



Z Codes: Capturing Social Determinants of Health Data in Electronic Health Records

Janet Thorlton, PhD, MS, RN

Diane Iverson, BSN, RN

Objectives

- Describe the difference between ICD-10-CM/PCS procedure codes and diagnosis codes
- Locate and list 3 of the various categories of Z codes.
- Describe possible reasons for underutilization of Z codes for capturing social determinants of health (SDH) data.

Background

- World Health Organization authorized publication of the International Classification of Diseases (ICD-10)¹
 - implemented for mortality coding /classification of death certificates since 1999
 - Allows for comparison of US morbidity diagnosis data at the international level
 - In 2015, the Dept. of Health & Human Services mandated that all entities covered by HIPAA must transition to ICD-10-CM/PCS for electronic health record transactions ¹

Benefits of ICD-10-CM

This classification system provides data for ²:

- Monitoring resource use
- Tracking public health and risks
- Measuring quality, safety, & efficacy of care
- Conducting research, epidemiological studies, clinical trials
- Strategic planning
- Setting health policy

What's the Difference?

ICD-10-CM

(Clinical Modification)

- Developed for **medical diagnosis coding** for all US healthcare settings¹
- >69,000 diagnosis codes
- provides categories of codes reflecting patients' social characteristics and reason for encounter in the form of "Z-codes"

ICD-10-PCS

(Procedure Coding System)

- Developed for **hospital inpatient procedures**¹
- >71,000 procedure codes
- is a completely separate medical coding system from ICD-10-CM.

What is a Z-Code?

- A special group of codes provided in ICD-10-CM ³
 - Factors influencing health status and contact with health services: Z00 – Z99.
- Z-Codes represent reasons for encounters
- Underutilized resource for tracking social needs
- The mandate for ICD-10-CM adoption creates an attractive standardized approach for data aggregation, via coding and billing for SDH

What are Social Determinants of Health?⁵

- SDH represent the interrelationships among personal, social, economic, and environmental factors that influence patient health status ⁴
- SDH data can inform clinical decision making, creating strategies for improving population health, potentially reducing utilization of overcrowded emergency departments ⁴



Codes Z55-Z65:

Persons with potential health hazards related to socioeconomic and psychosocial circumstances

Z55 Problems related to education and literacy

Z56 Problems related to employment and unemployment

Z57 Occupational exposure to risk factors

Z59 Problems related to housing & socioeconomic circumstances

Z60 Problems related to social environment

Z62 Problems related to upbringing; parental issues

Z63 Other problems related to primary support group, including family circumstances

Z64 Problems related to certain psychosocial circumstances

Z65 Problems related to other psychosocial circumstances

See all the Z codes⁶ on your mobile device:

