



Mid-America (HHS Region 7)

MHTTC

Mental Health Technology Transfer Center Network

Funded by Substance Abuse and Mental Health Services Administration

Adherence as a Social Determinant of Health

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Mid-America MHTTC



MUNROE-MEYER
INSTITUTE

SAMHSA

Substance Abuse and Mental Health
Services Administration

What is adherence?

"the extent to which a patient's behavior corresponds with the prescribed medication dosing regime"

Health Outcomes

Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

Economic Stability

- Employment
- Food Insecurity
- Housing Instability
- Poverty

Education Access and Quality

- Early Childhood Education and Development
- Enrollment in Higher Education
- High School Graduation
- Language and Literacy

Social and Community Context

- Civic Participation
- Discrimination
- Incarceration
- Social Cohesion

Health Care Access and Quality

- Access to Health Care
- Access to Primary Care
- Health Literacy

Neighborhood and Built Environment

- Access to Foods that Support Healthy Eating Patterns
- Crime and Violence
- Environmental Conditions
- Quality of Housing

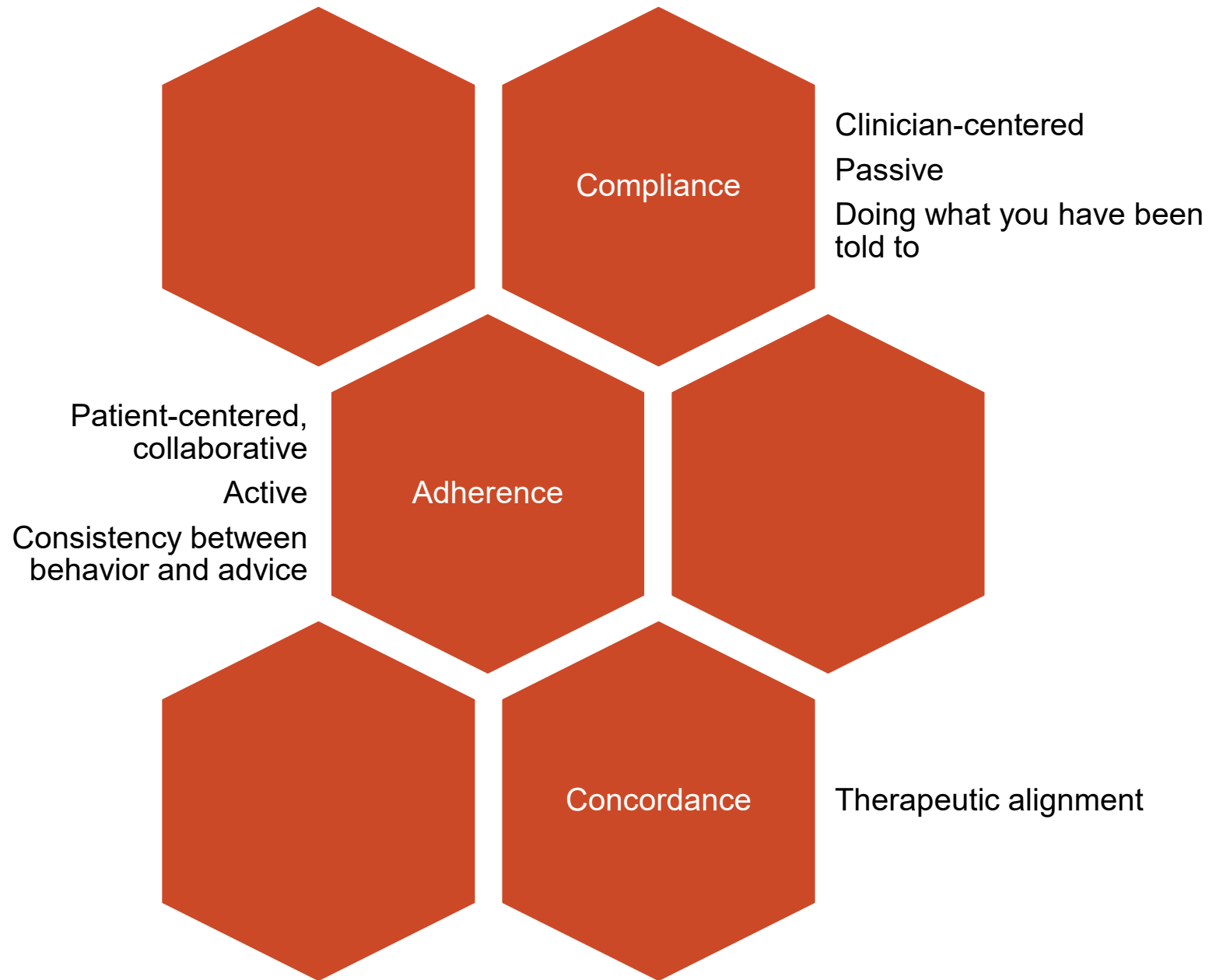
Adherence is...

