



Addressing Social Determinants of Health (SDOH)

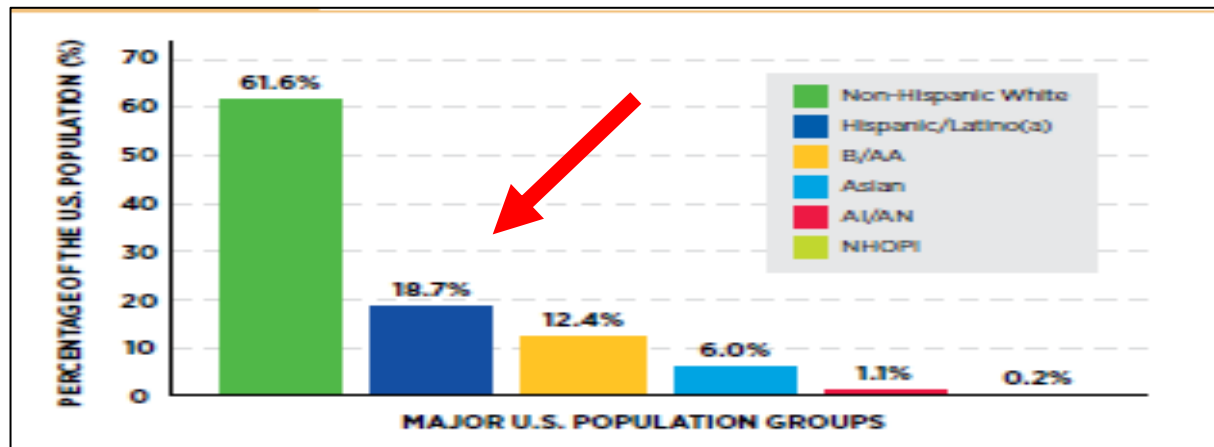
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AACR CANCER DISPARITIES PROGRESS REPORT 2022



>70%
VS
<3%

Between 2009 and 2019, 81 oral chemotherapeutic agents were approved by the U.S. Food and Drug Administration based on data from 142 clinical trials. Only 52 percent of these trials reported on race/ethnicity. Among the participants, greater than 70 percent were White while only 2.5 percent and 2.3 percent were Black and Hispanic, respectively (50).

Percentage of adults age 18 and older who reported cigarette use in 2020:

- 27.1% American Indian or Alaska Native
- 14.4% Black
- 13.3% White
- 8.0% Asian
- 8.0% Hispanic
- 19.0% Rural residents
- 11.4% Urban residents
- 20.2% Annual household income of <\$35,000
- 6.2% Annual household income of >\$100,000
- 16.1% Sexual and gender minority
- 12.3% Heterosexual/straight





Lung Cancer in Hispanics

- We will have 130,000 deaths in the US in 2022, and more than 60,000 deaths per year in Latin America (LATAM).
- Hispanics are the largest minority group in the US (18% of the population), and there are more than 20 countries with Hispanic populations in LATAM.
- Disparities in the diagnosis and clinical outcomes of Hispanic patients with lung cancer compared with Non-Hispanic White (NHW) patients are well documented.
 - ❖ Hispanics have disadvantages in social determinants of health: access to care, health insurance, cultural differences, and immigration status.
 - ❖ There are also genetic and other biological differences (like EGFR frequency)
 - ❖ Hispanics in LATAM have some extra hardships; most of them live in countries classified as low- and middle-income countries.





Compared with the NHW population in the US:

- Hispanics tend to have more social problems
- 24% live below the poverty line
- 35% have less than high school education
- One third had no health insurance and reported not having a PCP.

