

Social Need Screening and Intervention (SNS-E) Measure Validity Testing
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EXECUTIVE SUMMARY

This two-part report presents a comprehensive evaluation of the validity of the Social Need Screening and Intervention measure, assessing its effectiveness in identifying and addressing unmet food, housing and transportation among health plans member populations. This report is part of the May 2024 submission of the CMS Measures Under Consideration (MUC) form which included detailed measure information. In Part 1: Construct Validity, correlative analysis between SNS-E indicators and two other NCQA measures ([Cervical Cancer Screening \(CCS\)](#) and [Depression Screening and Follow-up \(DSF-E\)](#)) was conducted to determine if these two measures are theoretically related or show some degree of correlation. These measures were selected given the similarity in measure structure and intent for capturing widespread screenings. In terms of allowable measure data sources, CCS is an administrative measure and DSF-E is an ECDS measure similarly to SNS-E. Furthermore, the intervention indicators of SNS-E were compared to the CCS and the follow-up indicator in DSF-E. Both additional analyses can be found in Appendix A. The correlative analysis between CCS and SNS-E is displayed first, followed by the analysis between SNS-E and DSF-E. The expected relationship found in the literature, or correlation between the two measures is presented in sections 1a (CCS) and 1b (DSF-E) with the rationale, before showcasing the results and discussion.

We found that the SNS-E measure showed little or no correlation with the CCS measure. However, SNS-E did show construct validity (correlation) for social need screening indicators for food, housing, transportation within the commercial and Medicare product lines and the DSF-E screening indicator. The limited data available in first year SNS-E data may present a barrier to accurately evaluating performance correlations. The correlation analysis with DSF-E follow-up indicator did not substantiate construct validity with the SNS-E intervention indicators. To fully validate the construct validity of the SNS-E screening indicators across all product lines, and subsequently, the intervention indicators additional reportable data for the SNS-E measure is needed.

In Part 2: Performance Validity analyses using t-tests were conducted to determine if the differences in performance rates between high performing health plans and low performing health plans on the SNS-E measure were statistically significant. Due to limited availability of data, performance validity was not able to be calculated for any of the social need screening indicator rates by plan type. For the intervention indicators, only Medicaid data was sufficient in volumes that allowed for performance validity to be calculated, specifically for the food insecurity and housing domains. The SNS-E measure screening indicators showed construct validity with the DSF-E screening indicator, as demonstrated by the correlation in Medicare and commercial data. There was a lack of correlation in Medicaid as screening rates were generally lower than anticipated, given the population. The SNS-E intervention indicators did not show construct validity with the DSF-E follow-up indicator. Like the recommendation for assessing construct validity, better data collection of SNS-E screening data will support a more complete assessment of performance validity.

DATA SAMPLE

For context, the detailed first-year analysis results for SNS-E can be found in Appendix B. The data sample included 420 commercial plans, 278 Medicaid plans and 760 Medicare plans. Of these plans, 75.5% of them could report food, housing or transportation screening (Table 10). The ability to report percentage dropped to about 4-15% for the intervention indicator, depending on the domain screened for. Although the ability to report a social need screening was 75.5%, between 57-69% of health plans reported a rate of 0 (also known as a reportable zero) for the food insecurity screening indicator (Table 11). Furthermore, 38-67% of health plans reported a reportable zero for housing screening and 54-71% of health plans reported a reportable zero for transportation screening. The abundance of reportable zeros for the screening indicators may be a result of health plan inability to attain the data elements needed to fulfill the numerator of the social need screening indicators. Since there were many reportable zeros for the screening indicators, most health plans found small denominator sizes for the intervention indicators and were unable to report those rates.