According

to the

WHO

"the extent to which a person's behaviour – taking medication, following a diet, and/or executing lifestyle changes – corresponds with agreed recommendations from a health care provider."

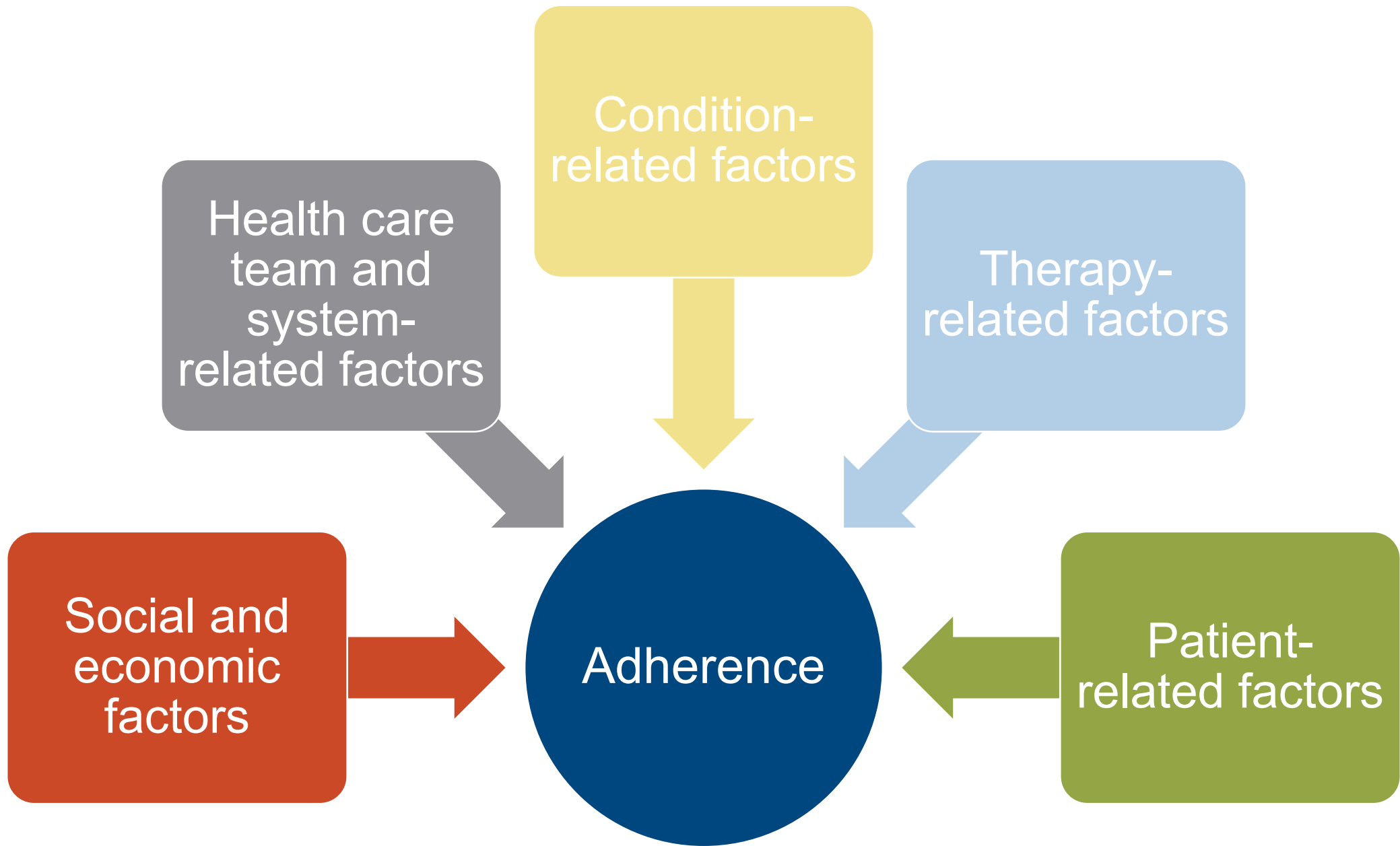


Nonadherence

20-30% of prescriptions are never filled

Patients do not continue treatment as prescribed
50% of the time

ADHD: half to two thirds of youth discontinue
treatment within one year



WHO, 2003

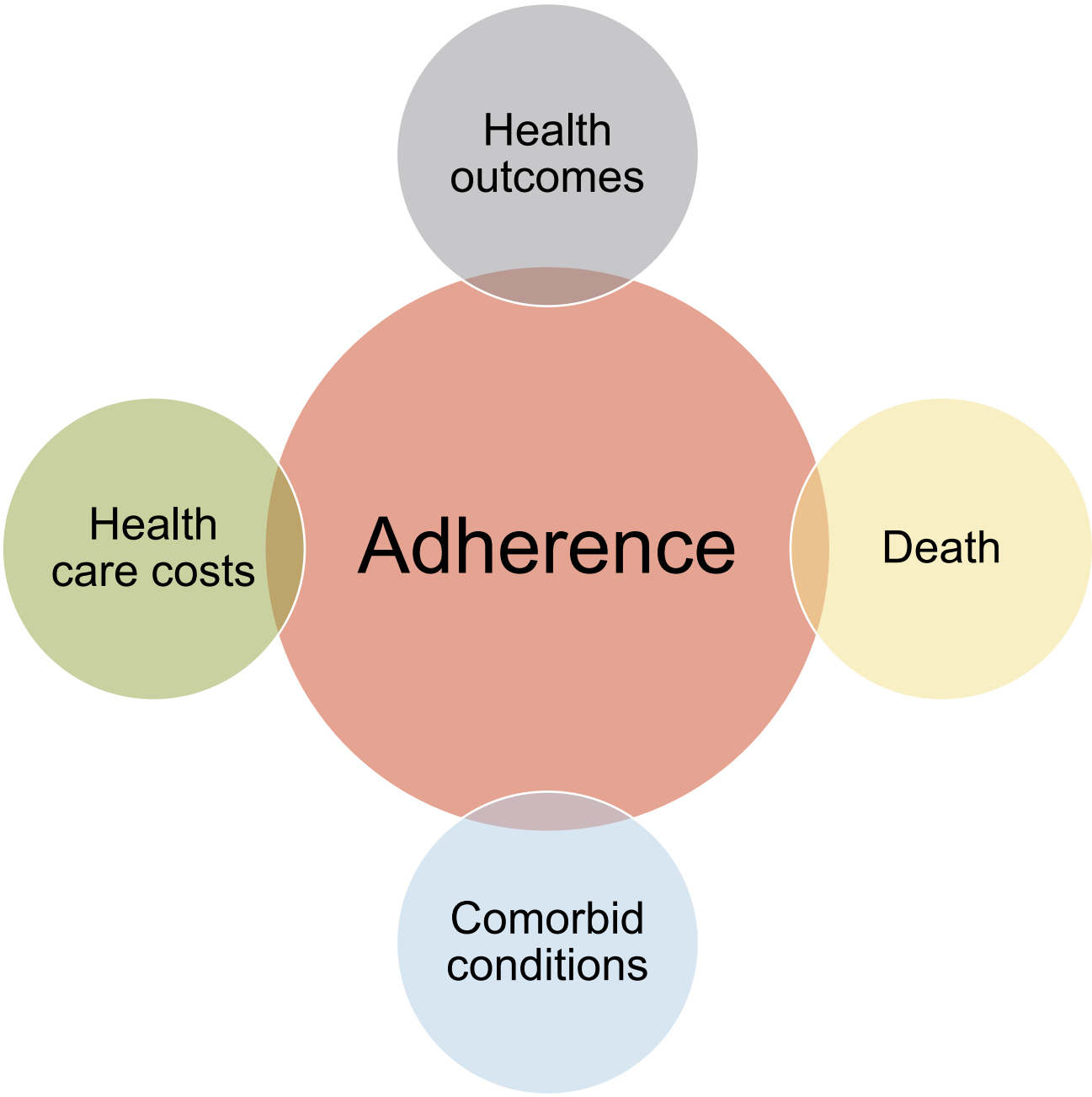
Factor	Examples
Socioeconomic	Poverty, illiteracy, unemployment, lack of social support networks, unstable living conditions, greater distance from treatment centers, higher out-of-pocket cost of medications and care, lack of transportation, cultural beliefs reflecting mistrust in the health care system, family dysfunction, patient demographic characteristics, levels of education, and literacy.
Health care system	Lack of patient engagement skills of health care professionals, little focus on team-based care, and lack of adherence monitoring.
Medical condition	Multiple health conditions, depression, and the simultaneous use of multiple drugs to treat a single ailment or condition (polypharmacy).
Therapy-related	Side effects, complexity of the medical regimen, long duration of regimen, and frequent changes to regime.
Patient-related	Visual, hearing, cognitive, mobility, and swallowing impairments; difficulty filling prescriptions (due to few resources or literacy); lack of knowledge or understanding about the disease or need for the prescribed medication; expectations about and perceived benefits of treatment; ability and motivation to follow a medical regimen; frustration; anxiety; and substance or alcohol abuse.