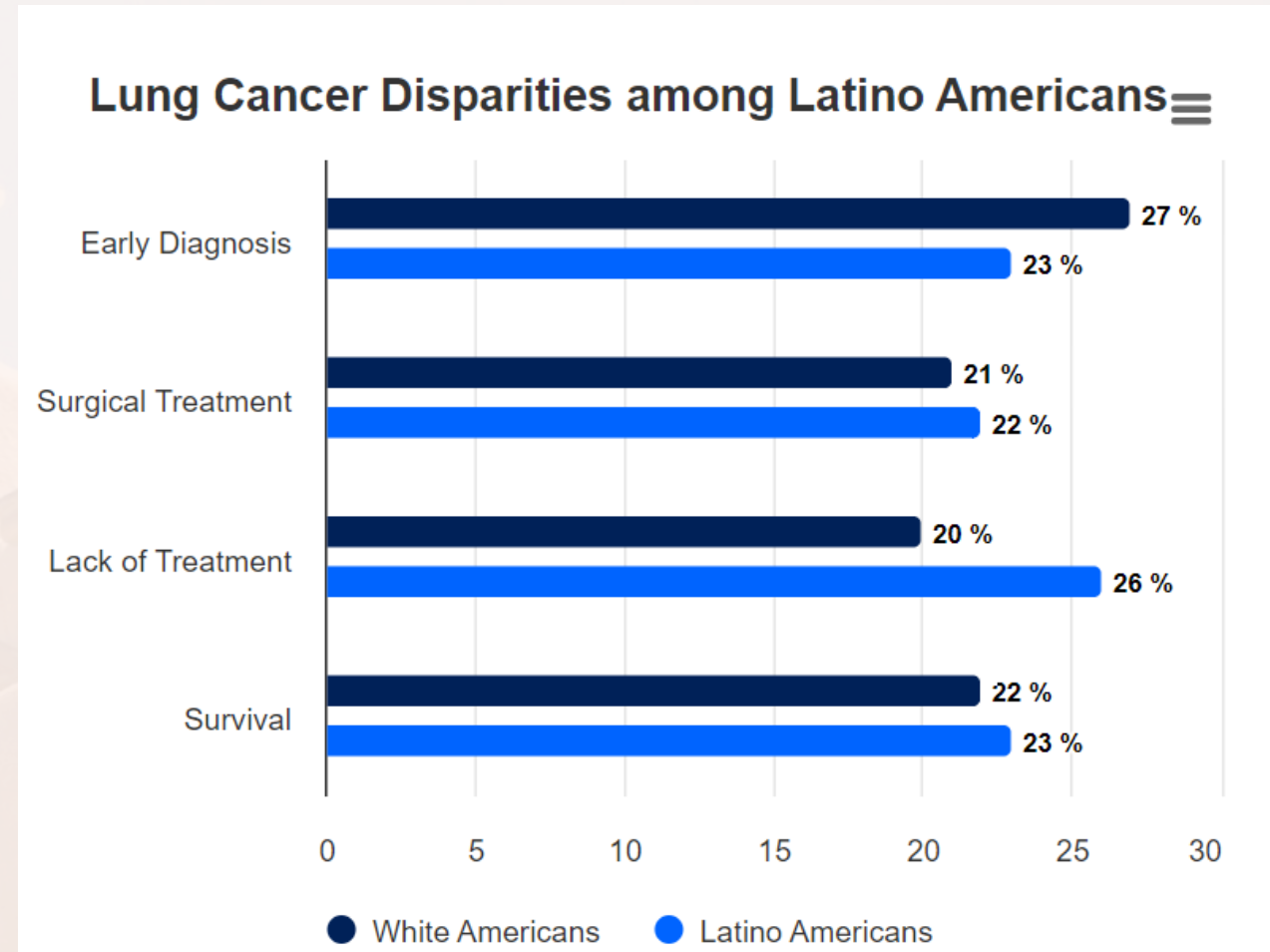
Aizer AA, et al. Cancer 120:1532-1539, 2014

Lin JJ, et al. Ann Am Thorac Soc 11:489-495, 2014

Lung Cancer in Hispanics

Latino Americans with lung cancer were:

- 15% less likely to be diagnosed early
- Equally likely to receive surgical treatment
- 28% more likely to not receive any treatment
- 25% less likely to survive five years compared to white Americans.



Lung Cancer Screening

RESULTS

	NCCN Eligible		P-value	USPSTF Eligible		P-value
	Yes (%)	No (%)		Yes (%)	No (%)	
Race						
African American	56.9	43.1	0.206	38.5	61.5	0.496
White, Asian, other	65.6	34.4		43.8	56.2	
Ethnicity						
Hispanic/LatinX	52.0	48.0	0.201	20.0	80.0	0.027
Non-Hispanic/LatinX	65.0	35.0		44.4	55.6	

Table 2: NCCN and USPSTF screening eligibility criteria in difference races and ethnicities

	Screening Eligible		P-value
	NCCN (%)	USPSTF (%)	
African American	56.9	38.5	0.0029
Hispanic/LatinX	52.0	20.0	0.0001