<http://www.icd10data.com/ICD10CM/Codes/Z00-Z99>



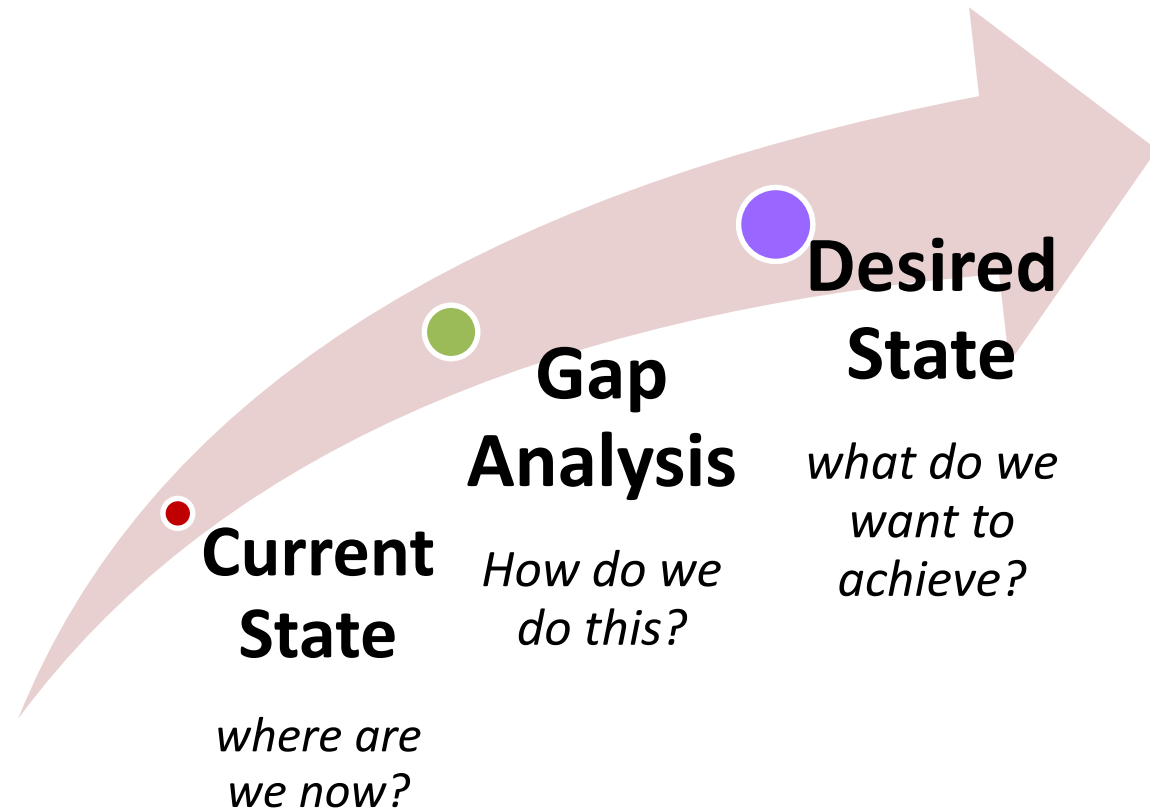
Methods

Experiences of a Nursing Case Manager from a Baltimore Emergency Dept., where high rates of homeless individuals turn for services, prompted the question:

What factors influence the inclusion and capture of social determinants of health data in electronic health records?

Methods

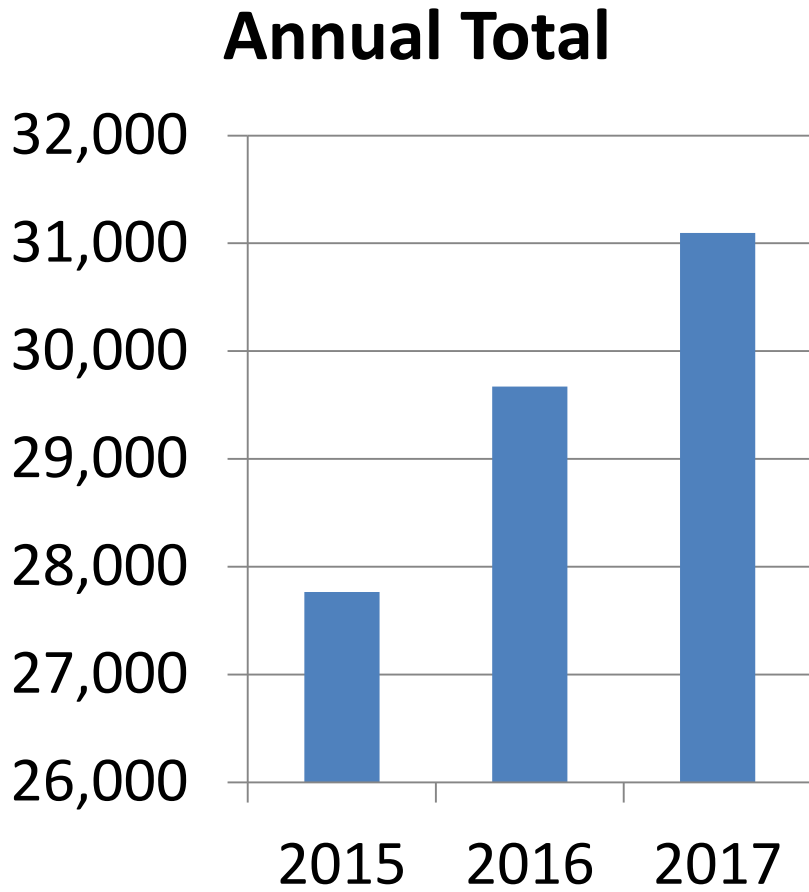
Using a basic process for gap analysis, we examined current and desired states, and took steps toward accomplishing the desired state:
capturing SDH data in the medical coding process.