WHO, 2003

Factor	Examples
Socioeconomic	Cost, lack of/insufficient insurance Lack of social support Access to care and resources Cultural beliefs, stigma, secrecy Education, English literacy Too busy, other priorities
Health care system	Poor provider communication
Medical condition	Comorbidities (depression)
Therapy-related	Changes in routine (related or unrelated) Complicated, variable, or time-intensive regimen
Patient-related	Distrust provider Beliefs about this medication or treatment – side effects Beliefs about symptoms – felt better, not a problem for the patient Alcohol or substance misuse Forgot Reduced motivation due to mental health issues



Maslow's hierarchy of needs



When resources are abundant...



When resources are not abundant...

Limited access to high
quality health care

Barriers to
adherence



Poor health

Worsening
health



Barrier to Adherence	Reason for non-adherence	Physician/health system hurdles
Health literacy	Health care systems dimension	Inadequate transmittal of information about condition and medication
Lack of medication knowledge		Inadequate transmittal of information about medication
Poor communication on doctor's part		Not applying effective communication strategies
Do not trust doctor	Patient-related dimension	Leaving patients with a lack of trust in the doctor
Concern about adverse effects, avoid side effects		Inadequate transmittal of information about medication
Belief about medication		Inadequate attention to aligning treatment with patient's beliefs
View on symptoms—felt good so did not take medication		Not adequately educating patients about need for treatment of asymptomatic disease
Alcohol/substance misuse		Inadequate effort to address patient's substance abuse
Forgot		Inadequate reminder systems put in place
Depression leading to reduced motivation		Inadequate effort to address depression
Cost and lack of insurance coverage	Social and economic dimension	Prescribing unaffordable medications
Lack of caregiver		Inadequate attention to patient's support
Secrecy/stigma		Inadequate attention to patient's beliefs about their condition
Access to health care and resources		Inadequate provision of service at patient's location
Cultural beliefs		Inadequate attention to aligning treatment with patient's cultural beliefs
Busy, competing priorities		Failure to consider patient's schedule when prescribing medication
Education level		Inadequate transmittal of information about condition and medication
Change to routine	Therapy-related dimension	Failure to consider patient's schedule when prescribing medication
Pill burden, drug regimen too much		Failure to simplify amount of medications and/or dosing frequency

WHO's take home messages about adherence (2003)

Nonadherence is

- Worldwide problem
- Influenced by several factors

Adherence is

- Important modifier of health system effectiveness
- Dynamic process that needs to be followed up
- Enhances patients' safety

Nonadherence leads to

- Poor health outcomes
- Increased health care costs
- Impact grows as the burden of chronic disease grows

To address nonadherence,

- Effective adherence interventions
- Evolving health systems
- Support, not blame, patients
- Patient-tailored interventions
- Train health professionals
- Involve family, community, and patients' organizations