Table 3: NCCN and USPSTF screening eligibility rates amongst AA and H/L

Early Stage and Different Surgical Outcomes

- Fewer Hispanics and Blacks undergoing surgery than NHW.
- Blacks exhibiting a reduced likelihood of surgical treatment and subsequently lower OS compared to NHW (26.4% vs. 34.1%, $P < 0.001$).
- Similar disparities in Hispanics, with lower OS and surgical rates than NHW (54.2% vs. 64.2%, $P = 0.008$ and 83% vs. 86%, $P = 0.003$)
- Blacks tend to experience treatment delays, averaging 6.7 days from diagnosis to surgery which can lead to a 3.2% decrease in OS for patients who delay surgery for a week.
- According to the American Lung Association's (ALA) 2022 lung cancer statistics, Hispanics have better survival rates than NHW, while Blacks have worse survival rates

Bach PB et al. New England Journal of Medicine. 1999;341(16):1198-1205.

UNC 2022. from: <https://unclineberger.org/news/intervention-reduces-disparities-in-timing-of-lung-cancer-surgery-between-black-and-white-patients/>.

ALA. 2022. Available from: <https://www.lung.org/research/state-of-lung-cancer/racial-and-ethnic-disparities>.



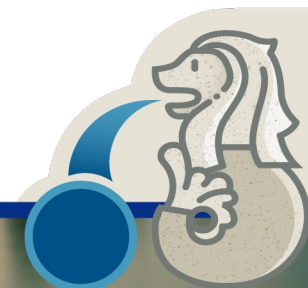
Gene Expression Profile

- Lynch et al, identified clinical, demographic, and regional predictors of EGFR&KRAS testing among Medicare beneficiaries with lung cancer (2011-13). There was a 19.7% increase in the rate of EGFR testing; however, Hispanics were less likely to be tested.
- Raez et al, performed a genomic analysis of 492 patients with NSCLC finding that Hispanics living in the US have a higher rate of EGFR mutations (25%) than NHW patient's historic rates (15%) while the frequencies of other genetic aberrations (ALK, ROS-1, and KRAS) were similar.
- Arrieta et al, (CLICAP) have shown that EGFR mutation frequencies have varying rates among Hispanics from LATAM countries (15% in Argentina, 20% in Brazil, 25% in Mexico, and 55% in Peru)
- This genomic disparity favors Hispanics who have a better chance of survival than NHW patients; maybe, this can help to explain the Hispanic Paradox?

Lynch JA et al. BMC Cancer 18:306, 2018

Raez LE et al. J Thorac Oncol 11:S176, 2016

Arrieta O et al. J Thorac Oncol 6:1955-1959, 2011



Disparities in Immunotherapy Outcomes

Durvalumab After Chemoradiation for Unresectable Stage III Non-Small Cell Lung Cancer: Inferior Outcomes and Lack of Health Equity in Hispanic Patients Treated With PACIFIC Protocol (LA1-CLICaP)

Luis E. Raez^{1†}, Oscar Arrieta^{2†}, Diego F. Chamorro^{3,4†}, Pamela Soberanis^{2†}, Luis Corrales⁵, Claudio Martín⁶, Mauricio Cuello⁷, Suraj Samtani⁸, Gonzalo Recondo⁹, Luis Mas¹⁰, Lucía Zatarain-Barrón², Alejandro Ruiz-Patiño^{3,4}, Juan Esteban García-Robledo¹¹, Camila Ordoñez^{3,4}, Elvira Jailer^{3,4}, Franco Dickson¹, Leonardo Rojas¹², Christian Rolfo¹³, Rafael Rosell¹⁴, Andrés F. Cardona^{3,4,15*} and on behalf of CLICaP