Current State

- Healthy People 2020 selected SDH as an indicator to assess the nation's health and to motivate action on local, state, and national levels to improve population health⁵.
- Though designated as a high priority indicator, over 30% of SDH objectives have gotten worse or haven't changed since 2010, indicating more progress is needed⁵.

2017 Homeless Data: Maryland



- ✓ 2,165 homeless Veterans
- ✓ 1,370 children <18
- ✓ 422 youth ages 18-24
- ✓ 11% flee domestic violence
- ✓ 5,511 are sheltered
- ✓ 1,736 not sheltered
- ✓ Deaths of homeless have more than doubled since 2007

Costs of Homelessness



- Nearly one-third of all visits to the emergency room are made by people struggling with chronic homelessness¹¹⁻¹²
- On average, they visit the emergency room 5 times/yr
 - The highest users visit weekly ¹¹
- Some studies have found that leaving a person to remain chronically homeless costs taxpayers as much as \$30,000 to \$50,000 per year ¹²
- 80% of emergency room visits made by people struggling with homelessness are for an illness that could have been treated with preventative care ¹¹

Current State

- ✓ When documenting in the EHR, physicians and nurses share patient information; however, they describe that information differently⁸⁻⁹
 - Physician entries emphasize diagnosis, treatment, and management
 - Nursing entries emphasize functional issues
- ✓ Even when SDH are documented in ancillary notes, this information may not necessarily be captured by medical coders or software programs, for various reasons, including software limitations⁸⁻⁹.

Current State

- ✓ Medical coders may be incentivized to meet quotas
 - A focus on medical diagnoses and other criteria may result in lack of coding SDH data⁸⁻⁹
 - Coding of functional issues may have little perceived value⁸⁻⁹
 - MD / mid-level provider entries are captured in the coding process, however, software programs may need to be updated to capture and assign Z-codes to SDH information located in ancillary notes⁸⁻⁹

Desired State

- ✓ use non-physician, ancillary entries for assigning Z codes to SDH information
- ✓ ensure that electronic health record software updates capture this information
- ✓ Capture SDH data to inform policy, develop programs to improve population health

Steps for Reaching the Desired State

- The **AHA Coding Clinic** is the official resource and authority for ICD-10-CM/PCS coding rules and conventions ¹⁰
- All questions submitted are processed free of charge, but registration is required¹⁰
 - The AHA Central Office is a Clearinghouse Service established with the Dept. of HHS to provide free assistance
 - Does not replace learning how to code; not a hotline service
- <https://www.codingclinicadvisor.com/>

Get the advice you need for your ICD-10-CM, ICD-10-PCS and HCPCS medical coding questions.

Learn More



Submit a Question
to our staff for review

Submit Question



Check the Status
of an existing submission

Check Status

Steps for Reaching the Desired State

- Categories Z55-Z65 contain codes pertaining to: *Persons with potential health hazards related to socioeconomic and psychosocial circumstances*
- This important information is typically only found in nurses or social worker documentation.

The Nurse Case Manager posed this question to the
AHA Coding Clinic Advisory Board:

*Is it appropriate to use non-physician
documentation to assign codes that provide
information on social determinants of health?*

Gap Analysis Results

The AHA Advisory Board responded...

