Implementation (n = 3529)**	
Overall Appointment Time (Minutes)	Mean (SD)	79.4 (43.68)	76.4 (42.03)	0.001
	Median (IQR)	72.0 (51–99)	69.0 (49–95)	
Provider 1 (Minutes)	n	739	630	0.987
	Mean (SD)	54.7 (47.88)	48.8 (29.11)	
	Median (IQR)	41.0 (30–58)	41.0 (31–57)	
Provider 2 (Minutes)	n	1178	1382	<0.001
	Mean (SD)	72.9 (47.18)	79.2 (43.15)	
	Median (IQR)	63.0 (46–84)	72.0 (53–97)	
Provider 3 (Minutes)	n	1599	774	0.002

	Mean (SD)	93.9 (38.49)	89.5 (36.51)	
	Median (IQR)	89.0 (69.0–112.0)	84.0 (65–106.25)	
Provider 4 (Minutes)	n	1132	743	0.002
	Mean (SD)	81.8 (34.53)	80.8 (44.36)	
	Median (IQR)	77.0 (59–101)	72.0 (53–96)	
P-value from Mann-Whitney U tests to compare each study epoch for rank equality.				

Table 4: SBIRT appointment time by study epoch and doctor.

Discussion

Contrary to provider's views regarding behavioral health screening in the primary medical care setting, survey results suggest patients overwhelmingly accept the screening as a welcome addition to their healthcare delivery. Ninety seven percent of patients chose to participate in the survey indicating acceptance of the process and 97% agreed they would recommend the screening to others in order to help doctors improve care. Providers, for the most part, note SBIRT is helpful and welcomed onsite support to assist them in this endeavor.

There are two major differing views between patients' and providers' experiences. First, 37.5% of the providers surveyed suggested patients were uncomfortable with the process while 94% of patients indicate they were not upset by being asked these questions. Second, over 95% of patients surveyed reveal they have never had counseling or treatment despite past indication of a behavioral health problem. In a previous ONE Health study with the same surveyed population during the same time period, 63.2% of the patients screened had positive SBIRT screening results [8] indicating they were at risk for a behavioral health condition associated with depression, alcohol abuse and/or substance abuse. However, providers indicate they had counseled and treated patients as a result of the screening program. Certainly, the definition of intervention and counseling [4,8] can be construed and defined differently by the surveyed groups, but most importantly, patients did not feel their behavioral health issues were addressed by their provider despite positive responses to the screening questions.

Providers cite time constraints as a problem in implementing behavioral health screenings and interventions in the clinical setting. However, as this study reveals, increased time demands are not an issue when implementing behavioral health screens. The median time from patient sign-in to visit discharge decreased overall by three minutes per patient after SBIRT was initiated. The reason for this improved efficiency is unclear except perhaps the screening improved efficiencies. Limited studies are available that address physician time as a resource [12]. One study found patients who were more effective in eliciting information and asking more questions about their illnesses had no increase in the length of their total visit [13]. Perhaps directly soliciting patients' viewpoints regarding their behavioral health through SBIRT screening initiated more efficient dialogue and provider interaction resulting in better use of time.

Both patient and provider surveys and time analysis study suggest the SBIRT process in a medical outpatient facility can be efficient and non-threatening. Patients readily accept the screening as part of their medical visit resulting in an increased provider awareness and medical diagnosis of behavioral health issues [8]. Providers overwhelmingly favor the process and believe onsite behavioral health workers (such as counselors) would be beneficial to the SBIRT process.

The savings of three minutes per patient visit reduces time costs and potentially increases revenues by increasing productivity. This helps justify and support the use of onsite counselors as part of an integrated healthcare delivery program. In addition to an improved efficiency of time, utilization of onsite behavioral health workers can lead to an improved kept appointment referral rate to counselors previously described as abysmal [8].

Study Limitations

The study was performed under the umbrella of ONE Health single system of healthcare providers, serving patients primarily in Northeast Ohio. This limitation to the external validity of the study, however, did enable for additional controls to make certain that no other initiatives or systematic changes to the healthcare delivery systems were performed over the study period.

An added study limitation is that patients were selected via quota sampling which is not an unbiased form of sampling. This sampling method was chosen to help increase the patient participation rate to 96.65% by having a trained RA present for fixed time intervals while ensuring that each site's patients were uniformly represented in the study population.

Conclusion

Despite limitations, the surveys and time data overwhelmingly support the effective use of SBIRT in a clinical outpatient facility. Contrary to some provider's belief of negative patient receptivity for the process and increased time demands on their practice, SBIRT is shown to be acceptable to patients and can be time-efficient, productive and a valuable tool to early detection and intervention of behavioral health issues for patients. Thus, SBIRT can be used as an effective clinical tool to support integrative healthcare.

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