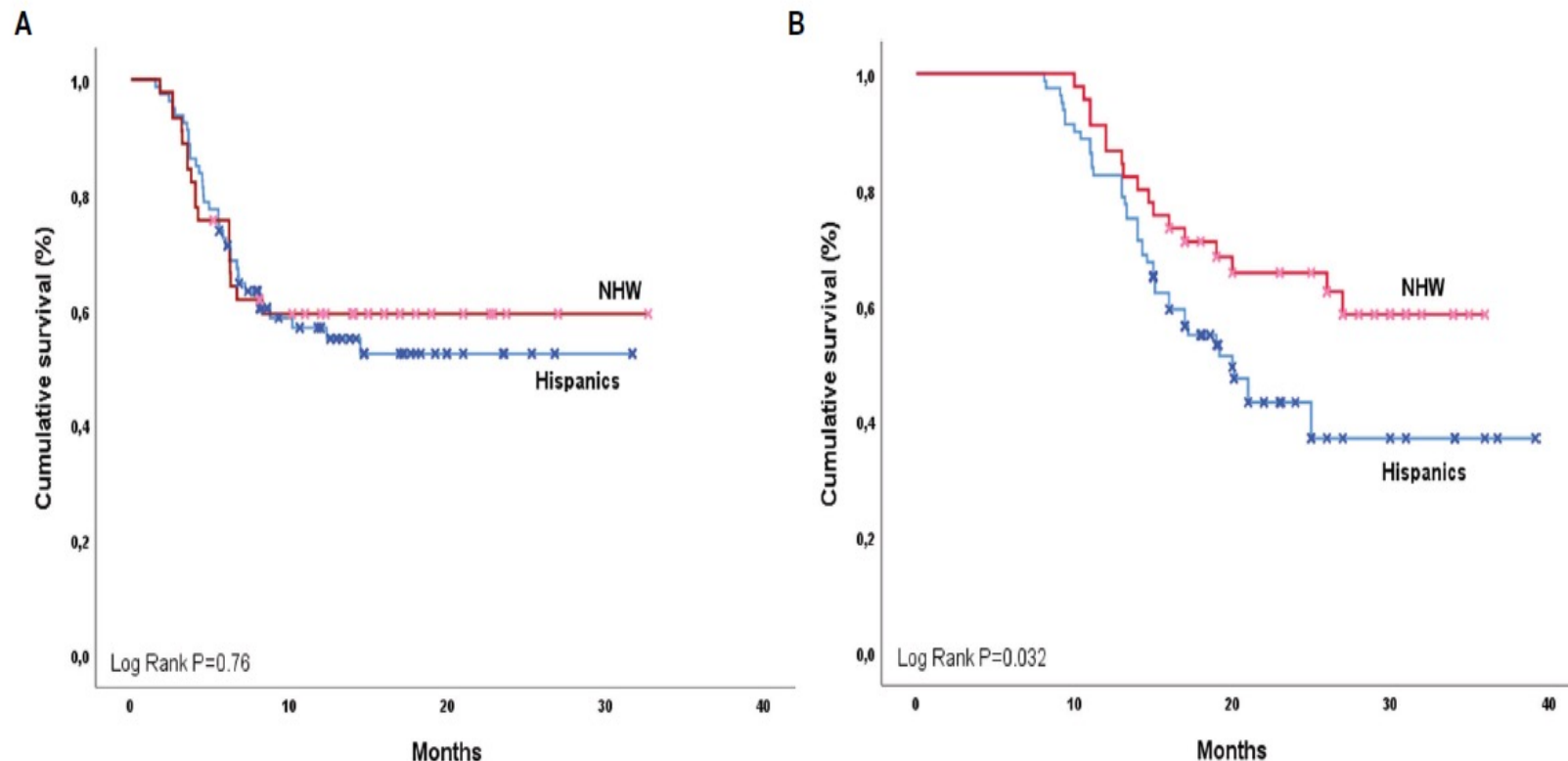


FIGURE 1 | Progression-free survival (A) and overall survival by ethnicity (Hispanic and NHW).



Immunotherapy

- Most of the IO registration trials were done in the US/Europe, and they did not include anybody or enrolled a minimal number of Hispanics.
- Raez et al; reported data from 256 Hispanics with NSCLC treated with IO as 2nd line in LATAM and US compared with 180 NHW controls, finding no difference in outcomes (PFS and OS).
- Cardona et al; included 296 Hispanic patients from the US and LATAM with NSCLC treated IO in 1st, 2nd or 3rd line; median OS was 19.9 months, compared with historical data from NHW patients; IO proved to be superior in terms of OS but not PFS.
- Despite the fact that biological speaking, the outcomes of Hispanics seem to be better or similar to NHW patients; other factors, mainly in Hispanics in LATAM, do not allow them to have these benefits because of lack of access, creating substantial disparities in outcomes.

Raez LE et al. J Clin Oncol 37, 2019 (suppl; abstr e18109)

Cardona AF et al. J Thorac Oncol 14:S984-S985, 2019



What are Social Determinants of Health (SDOH)?



Conditions of an individual's **living, learning, and working** environments that affect one's health risks and outcomes.