- The ruling now states that for ICD-10-CM categories Z55-Z65, persons with potential health hazards related to socioeconomic and psychosocial circumstances, represent social information, rather than medical diagnoses.
- As such, it is acceptable to report Z codes based on information documented by other clinicians involved in the care of the patient.

Implications for Practice & Conclusion

- SDH correlate with health outcomes & risks
 - Data can inform decision making
 - potential for treating with preventive care
- Z-coded data captured from nurse and social worker notes, will contribute data for epidemiological research
 - More precise identification, tracking of SDH
- Policy implications
 - Potential for more low-barrier shelter options; reduced ER visits?

MAP-IT: Guide to Using Healthy People 2020 in Your Community¹³

Are you working to achieve Healthy People 2020 objectives?

Healthy People 2020 is looking for real stories from organizations implementing programs to improve our Nation's health. [Share your story!](#)

- **Healthy People is based on a simple but powerful model:**
 - Establish national health objectives.
 - Provide data & tools to enable states, cities, communities, and individuals across the Nation to combine their efforts to achieve them.
- **Use the MAP-IT framework to help**

Mobilize

Assess

Plan

Implement

Track

Questions?

Janet Thorlton

thorlton@uic.edu

Diane Iverson

d.iverson1@gmail.com

References

1. Centers for Disease Control & Prevention (2015). *International Classification of Diseases, (ICD-10-CM/PCS) transition – background*. Retrieved from: https://www.cdc.gov/nchs/icd/icd10cm_pcs_background.htm
2. Dept. of Health & Human Services. Medicare Learning Network[®] (2017). *Diagnosis Coding: Using the ICD-10-CM*. Retrieved from https://www.cms.gov/outreach-and-education/medicare-learning-network-mln/mlnedwebguide/downloads/icd-10wbt_textonly_508.pdf.
3. ICD10Data.com (2018). *Factors influencing health status and contact with health services Z00-Z99*. Retrieved from: <https://www.icd10data.com/ICD10CM/Codes/Z00-Z99>
4. Lexis Nexis Risk Solutions (2017). *White paper: Social determinants of health fuel deeper understanding of health risks and ability to proactively impact health outcomes*.
5. U.S. Dept. of Health & Human Services. Office of Disease Prevention and Health Promotion. *Healthy People 2020: Social determinants of health*. Image from: <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources>
6. ICD-10-CM Codes (2018). *Factors influencing health status and contact with health services Z00-Z99*. Retrieved from: <http://www.icd10data.com/ICD10CM/Codes/Z00-Z99>
7. Maryland Interagency Council on Homelessness (2017, Nov. 7). *2017 Annual report on homelessness*. Retrieved from: dhcd.maryland.gov/HomelessServices/Documents/2017AnnualReport.pdf

References (cont'd)

8. Goar, E.S. (2017, May). Don't sleep on Z codes: Is the industry taking advantage of this group of codes as a tool to collect social determinant data? *For the Record*, 29(5):14-17. Retrieved from <http://www.fortherecordmag.com/archives/0517p14.shtml>.
9. Gottlieb, L., Tobey, R., Cantor, J., Hessler, & Adler, N.E. (2016). Integrating social and medical data to improve population health: Opportunities and barriers. *Health Affairs*, 35(11), 2116-2123. doi: 10.1377/hlthaff.2016.0723.
10. American Hospital Association (2018). AHA Coding Clinic © Advisor. Available at: <https://www.codingclinicadvisor.com/>
11. Green Doors (2008). *The cost of homelessness facts*. Retrieved from: <http://greendoors.org/facts/cost.php>
12. US Interagency Council on Homelessness. *Ending chronic homelessness in 2017*. https://www.usich.gov/resources/uploads/asset_library/Ending_Chronic_Homelessness_in_2017.pdf
13. U.S. Dept. of Health & Human Services. Office of Disease Prevention and Health Promotion. *Healthy People 2020: Program Planning*. Available at: <https://www.healthypeople.gov/2020/tools-and-resources/Program-Planning>