Assessment & Intervention



AAFP's Framework to Address SDOH

ASK

- About SDOH

IDENTIFY

- Resources in patients' communities that can help address SDOH

ACT

- To help connect patients with resources to address patients' SDOH

WHO, 2003

Think
about other
SDOH
webinars

Factor	Examples
Socioeconomic	Poverty, illiteracy, lack of social support networks, unstable living conditions, greater distance to health care centers, higher out-of-pocket cost of medications and care, lack of transportation, patient demographics, reflecting mistrust in the health care system, family dysfunction, levels of education, and literacy.
Health care system	Lack of patient and health care professionals, little focus on team-based care, and lack of adherence.
Medical condition	Multiple health conditions, depression, and the simultaneous use of multiple drugs to treat a single ailment or condition (polypharmacy).
Therapy-related	Side effects, complexity of the medical regimen, long duration of regimen, and frequent changes.
Patient-related	Age, hearing, cognitive, mobility, and swallowing impairments; difficulty filling prescriptions (due to cost or literacy); lack of knowledge or understanding about the disease or need for medication; expectations about and perceived benefits of treatment; ability and willingness to follow a medical regimen; frustration; anxiety; and substance or alcohol abuse.

How do
we identify
these
among our
patients?

What we
usually
think about



Screening

Depression
screening

Chart review
& historical
adherence



Assessing adherence

- Direct/objective measures
- Indirect measures
 - Subjective – verbal self-report, questionnaires
 - Objective

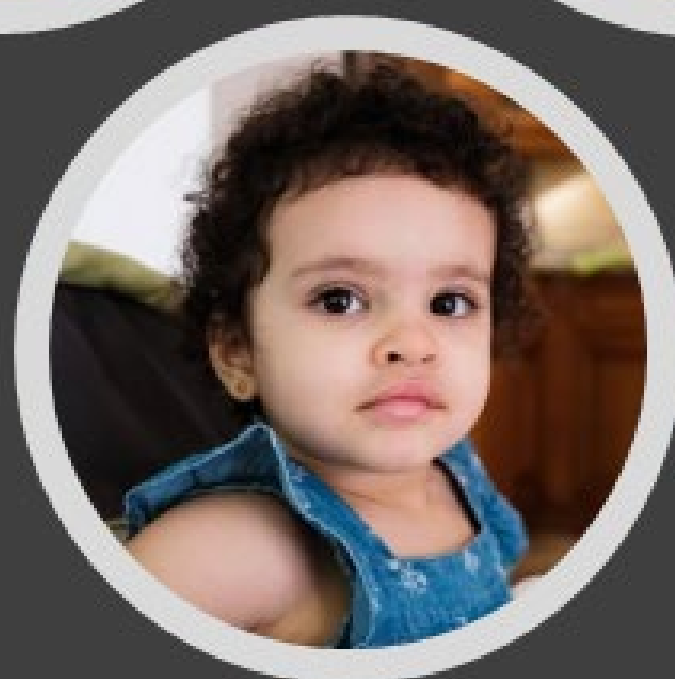
Z-Codes

Z55	Problems related to education and literacy	Z71	Persons encountering health services for other counseling and medical advice, not elsewhere classified
	.0 Illiteracy and low-level literacy		.2 Person consulting for explanation of examination or test findings
Z56	Problems related to employment and unemployment		.3 Dietary counseling and surveillance
	.0 Unemployment, unspecified		.4 Alcohol abuse counseling and surveillance
Z59	Problems related to housing and economic circumstance		.5 Drug abuse counseling and surveillance
	.0 Homelessness		.6 Tobacco abuse counseling
	.1 Inadequate housing	Z91	Personal risk factors, not elsewhere classified
	.4 Lack of adequate food and safe drinking water		.1 Patient's noncompliance with medical treatment and regimen
	.5 Extreme poverty		.11 Patient's noncompliance with dietary regime
	.6 Low income		.12 Patient's intentional underdosing of medication regimen
	.7 Insufficient social insurance and welfare support		.120 ... due to financial hardship
Z62	Problems related to upbringing		.128 ... for other reason
	.0 Inadequate parental supervision and control		.13 Patient's unintentional underdosing of medication regimen
Z63	Other problems related to primary support group, including family circumstances		.130 ... due to age-related disability
	.6 Dependent relative needing care at home		.138 ... for other reason
	.7 Other stressful life events affecting family and household		.14 Patient's other noncompliance with medication regimen
	.72 Alcoholism and drug addiction in family		.19 Patient's noncompliance with other medical treatment and regimen