PART 1: CONSTRUCT VALIDITY

1a. SNS-E and CCS Correlative Analysis

EXPECTED CORRELATION

Expected direction of association	Expected strength of association
Negative for food insecurity	Moderate for food insecurity
No correlation for housing	None for housing
Negative for transportation	Moderate for transportation

CORRELATION RATIONALE

Food Insecurity and Cervical Cancer Screening: A 2023 study published in the Journal of Clinical Oncology highlighted a significant disparity in cancer screening rates between individuals with food insecurity and those who are food secure. Specifically, the study found that 78.1% of those experiencing food insecurity participated in cervical cancer screening, compared to 85.2% of people who were food secure ($p < 0.0001$).¹ Additionally, those with food insecurity also had notably lower screening rates for colon cancer (51.3% vs. 61.8% $p < 0.0001$) and prostate cancer (36.0% vs. 51.5%, $p < 0.0001$).¹

Housing and Cervical Cancer Screening: Two studies identified a statistically significant correlation between self-reported housing concerns, such as unaffordable rent, overcrowding, or homelessness, and reduced access to breast cancer screening. However, these housing concerns did not show a significant association with access to cervical cancer screening rates.²

Transportation Insecurity and Cervical Cancer Screening: Although transportation insecurity is generally believed to be common among cancer patients, prevalence estimates vary significantly across published studies. For example, nearly 90% of women in the National Breast and Cervical Cancer Early Detection Program and 75% of adults in the Colorectal Cancer Control Program identified lack of transportation as a barrier to screening.³ One study found that women residing in counties where fewer than 2% of residents lacked access to a car were slightly more likely to have received a Pap test in the past three years compared to women in areas where 3% or more of the residents lacked access to a car (87.3% versus 84.5%; p-value for test for trend < 0.01). However, in a multivariate analysis, living in a county with a median commute time of 30 minutes or more was not significantly linked to having had a Pap test in the past three years (adjusted OR = 1.1, 95% CI: 0.9-1.2, p = .50) or a mammogram in the past two years (adjusted OR = 0.9, 95% CI: 0.9-1.1, p = .28).⁴

RESULTS

Tables 1 shows the correlation results for SNS-E screening indicators and the correlation comparison with CCS. The SNS-E measure showed little or no correlation with the CCS measure.

Table 1. SNS-E Screening Indicators Correlation Comparison with CCS, by Product Line

Product	Food			Housing			Transportation		
	No. Plans	Presence of Correlation	Correlation Coefficient	No. Plans	Presence of Correlation	Correlation Coefficient	No. Plans	Presence of Correlation	Correlation Coefficient
Commercial	317	FALSE	0.08	317	FALSE	0.08	317	FALSE	0.11
Medicaid	174	FALSE	0.16	174	FALSE	0.05	174	FALSE	0.17

FALSE=the p-value was greater than the alpha level threshold for statistical correlation

Note: The number of plans includes plans which reported both measures.

An additional analysis was conducted for the SNS-E intervention indicators and the CCS which is found in Appendix A

DISCUSSION

The SNS-E measure showed little or no correlation with the CCS measure. The CCS measure may not be used to ensure that SNS-E has good construct validity. While the exact population sizes do not need to be the same, differences in population characteristics could be affecting the results. The CCS measure screening population is limited to women aged 21 to 64; whereas SNS-E is all individuals across the lifespan.

Ib. SNS-E and DSF-E Correlative Analysis

EXPECTED CORRELATION

Measure indicator	Expected direction of association	Expected strength of association
DSF: Depression screening indicator	Positive for food Positive for housing Positive for transportation	Moderate for food Strong for housing Strong for transportation
DSF: Follow-up after positive depression screen indicator	Positive for food Positive for housing Positive for transportation	Moderate for food Strong for housing Strong for transportation

EXPECTED CORRELATION RATIONALE

Food Insecurity and Depression: A study aimed to explore the links between food insecurity and depression, anxiety, and stress during the COVID-19 pandemic among low-income adults in the United States. The meta-analysis results revealed a positive association between food insecurity and the risk of depression (OR = 1.40; 95% CI: 1.30 -1.58) and stress (OR = 1.34; 95% CI: 1.24 - 1.44) but found no significant association with anxiety. Additionally, compared to food-secure adults, those experiencing very low food security were significantly more likely to screen positive for depression (OR = 7.72; 95% CI: 5.52-10.80), anxiety (OR = 6.19; CI: 4.51-8.51), and high perceived stress (OR = 10.91; 95% CI: 7.78-15.30).⁵