Recognized as **important predictors in clinical care** and positive conditions are associated with **improved patient outcomes and reduced costs.**

SOCIAL DETERMINANTS OF HEALTH



30%
Health
Behaviors

- Tobacco
- Sexual Activity
- Alcohol
- Diet/Exercise

40%
Social
Factors

- Education
- Family/Social Support
- Employment
- Community Safety
- Income

20%
Clinical
Care

- Medical & Clinical Interventions

10% Environment

- Air & Water Quality
- Housing & Transit

- Good medical care alone is not sufficient for ensuring better health outcomes
- SDoH are influenced by policies, systems & environments
- Healthcare systems must adopt a new culture that values SDoH
- Collaboration with community partners
- Listening and understanding the needs of the communities we support



Review Social Determinants

♥ Social Determinants of Health ↗

[Expand All](#) [Collapse All](#)



Social Connections ↗

Dec 13 2021: Socially Isolated



Tobacco Use ↗

Jan 12 2022: Medium Risk



Depression ↗

Jan 12 2022: At risk



Physical Activity ↗

Dec 13 2021: Insufficiently Active



Transportation Needs ↗

Dec 13 2021: No Transportation Needs



Caregiver Education and Work ↗

Not on file



Violence ↗

Not on file



Alcohol Use ↗

Dec 13 2021: Not At Risk



Financial Resource Strain ↗

Dec 13 2021: Low Risk



Stress ↗

Dec 13 2021: Stress Concern Present



Food Insecurity ↗

Dec 13 2021: No Food Insecurity



Housing Stability ↗

Dec 13 2021: Low Risk



Caregiver Health ↗

Not on file

[Find community resources](#)