Case Study

- Mother – Claudia
- Father – Patrick
- Grandmother – Ivonne
- Daughter – Tyler (age 16)
- Son – Elliot (age 13)
- Daughter – Edith (age 2)





Risk factors for poor adherence

Socioeconomic
factors

Health care
system factors

Medical
condition
factors

Therapy-
related factors

Patient-related
factors

Risk factors for poor adherence

Socioeconomic factors

Low literacy and health literacy (grandma)

Lack of transportation (have a van; only 2 adults can use it)

Mistrust of health care system (father)

Ethnic minority status (Latinos)

Disability (grandma-disability due to a stroke)

Income (2 employed adults and 4 unemployed household members)

Insurance (grandma is not covered)

Age (young children and aging grandma)



Risk factors for poor adherence

Health
care
system
factors

Therapy-
related
factors

Risk factors for poor adherence

Medical
condition
factors

Chronic,
congenital
condition (son)

Patient-related factors

Alcohol or
substance misuse
(possible for dad,
history of DUI)

Mental health
issues (mom-
anxiety, daughter-
depression)

Increasing adherence

Measure and monitor adherence

- Electronic monitoring rather than retrospective verbal report

Team-based engagement

- Reduce fragmentation & silos
- Patient portals for e-visits, clinical reminders, and medication education

Reduce health disparities




Interventions

- Use the teach-back method
- Ensure patients who speak languages other than English have access to appropriate services
 - Access to interpreters and translators
- Connect patients and families with social work and community organizations


Find **food assistance**, **help paying bills**, and other free or reduced cost programs, including new programs for the COVID-19 pandemic:

ZIP

 Search

6,924,399 people use it (and growing daily)


By continuing, you agree to the [Terms](#) & [Privacy](#)

findhelp.org is a service provided by  auntbertha

How to use Aunt Bertha

Find **food assistance**, **help paying bills**, and other free or reduced cost programs, including new programs for the COVID-19 pandemic:


ZIP

 Search

6,924,399 people use it (and growing daily)

Enter your zip code

By continuing, you agree to the [Terms](#) & [Privacy](#)

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Find **food assistance, help paying bills**, and other reduced cost programs, including new programs for the COVID-19 pandemic:


ZIP

67401

Search

6,924,399 people use it (and growing daily)

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Choose the category of assistance
I chose Food

Find food assistance, help paying bills, and other free or reduced cost programs in Salina, KS 67401 , including new programs for the COVID-19 pandemic:

ZIP or keyword or program name

Select Language

 Food

 Housing

 Goods

 Transit

 Health

 Money

 Care

 Education

 Work

 Legal

Find food assistance, help paying bills, and other free or reduced cost programs in Salina, KS 67401 , including new programs for the COVID-19 pandemic:

istance, help paying bills, and other free or reduced cost programs in Salina, KS 67401 , including new programs for the COVID-19 pandemic:

ZIP or keyword or program name

om name

Select Language

< 🍏 **Food**

- Emergency Food (6)
- Food Delivery (11)
- Food Pantry (1)
- Help Pay For Food (12)
- Meals (10)
- Nutrition Education (15)

Select the specific type
of assistance
I chose Meals



1,439 programs

serve people in Salina, KS 67401

ab findhelp.org

ab findhelp.org

Find food assistance, help paying bills, and other free or reduced cost programs in ZIP 67401, including new programs for the COVID-19 pandemic:

ZIP or keyword or program name

Select Language

< **Food**

- Emergency Food (6)
- Food Delivery (11)
- Food Pantry (1)
- Help Pay For Food (12)
- Meals (10)
- Nutrition Education (15)

Search the available
resources in the area

↑

1,439 programs

serve people in Salina, KS 67401

MORE INFO

SAVE SHARE NOTES SUGGEST

☐ **Seasonal Services Program**
by The Salvation Army USA MidWest

The Salvation Army USA Mid West's Seasonal services are special services to help families and children in need at specific times during the year. Seasonal services offered include the many

📍 Main Services: help pay for utilities, meals, clothes for school, blankets & fans, home fuels, supplies for school, toys & gifts