Housing Insecurity and Depression: A study published in JAMA focused on four facets of childhood housing insecurity: frequent residential moves, reduced standards of living,

involuntary separation from the home, and foster care status. The study found strong evidence linking childhood housing insecurity with higher anxiety and depression symptom scores during childhood, as well as higher depression symptom scores in adulthood. Overall, these findings suggest that children who experienced housing insecurity are at a greater risk of developing anxiety and depression symptoms during childhood and adolescence, and are also more likely to experience depression in adulthood compared to those that were housing-secure as children.⁶

A study analyzing the effects of long-term housing affordability stress, which refers to a significant housing cost burden, found that both continuous and occasional exposure to this stress negatively impacted self-reported mental health. This impact was evident in social, emotional, and mental functioning, even when accounting for the participants' initial mental health conditions.⁷

Transportation Insecurity and Depression: A recent study by researchers at Montefiore Health System published in the journal, *Preventive Medicine*, reveals a strong link between healthcare transportation challenges and chronic health conditions such as depression, anxiety, asthma, and diabetes. The study found that individuals who identified healthcare transportation as a need were 84% more likely to have a diagnosis of alcohol or drug abuse and 41% more likely to smoke compared to those without such need.⁸ Additionally, another study observed that mental health conditions were significantly associated with increased requests for help with transportation, food, healthcare, and personal safety. Among these, transportation needs showed the strongest and most consistent connections. Even after adjusting for potential confounding factors, most of the associations between transportation needs and mental health remained significant.⁹

RESULTS

In Table 2, the correlation between the SNS-E screening indicators and the DSF-E depression screening indicators, by product line and age. There was a moderate relationship between Depression Screening and Food Screening indicators for commercial and Medicare plans—indicating that if plans performed well on depression screenings, they were more likely to perform well on the food screening indicator. For commercial plans, across all age groups and screening indicators, there was a moderate positive correlation between performance on social need screenings and performance well on depression screenings.

For Medicaid plans, there was no correlative relationship between performance on food and transportation screenings and depression screenings (for the total age group). There was a weak positive correlation between performance on housing screenings and depression screenings. This relationship was not found in age stratification groups.

Among Medicare plans, age groups of members 18-64 had moderate positive relationships between performance on social needs screenings (all domains) and depression screenings; this was not the case for Medicare populations aged 65+ where there was no correlation between

performance on depression screenings and food or transportation screenings. There was a somewhat weak positive relationship between performance on housing screenings for Medicare 65+ and depression screenings in the same population.

Table 2. SNS-E Screening Indicators Correlation Comparison with DSF-E Depression Screening Indicator, by Product Line and Age

Product	Age	No. Plans	Food Screening		Housing Screening		Transportation Screening	
			Presence of Correlation	Correlation Coefficient	Presence of Correlation	Correlation Coefficient	Presence of Correlation	Correlation Coefficient
Commercial	18-64	314	TRUE	0.4	TRUE	0.4	TRUE	0.38
	65+	302	TRUE	0.29	TRUE	0.27	TRUE	0.25
	Total	314	TRUE	0.41	TRUE	0.4	TRUE	0.38
Medicaid	18-64	171	TRUE	0.17	FALSE	0.16	FALSE	0.13
	65+	135	FALSE	-0.04	FALSE	-0.05	FALSE	-0.07
	Total	173	FALSE	0.17	TRUE	0.19	FALSE	0.1
Medicare	18-64	636	TRUE	0.44	TRUE	0.49	TRUE	0.44
	65+	662	FALSE	0.08	TRUE	0.26	FALSE	0.08
	Total	710	TRUE	0.53	TRUE	0.57	TRUE	0.53

TRUE=the p-value was equal to or less than the threshold for statistical correlation, positive correlation
 TRUE=the p-value was equal to or less than the threshold for statistical correlation, negative correlation
 FALSE=the p-value was greater than the alpha level threshold for statistical correlation
 Correlation coefficient indicates the strength of the correlation (0=no correlation, 0.5/-0.5= moderate correlation, 1/-1=perfectly strong correlation)

Note: The number of plans includes plans which reported both measures.

In Table 3, the correlation between SNS-E and the DSF-E follow-up after positive screen indicator were assessed. For commercial plans, there was a moderate negative correlation between the DSF-E follow-up after positive depression screening indicator and the SNS-E food intervention indicator—commercial plans which performed well on following up after positive depression screenings were less likely to perform well on providing interventions for food insecurity.