1) Summary

Patients Screened for At Least 1 Domain
370,450

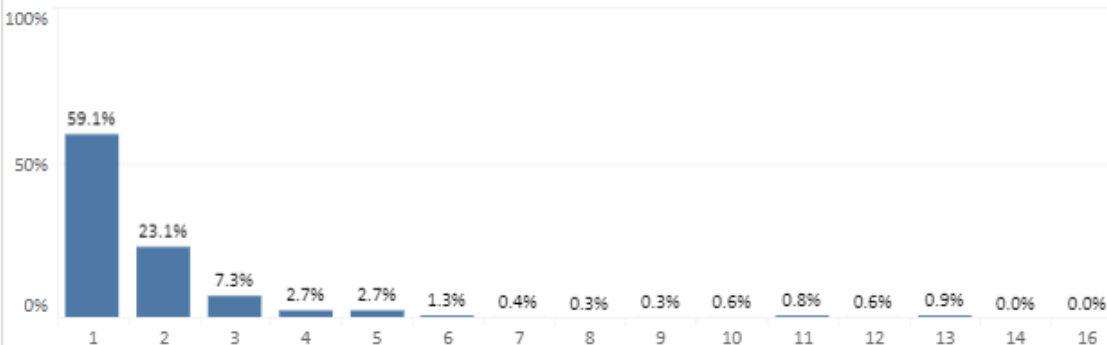
At Risk Patients
95,009

Patients with 4+ Domains at Risk
1,892

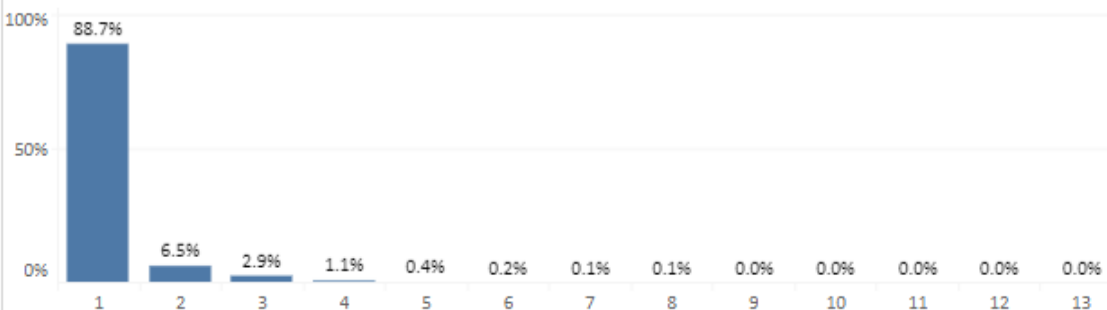
Avg Domains Screened per Patient
2.0

Avg Domains at Risk per Patient
1.2

2) Distribution of Patients by Number of Domains Screened



3) Distribution of Patients by Number of Domains at Risk



4) Percentage of Patients At Risk by Domain

Domain	At Risk (Count, %)	Total Screened (N)
Tobacco Use	At Risk = 79,416; 22.5%	N = 352,423
Depression	At Risk = 2,186; 1.9%	N = 115,304
Interpersonal Safety	At Risk = 980; 2.0%	N = 49,360
Transportation Needs	At Risk = 841; 2.2%	N = 37,731
Food Insecurity	At Risk = 1,860; 5.0%	N = 36,851
Postpartum Depression	At Risk = 5,739; 18.3%	N = 31,340
Financial Resource Strain	At Risk = 2,204; 8.7%	N = 25,367
Housing Stability	At Risk = 1,655; 7.8%	N = 21,164
Physical Activity	At Risk = 8,792; 67.9%	N = 12,940
Alcohol Use	At Risk = 470; 3.9%	N = 12,195
Stress	At Risk = 2,204; 18.1%	N = 12,186
Social Connections	At Risk = 5,984; 62.6%	N = 9,558
Caregiver Education & Work	At Risk = 1,440; 17.6%	N = 8,203
Caregiver Health	At Risk = 362; 4.6%	N = 7,867
Safety and Environment	At Risk = 10; 3.4%	N = 297
Adolescent Substance Abuse		N = 64
Adolescent Education & Socialization	At Risk = 52; 91.2%	N = 57
Child Education	At Risk = 22; 48.9%	N = 45

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CONNECTING PATIENTS WITH RESOURCES

- Consider connecting with FindHelp or UniteUs or another vendor that will connect you to community resources in your EHR – this is for the *Non-emergent needs*
- For alcohol, depression or social connections, consider a referral to social work or Outpatient Behavioral Health services
- SDOH Hub

With FindHelp.org, the “Find Community Resources” link will identify resources located near patients.

Social Determinants of Health

- Social Connections**
Aug 12, 2023: Moderately Isolated
- Tobacco Use**
Aug 11, 2023: Medium Risk
- Physical Activity**
Aug 12, 2023: Inactive
- Transportation Needs**
Aug 12, 2023: No Transportation Needs
- Interpersonal Safety**
Aug 11, 2023: Low Risk
- Alcohol Use**
Aug 12, 2023: Not At Risk
- Depression**
Jul 14, 2023: None or minimal depression
- Food Insecurity**
Aug 12, 2023: No Food Insecurity
- Housing Stability**
Jul 19, 2023: Low Risk
- Utilities**
Aug 12, 2023: Not At Risk

[Find community resources](#)

Community Resources

«Search by name» «Near City, State, ZIP, or Keyword»

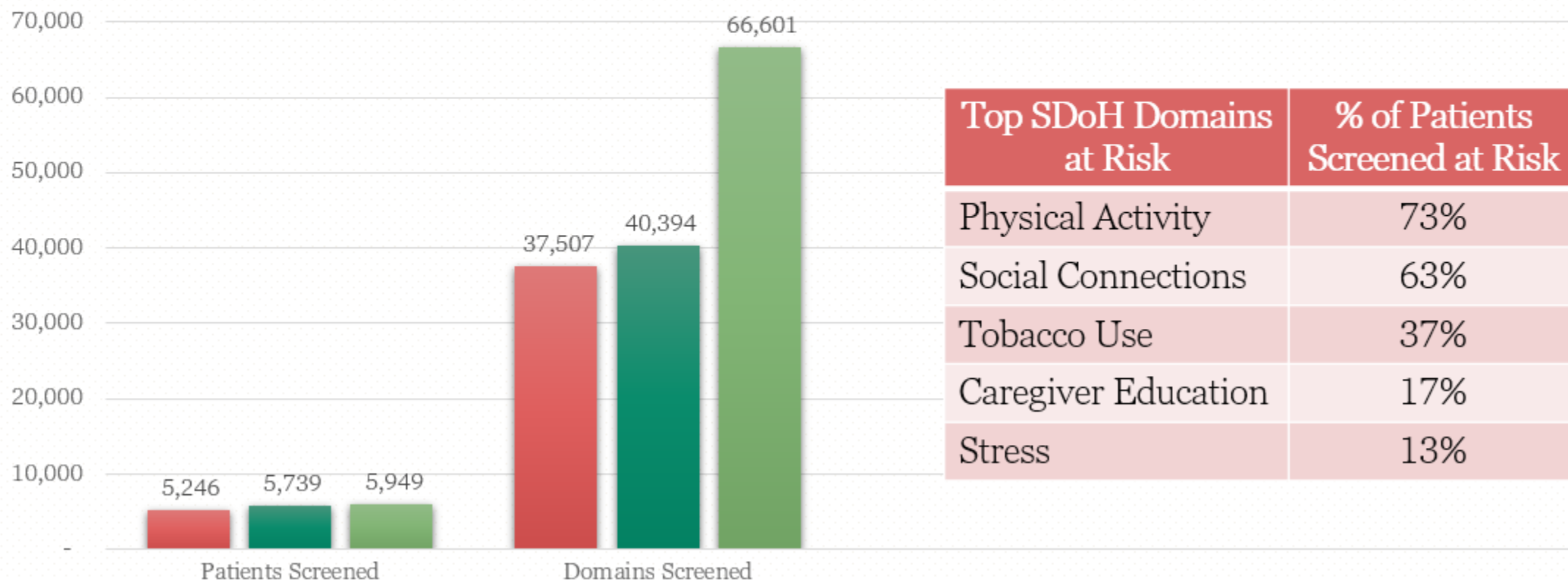
Filter by: Try entering more specific search criteria

