Capturing Social Determinants of Health Data in Electronic Health Records

INLS 770
Spring 2018

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Overview

Interest based on:

- Combination of clinical and public health
- Includes themes from 2018 Spring semester: community health, health disparities, collecting data to improve health care, patient portals

Will cover:

- Meaning of social determinants of health (SDOHs)
- Benefits and risks
- Data domains collected
- Implementation pathways

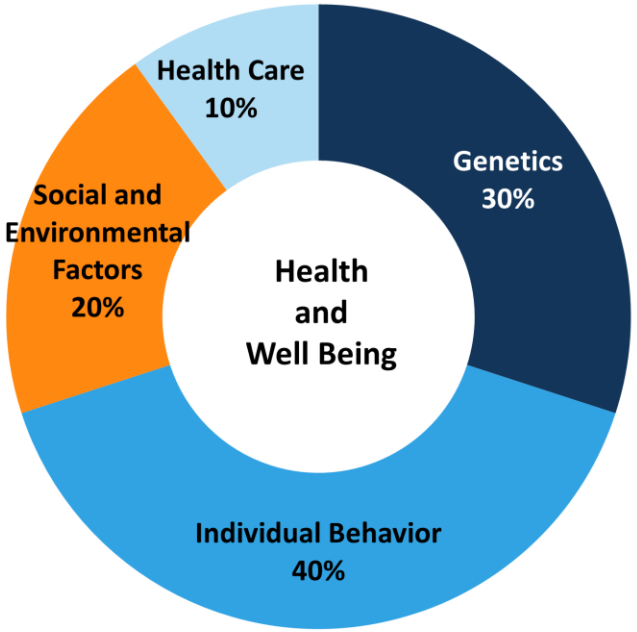
Social determinants of health are environmental conditions that affect health.

(Healthypeople.gov)

There is growing research suggesting SDOHs affect disease progression and mortality as much or more than traditional health care.

Figure 1

Impact of Different Factors on Risk of Premature Death



SOURCE: Schroeder, SA. (2007). We Can Do Better — Improving the Health of the American People. *NEJM*. 357:1221-8.

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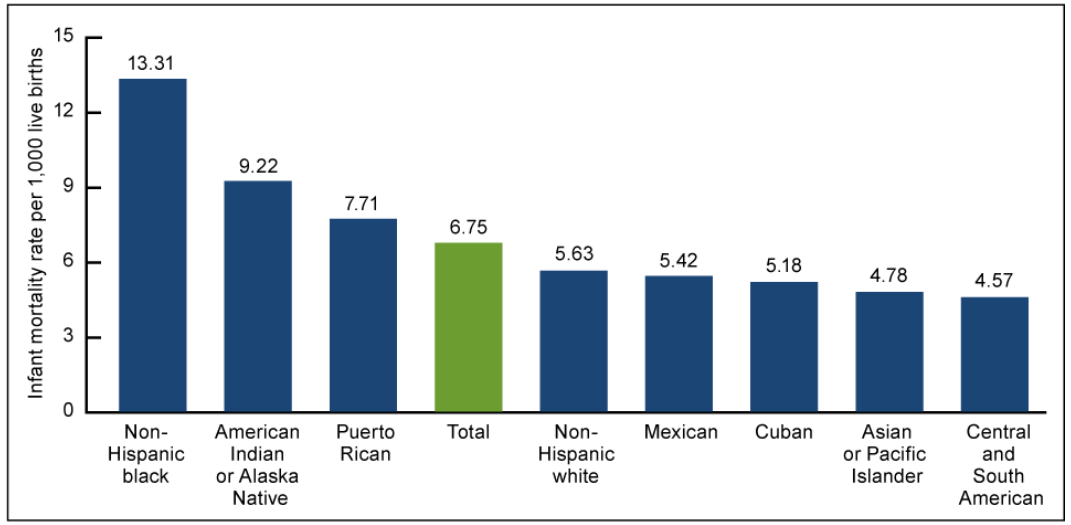
SDOHs contribute to U.S. health disparities.

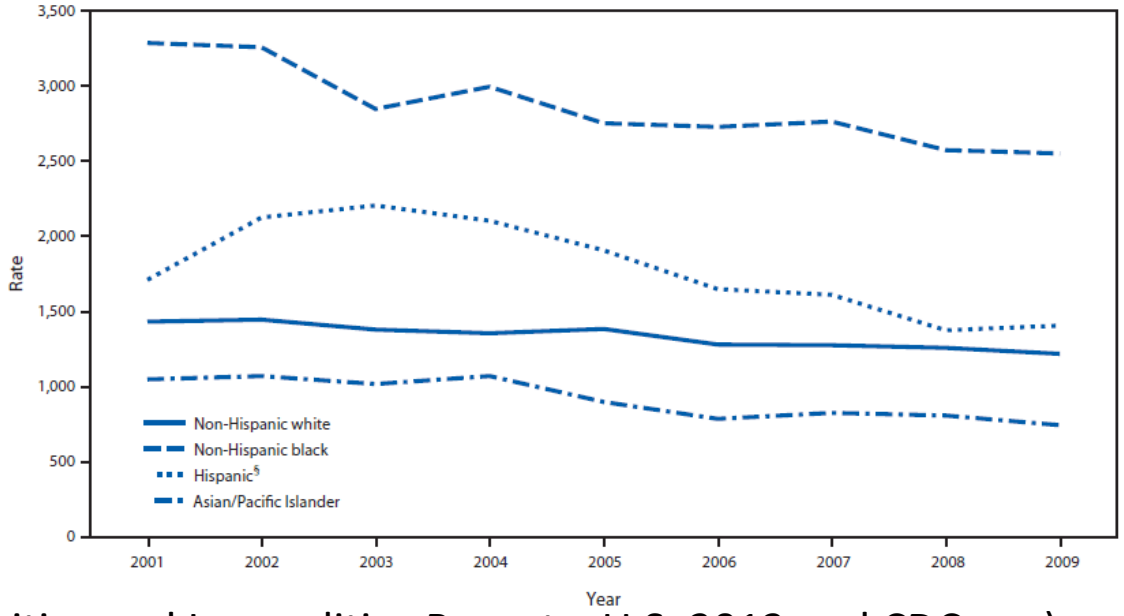
Infant mortality rate: 2X higher for non-Hispanic black women than for non-Hispanic white women in 2005 and 2008.