For Medicaid plans, there were no correlative relationships between performance on DSF-E follow-up after positive screening and SNS-E intervention indicators, for all social need domains and across age groups.

For Medicare plans, there was a weak positive correlation between the DSF-E follow-up after positive depression screening indicator and the SNS-E housing intervention indicator—Medicare plans which performed well on following up after positive depression screenings were more likely to perform well on providing interventions for housing insecurity.

There were no other statistically significant correlative relationships between performance on social need intervention indicators and performance on follow-up after positive depression screenings.

Table 3. SNS-E Intervention Indicators Correlation Comparison with DSF-E Follow-up After Positive Screen Indicator, by Product Line and Age

Product	Age	Food Intervention			Housing Intervention			Transportation Intervention		
		No. Plans	Presence of Correlation	Correlation Coefficient	No. Plans	Presence of Correlation	Correlation Coefficient	No. Plans	Presence of Correlation	Correlation Coefficient
Commercial	18-64	19	TRUE	-0.54	15	FALSE	-0.27	12	FALSE	-0.36
	65+	3	FALSE	0.3	3	FALSE	0.07	1	-	-
	Total	20	TRUE	-0.54	15	FALSE	-0.28	14	FALSE	-0.32
Medicaid	18-64	17	FALSE	0.03	18	FALSE	0.03	16	FALSE	0
	65+	3	FALSE	0.43	3	FALSE	-0.36	3	FALSE	0.45
	Total	18	FALSE	0.07	20	FALSE	0.08	16	FALSE	0.04
Medicare	18-64	57	FALSE	-0.1	52	FALSE	0.04	41	FALSE	-0.01
	65+	67	FALSE	-0.08	65	TRUE	0.31	50	FALSE	0.22
	Total	78	FALSE	-0.11	76	TRUE	0.31	60	FALSE	0.26

TRUE=the p-value was equal to or less than the threshold for statistical correlation, positive correlation

TRUE=the p-value was equal to or less than the threshold for statistical correlation, negative correlation

FALSE=the p-value was greater than the alpha level threshold for statistical correlation

Table 4 summarizes the correlative relationships between SNS-E screening and intervention indicators with the DSF-E screening and follow-up indicators by product line and age. The expected direction and strength for the food screening indicator was a moderately positive correlation, which was shown for the commercial and Medicare plans only. It was anticipated that the correlation for the food intervention indicator would result in a moderately positive correlation with the DSF follow-up indicator but there was no correlation for Medicaid and Medicare, and a moderate negative correlation for commercial.

For housing screening, a moderate positive correlation was found for commercial and Medicare, with a weak positive for Medicaid. A positive correlation was expected, but the strength was anticipated to be strong for housing screening. For housing intervention, no correlation was found between SNS-E intervention indicator and the DSF-E follow-up indicator within the total population for commercial and Medicaid, with a weak positive within Medicare. A strong positive correlation was anticipated.

For transportation screening, a weak positive correlation between SNS-E and DSF-E screening was found within commercial, whereas no correlation was found in Medicaid, and a moderate positive was found in Medicare. It was anticipated that a strong positive correlation would be

found across health plans. It was anticipated for transportation screening, a strong positive correlation would exist between the two intervention indicators, but no correlation was found.

Table 4. Summary: Correlative Relationships Between SNS-E Screening Indicators & DSF-E Screening Indicator and SNS-E Intervention Indicators & DSF-E Follow-up After Positive Screen Indicator, by Product Line and Age

Product	Age	Food		Housing		Transportation	
		Screening	Intervention	Screening	Intervention	Screening	Intervention
Commercial	18-64	Moderate positive	Moderate negative	Moderate positive	None	Weak positive	None
	65+	Weak positive	None	Weak positive	None	Weak positive	N/A (only 1 plan)
	Total	Moderate positive	Moderate negative	Moderate positive	None	Weak positive	None
Medicaid	18-64	Weak positive	None	None	None	None	None
	65+	None	None	None	None	None	None
	Total	None	None	Weak positive	None	None	None
Medicare	18-64	Moderate Positive	None	Moderate positive	None	Moderate positive	None
	65+	None	None	Weak positive	Weak positive	None	None
	Total	Moderate Positive	None	Moderate positive	Weak positive	Moderate positive	None

Relationship thresholds

Weak: CC=+/- [0-0.4], Moderate: CC=+/- [0.4-0.6], Strong CC=+/- [0.6-1]

DISCUSSION

The SNS-E measure screening indicators showed construct validity with the DSF-E screening indicator, as demonstrated by the correlation in Medicare and commercial data. There is a lack of correlation in Medicaid as screening rates for Medicaid are generally lower than anticipated, given the population. There is a weak positive being detected for those 18-64 for food insecurity screening, and for the total population for housing insecurity screening. With additional screening data, there is potential that a stronger positive correlation will be detected.