Showing results. Filtered by: Provided Service. Most relevant matches on top

AS	All Souls Episcopal Church - Wednesday Outreach	Food Pantry, Free Meals, Clothing	14640 North Cleveland Avenue North Fort Myers FL 33903
SA	1st Studio Arts & Cultural Center, Inc. - Food Pantry	Food Pantry	2701 President Barack Obama Highway Riverside Beach FL 33404
AC	53rd Avenue Church of Christ - Food Pantry	Food Delivery, Food Pantry	3412 53rd Ave E Bradenton FL 34202
SB	60th Street Baptist Church - Food Pantry	Food Pantry	5909 60th Street Pinellas Park FL 33782
AG	A Grateful Mind International - Emergency Food Distribution and Pantry	Food Pantry, Emergency Food	2431 Aloma Avenue Suite 124 Winter Park FL 32792
AB	Abe Brown Ministries (ABM) - Food for Life Pantry	Food Pantry	2921 North 25th Street Tampa FL 33605
AL	Abundant Life Ministries - Bread of Life Food Pantry	Food Pantry, Clothing, Emergency Food	1550 South Belcher Road Largo FL 33771
AO	Act Of Hope Ministries, Inc. - Food Pantry	Food Pantry	1011 East Hazzard Avenue Suwanee FL 32726



MEMORIAL CANCER INSTITUTE PATIENTS SCREENED



* 2023 – through September

■ 2021 ■ 2022 ■ 2023

USING Z CODES:

The **Social Determinants of Health (SDOH)**

Data Journey to Better Outcomes

What are

Z

codes

SDOH-related Z codes ranging from Z55-Z65 are the ICD-10-CM encounter reason codes used to document SDOH data (e.g., housing, food insecurity, transportation, etc.).

SDOH are the conditions in the environments where people are born, live, learn, work, play, and age.



Step 1 Collect SDOH Data

Any member of a person's care team can collect SDOH data during any encounter.

- Includes providers, social workers, community health workers, case managers, patient navigators, and nurses.
- Can be collected at intake through health risk assessments, screening tools, person-provider interaction, and individual self-reporting.

Step 2 Document SDOH Data

Data are recorded in a person's paper or electronic health record (EHR).

- SDOH data may be documented in the problem or diagnosis list, patient or client history, or provider notes.
- Care teams may collect more detailed SDOH data than current Z codes allow. These data should be retained.
- Efforts are ongoing to close Z code gaps and standardize SDOH data.

Step 3 Map SDOH Data to Z Codes

Assistance is available from the ICD-10-CM Official Guidelines for Coding and Reporting.¹

- Coding, billing, and EHR systems help coders assign standardized codes (e.g., Z codes).
- Coders can assign SDOH Z codes based on self-reported data and/or information documented in an individual's health care record by any member of the care team.²

Step 4 Use SDOH Z Code Data

Data analysis can help improve quality, care coordination, and experience of care.

- Identify individuals' social risk factors and unmet needs.
- Inform health care and services, follow-up, and discharge planning.
- Trigger referrals to social services that meet individuals' needs.
- Track referrals between providers and social service organizations.