Figure 1. Infant mortality rates, by race and Hispanic origin of mother: United States, 2007



SOURCE: CDC/NCHS, linked birth/infant death data set, 2007.

Preventable hospitalization rates: higher for non-Hispanic blacks and Hispanics compared with non-Hispanic whites during 2001-2009.



(CDC Health Disparities and Inequalities Report—U.S. 2013 and CDC.gov)

Government funding to capture SDOHs is available.

- In 2016, the Innovation Center at the Centers for Medicare and Medicaid Services (CMS) announced the creation of the Accountable Health Communities Model, which focuses on the social determinants of health.
- It offers $157 million for organizations to test whether screening beneficiaries for SDOHs and offering appropriate referrals will improve quality and affordability in Medicare and Medicaid

There are many possible benefits.

- Identify risk factors for diseases
- Could reduce known diagnosis biases
- Improve shared decision making
- Better referrals, and cross-physician knowledge
- More patient information could help health systems tailor to their population
- Improve population data research

But there are also risks.

- **Lack of resources to help with identified issues**
- Could introduce biases
- Use of information by insurers to screen out high risk patients
- Adding more sensitive data increases risk with PHI
- Ethical issues

In 2014 the Institute of Medicine(IOM) recommended specific SDOH data be documented in electronic health records.

Based on:

- Evidence of their health impacts
- Potential clinical usefulness
- Actionability
- Availability of valid measures

Routinely captured in EHRs	Not routinely captured in EHRs
• Race/ethnicity • Depression • Nicotine use/exposure • Alcohol use	• Education • Financial strain • Stress • Physical activity • Social connections/social isolation • Exposure to violence • Neighborhood characteristics

(Gold et al, 2017)

Seven implementations in Primary Care were studied and they each included different data.

Table 3. IOM-Recommended Patient-Reported SDH Domains

Domain	IOM	HealthBegins	UNM—WellRx	Mosaic	Kaiser	NACHC—PRAPARE	OCHIN
Alcohol use	X		X				X[a]
Depression	X						X[a]
Education	X	X	X			X	X
Financial resource strain	X	X		X	X	X	X
Intimate partner violence	X	X	X			X	X
Physical activity	X	X					X
Race or ethnic group	X					X	X[a]
Residential address	X					X	X
Social connection and isolation	X	X		X	X	X	X
Stress	X	X			X	X	X
Tobacco use	X						X[a]

Abbreviations: IOM, Institute of Medicine; NACHC, National Association of Community Health Centers; PRAPARE, Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences; SDH, social determinants of health; UNM, University of New Mexico.

[a]Already collected in standard workflows.

(LaForge et al, 2018)

Other data domains varied.

Table 4. SDH Domains Used by Participants for Standardized SDH Screening in Addition to Those Recommended by the IOM

Domain	IOM	HealthBegins	UNM—WellRx	Mosaic	CMI—Kaiser	NACHC—PRAPARE	OCHIN
Activities of daily living				X	X		
Childcare			X		X	X	X
Civic engagement		X					
Clothing				X		X	X
Dental				X	X		
Dietary pattern		X					
Disability status				X			
Drug use			X				
Employment		X	X	X	X	X	
Food insecurity		X	X	X	X	X	X
Health literacy				X			X
Hearing				X			
Housing		X	X	X	X	X	X
Incarceration history						X	
Income						X	
Language preference						X	
Legal/public benefit needs				X	X		
Literacy/learning style				X			X
Marital status		X					X
Medical needs (including health insurance)				X	X	X	X
Safety		X	X		X	X	
Seasonal/farmworker status						X	
Transportation		X	X	X	X	X	X
Utilities			X	X	X	X	X
Veteran status						X	
Vision				X	X		

Abbreviations: CMI, Care Management Institute; IOM, Institute of Medicine; NACHC, National Association of Community Health Centers; PRAPARE, Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences; SDH, social determinants of health; UNM, University of New Mexico.

(LaForge et al, 2018)

Capturing these fields has been done in different ways.

Methods	Considerations
• Static PDF • Paper forms • EHR flowsheets • Patient portal surveys • Use of tablets for patient entry	• Time required to enter data • Double entry of information • Workflow problems

Social Determinants of Health data collection in the future

- More implementations
- More research on data collection and effectiveness

Thank you! Questions?

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