The SNS-E intervention indicators did not show construct validity with the DSF-E follow-up indicator. It was anticipated that the direction of the association would be positive for food, housing and transportation intervention indicators, with the strength of association being moderate for food and strong for housing and transportation. Differences in populations, including the limited amount of data available for the SNS-E measure may be contributing to the lack of association seen with the current data.

PART 2: PERFORMANCE VALIDITY

Performance validity assesses if the differences in performance rates between high performers and low performers is statistically significant. This determines if the measure indicators are truly useful for distinguishing performance. T-tests were conducted on all measure rates and age stratification groups across product lines. For most rates, we could not randomly select plans in the bottom and top quartiles for comparison. There was not enough spread in performance to allow for performance validity analyses and in cases when it was possible, the tests found no statistical significance between the top and bottom performers. Table 5 summarizes the performance validity results for each measure indicator by age stratification and product line.

Table 5. Performance Validity Results, by Age and Product Line

Product	Age	Food		Housing		Transportation	
		Screening	Intervention	Screening	Intervention	Screening	Intervention
Commercial	≤17	IS	IS	IS	IS	IS	IS
	18-64	IS	FALSE	IS	IS	IS	IS
	65+	IS	IS	IS	IS	IS	IS
	Total	IS	FALSE	IS	IS	IS	IS
Medicaid	≤17	IS	TRUE	IS	IS	IS	FALSE
	18-64	IS	FALSE	IS	TRUE	IS	IS
	65+	IS	FALSE	IS	IS	IS	FALSE
	Total	IS	FALSE	IS	FALSE	IS	FALSE
Medicare	18-64	IS	FALSE	IS	IS	IS	IS
	65+	IS	IS	IS	IS	IS	IS
	Total	IS	FALSE	IS	IS	IS	IS

IS=insufficient spread in data to calculate performance validity

FALSE=no statistical significance between randomly selected top and bottom performance rates

TRUE=statistical significance between randomly selected top and bottom performance rates

DISCUSSION

There was insufficient data to calculation performance validity for the social need screening indicator rates. For the intervention indicators, only Medicaid data allowed for performance validity to be calculated, for both the food insecurity and housing domains. The two rates which showed statistically significant variation between top performers and bottom performers was the food intervention indicator for ages 0-17 and the housing intervention indicator for ages 18-64 within the Medicaid product line. The inability to evaluate performance validity is likely a byproduct of the large number of plans which reported rates of zero, especially for screening indicators, which largely skewed the performance rates. For example, for the food screening indicator, 57% of commercial plans and 69% of Medicaid and Medicare plans reported rates of

zero. More details on the prevalence of reported rates of zero is included in Table 11 of Appendix B. Better data collection of SNS-E screening data is recommended to fully assess performance validity.