Step 5 Report SDOH Z Code Data Findings

SDOH data can be added to key reports for executive leadership and Boards of Directors to inform value-based care opportunities.

- Findings can be shared with social service organizations, providers, health plans, and consumer/patient advisory boards to identify unmet needs.
- A **Disparities Impact Statement** can be used to identify opportunities for advancing health equity.



Z Codes Utilization among Medicare Fee-for-Service (FFS) Beneficiaries in 2019

Among **33.1** million total Medicare FFS beneficiaries in 2019, approximately **1.59%** had claims with Z codes.

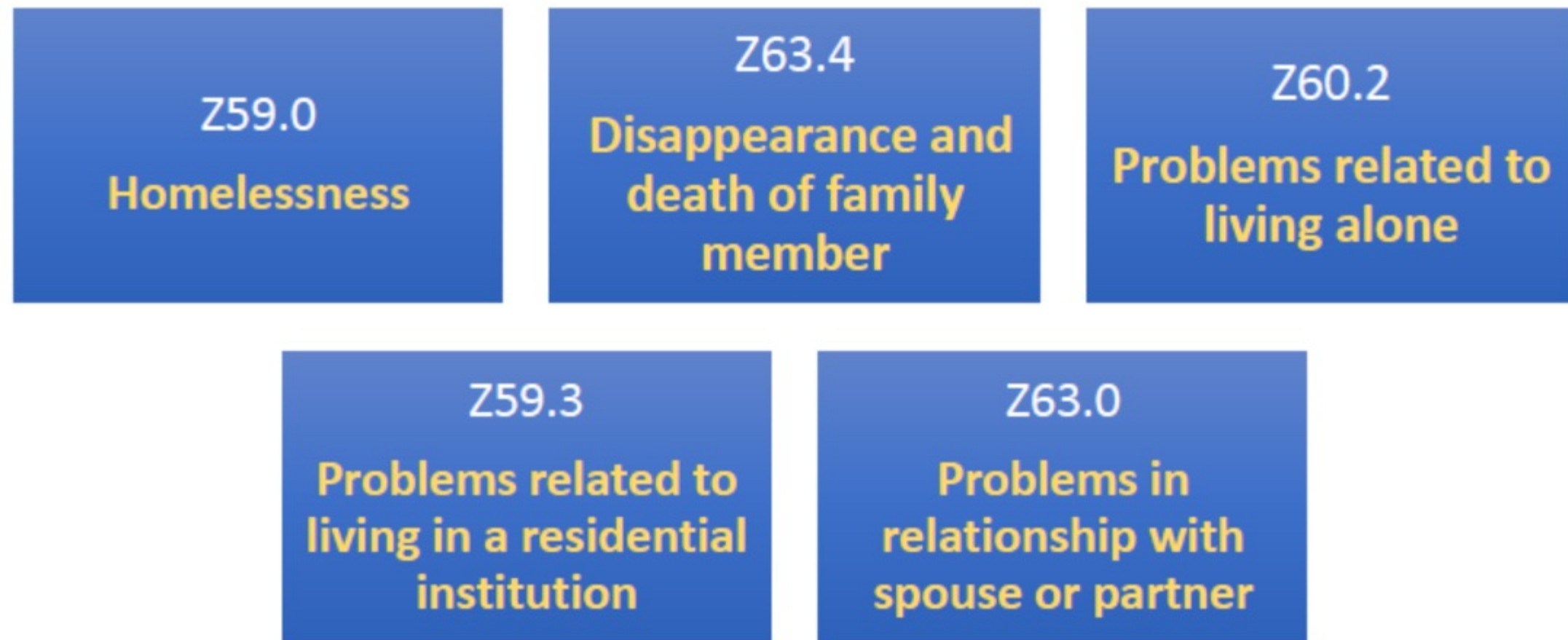
CMS Data Highlight

No. 24 September 2021

[Utilization of Z Codes for Social Determinants of Health among Medicare Fee-for-Service Beneficiaries, 2019](#)

Z Codes Utilization among Medicare Fee-for-Service (FFS) Beneficiaries in 2019

Most Utilized Z codes



SDOH and Quality Initiatives

ASCO/COA Oncology Medical Home





13th Annual **WCS**™ WINTERCANCER SYMPOSIUM
MARCH 1-3, 2024
WYNDHAM GRAND RIO MAR PUERTO RICO HOTEL | RIO GRANDE, PUERTO RICO

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