REFERENCES

1. Shah MM, Islam S, Braunstein MJ. Association of food insecurity with reduced cancer screening rates. *J Clin Oncol*. 2023;41(16_suppl):e18609-e18609. doi:10.1200/JCO.2023.41.16_suppl.e18609
2. Fan Q, Nogueira L, Yabroff KR, Hussaini SMQ, Pollack CE. Housing and Cancer Care and Outcomes: A Systematic Review. *JNCI J Natl Cancer Inst*. 2022;114(12):1601-1618. doi:10.1093/jnci/djac173
3. Graboyes EM, Chaiyachati KH, Sisto Gall J, et al. Addressing Transportation Insecurity Among Patients With Cancer. *JNCI J Natl Cancer Inst*. 2022;114(12):1593-1600. doi:10.1093/jnci/djac134
4. Coughlin SS, King J. Breast and cervical cancer screening among women in metropolitan areas of the United States by county-level commuting time to work and use of public transportation, 2004 and 2006. *BMC Public Health*. 2010;10:146. doi:10.1186/1471-2458-10-146
5. Wolfson JA, Garcia T, Leung CW. Food Insecurity Is Associated with Depression, Anxiety, and Stress: Evidence from the Early Days of the COVID-19 Pandemic in the United States. *Health Equity*. 2021;5(1):64-71. doi:10.1089/heap.2020.0059
6. Avenue 677 Huntington, Boston, Ma 02115. Childhood housing insecurity linked to short- and long-term anxiety and depression. News. July 13, 2023. Accessed August 15, 2024. <https://www.hsph.harvard.edu/news/features/childhood-housing-insecurity-linked-to-short-and-long-term-anxiety-and-depression/>
7. How Does Housing Stability Affect Mental Health? | Housing Matters. April 26, 2023. Accessed August 15, 2024. <https://housingmatters.urban.org/articles/how-does-housing-stability-affect-mental-health>
8. Heller CG, Rehm CD, Parsons AH, Chambers EC, Hollingsworth NH, Fiori KP. The association between social needs and chronic conditions in a large, urban primary care population. *Prev Med*. 2021;153:106752. doi:10.1016/j.ypmed.2021.106752
9. Garg R, Muhammad SN, Cabassa LJ, et al. Transportation and other social needs as markers of mental health conditions. *J Transp Health*. 2022;25:101357. doi:10.1016/j.jth.2022.101357

APPENDIX A

Additional correlative analyses for SNS-E and DSF-E:

Additional analyses were conducted to see if correlations existed between intervention indicators for SNS-E and CCS (Table 6). The only correlation found was for the transportation domain within the commercial product line. This means that as the value of the transportation indicator increases, the cervical cancer screening rate tends to decrease, and vice versa.

Table 6. SNS-E Intervention Indicators Correlation Comparison with CCS, by Product Line

Product	Food			Housing			Transportation		
	No. Plans	Presence of Correlation	Correlation Coefficient	No. Plans	Presence of Correlation	Correlation Coefficient	No. Plans	Presence of Correlation	Correlation Coefficient
Commercial	25	FALSE	-0.26	20	FALSE	-0.38	16	TRUE	-0.62
Medicaid	25	FALSE	0.42	28	FALSE	0.33	22	FALSE	0.32

FALSE=the p-value was greater than the alpha level threshold for statistical correlation

TRUE=the p-value was equal to or less than the threshold for statistical correlation, negative correlation

Note: The number of plans includes plans which reported both measures.

Additional correlative analyses for SNS-E and DSF-E:

Additional analyses were conducted to see if correlations existed between intervention indicators for SNS-E and the screening indicator for DSF-E (Table 7).

For Medicare plans, across all social needs domains and age groups, plans which performed well on the DSF-E depression screening indicator were more likely to perform well on social need intervention indicators.

Table 7. DSF-E Depression Screenings x SNS-E Intervention Indicators

Product	Age	Food Intervention			Housing Intervention			Transportation Intervention		
		No. Plans	Presence of Correlation	Correlation Coefficient	No. Plans	Presence of Correlation	Correlation Coefficient	No. Plans	Presence of Correlation	Correlation Coefficient
Commercial	18-64	24	FALSE	0.27	20	FALSE	0.39	14	FALSE	0.3
	65+	3	FALSE	-0.97	3	FALSE	-0.89	1	-	-
	Total	25	FALSE	0.25	20	FALSE	0.35	16	FALSE	0.29
Medicaid	18-64	22	TRUE	0.56	24	FALSE	0.31	19	FALSE	0.36
	65+	9	FALSE	0.62	9	FALSE	0.48	8	FALSE	0.33
	Total	23	FALSE	0.44	26	FALSE	0.32	20	FALSE	0.25
Medicare	18-64	90	TRUE	0.29	79	TRUE	0.32	64	TRUE	0.3
	65+	102	TRUE	0.33	94	TRUE	0.3	78	TRUE	0.34
	Total	111	TRUE	0.31	100	TRUE	0.31	85	TRUE	0.34

Additional analyses were conducted to see if correlations existed between screening indicators for SNS-E and the follow-up indicator for DSF-E (Table 8).

For Medicare, across age groups, plans which performed well on the DSF-E follow-up after positive screen indicator were more likely to perform well on housing screenings. No other correlative relationships were present between DSF-E follow-up and SNS-E screening indicators.

Table 8. SNS-E Screening Indicators x DSF-E Follow-up after positive screen indicator

Product	Age	No. Plans	Food Screening		Housing Screening		Transportation Screening	
			Presence of Correlation	Correlation Coefficient	Presence of Correlation	Correlation Coefficient	Presence of Correlation	Correlation Coefficient
Commercial	18-64	88	FALSE	-0.03	FALSE	-0.03	FALSE	-0.02
	65+	20	FALSE	-0.1	FALSE	-0.1	FALSE	-0.08
	Total	93	FALSE	-0.03	FALSE	-0.03	FALSE	-0.01
Medicaid	18-64	88	FALSE	0.04	FALSE	0.06	FALSE	0.07
	65+	23	FALSE	0.01	FALSE	0.01	FALSE	0.05
	Total	99	FALSE	0.05	FALSE	0.07	FALSE	0.07
Medicare	18-64	115	FALSE	0.1	<i>TRUE</i>	0.23	FALSE	0.15
	65+	158	FALSE	-0.03	<i>TRUE</i>	0.33	FALSE	0.14
	Total	189	FALSE	-0.03	<i>TRUE</i>	0.33	FALSE	0.09

APPENDIX B

First Year Analysis Results of SNS-E:

Table 9. Health Plan Ability to Report SNS-E Indicators, by Product Line (Number of Plans)

Product	Ability to Report	Food		Housing		Transportation	
		Screening	Intervention	Screening	Intervention	Screening	Intervention
Commercial	Reported a Valid Rate	317	25	317	20	317	16
	Small Denominator	-	292	-	297	-	301
	Not Reported	42	42	42	42	42	42
	Not Required	61	61	61	61	61	61
Medicaid	Reported a Valid Rate	184	25	184	28	184	22
	Small Denominator	1	160	1	157	1	163
	Not Reported	56	56	56	56	56	56
	Not Required	37	37	37	37	37	37
Medicare	Reported a Valid Rate	712	111	712	100	712	85
	Small Denominator	44	645	44	656	44	671
	Not Reported	-	-	-	-	-	-
	Not Required	4	4	4	4	4	4
Overall total	Reported a Valid Rate	1,213	161	1,213	148	1,213	123

Table 10. Health Plan Ability to Report SNS-E Indicators, by Product Line (Percentage)

Product	Ability to Report	Food		Housing		Transportation	
		Screening	Intervention	Screening	Intervention	Screening	Intervention
Commercial	Reported a Valid Rate	75.5	6.0	75.5	4.8	75.5	3.8
	Small Denominator	-	69.5	-	70.7	-	71.7
	Not Reported	10	10	10	10	10	10
	Not Required	14.5	14.5	14.5	14.5	14.5	14.5
Medicaid	Reported a Valid Rate	66.2	9.0	66.2	10.1	66.2	7.9
	Small Denominator	0.4	57.6	0.4	56.5	0.4	58.6
	Not Reported	0.2	20.1	20.1	20.1	20.1	20.1
	Not Required	13.3	13.3	13.3	13.3	13.3	13.3
Medicare	Reported a Valid Rate	93.7	14.6	93.7	13.2	93.7	11.2
	Small Denominator	5.8	84.9	5.8	86.3	5.8	88.3
	Not Reported	-	-	-	-	-	-
	Not Required	0.5	0.5	0.5	0.5	0.5	0.5

Table 11. Prevalence of Reportable Zeros by Product Line, Number of Plans (Percent of Total Plans)

Product	Food		Housing		Transportation	
	Screening	Intervention	Screening	Intervention	Screening	Intervention
Commercial	182 (57%)	5 (20%)	119 (38%)	7 (35%)	170 (54%)	5 (31%)
Medicaid	127 (69%)	1 (4%)	126 (68%)	7 (25%)	131 (71%)	5 (23%)
Medicare	493 (69%)	24 (22%)	475 (67%)	38 (38%)	488 (69%)	27 (32%)