👤 Serving: anyone in need, all ages

MORE INFO

SAVE SHARE NOTES SUGGEST

APPLY

Next Steps:
Call 847-294-2000.
Serves your state
🕒 **Closed Now** : See open hours

☐ **Home Delivered Meals**
by Mom's Meals

Mom's Meals NourishCare provides Home Delivered Meals to the elderly, disabled, and individuals in poor health, who are eligible for economic assistance through Medicaid Waiver or

📍 Main Services: food delivery, meals

👤 Serving: adults 18+, all disabilities, limited mobility, benefit recipients, low-income

MORE INFO

SAVE SHARE NOTES SUGGEST

NEXT STEPS

Next Steps:
Get a referral from a case manager to apply or call 877-508-6667.
Serves nationwide
🕒 **Closed Now** : See open hours

☐ **Program of All-Inclusive Care for the Elderly (PACE)**
by Kansas Department for Aging and Disability Services

The Program of All-Inclusive Care for the Elderly (PACE) program promotes quality, comprehensive health services for older adults. The primary care physicians and

📍 Main Services: meals, dental care, medical care, skilled nursing, exercise & fitness, physical therapy, occupational therapy, in-home support, recreation, navigating the system

Next Steps:
Call 785-776-9294 (your nearest location).
📍 62.61 miles (serves your local area)

ab findhelp.org

Find food assistance, help paying bills, or find a place to live in ZIP 67401, including nearby programs.

ZIP or keyword or program name

Select Language

< 🍏 **Food**

- Emergency Food (6)
- Food Delivery (11)
- Food Pantry (1)
- Help Pay For Food (12)
- Meals (10)
- Nutrition Education (15)

1,439 programs

serve people in Salina, KS 67401

☐ **Food Distribution**

by Salina Emergency Aid / Food Bank

The Salina Emergency Aid / Food Bank addresses the needs of low-income individuals and households that lack a reliable access to affordable, nutritious food and may experience hunger

- 📍 Main Services: food pantry
- 👤 Serving: all ages, low-income

MORE INFO ▼



SAVE



SHARE



NOTES



SUGGEST

➔ NEXT STEPS

😊 **Best way to connect!**

Contact or go to the [nearest location](#) to get services.

Helping someone else?

LOG A REFERRAL

☐ **Seasonal Services Program**

by The Salvation Army USA MidWest

Next Steps:

Contact or go to the [nearest location](#).

📍 0.98 miles (serves your local area)

255 South Chicago Street, Salina, KS 67401

🕒 **Closed Now** : See open hours ▼

Next Steps:

Call 847-294-2000.

Serves your state

🕒 **Closed Now** : See open hours ▼

📄 APPLY

Next Steps:

Get a referral from a case manager to apply or call 877-508-6667.

Serves nationwide

🕒 See open hours ▼

➔ NEXT STEPS

Once you select one, click Next Steps and follow the instructions

The Program of All-Inclusive Care for the Elderly (PACE) program promotes quality, comprehensive health services for older adults. The primary care physicians and

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Next Steps:

Call 785-776-9294 (your nearest location).

📍 62.61 miles (serves your local area)

How to be adherent



Knowledge – know
what the instructions
are



Motivation – understand
the importance, desire
to please provider



Ability – physical,
mental, emotional



Contextual factors –
time, finances

Resources – Teach Back

This is an excerpt from the full AHRQ Health Literacy Universal Precautions Toolkit, Second Edition, available at <http://www.ahrq.gov/literacy>.

Use the Teach-Back Method

Tool 5

Overview

Regardless of a patient's health literacy level, it is important that staff ensure that patients understand the information they have been given. The teach-back method is a way of checking understanding by asking patients to state in their own words what they need to know or do about their health. It is a way to confirm that you have explained things in a manner your patients understand. The related show-me method allows staff to confirm that patients are able to follow specific instructions (e.g., how to use an inhaler).

- The teach-back and show-me methods are valuable tools for everyone to use with each patient. These methods can help you:
 - Improve patient understanding and adherence.
 - Decrease call backs and cancelled appointments.
 - Improve patient satisfaction and outcomes.

Fact

Studies have shown that 40-80% of the medical information patients are told during office visits is forgotten immediately, and nearly half of the information retained is incorrect.

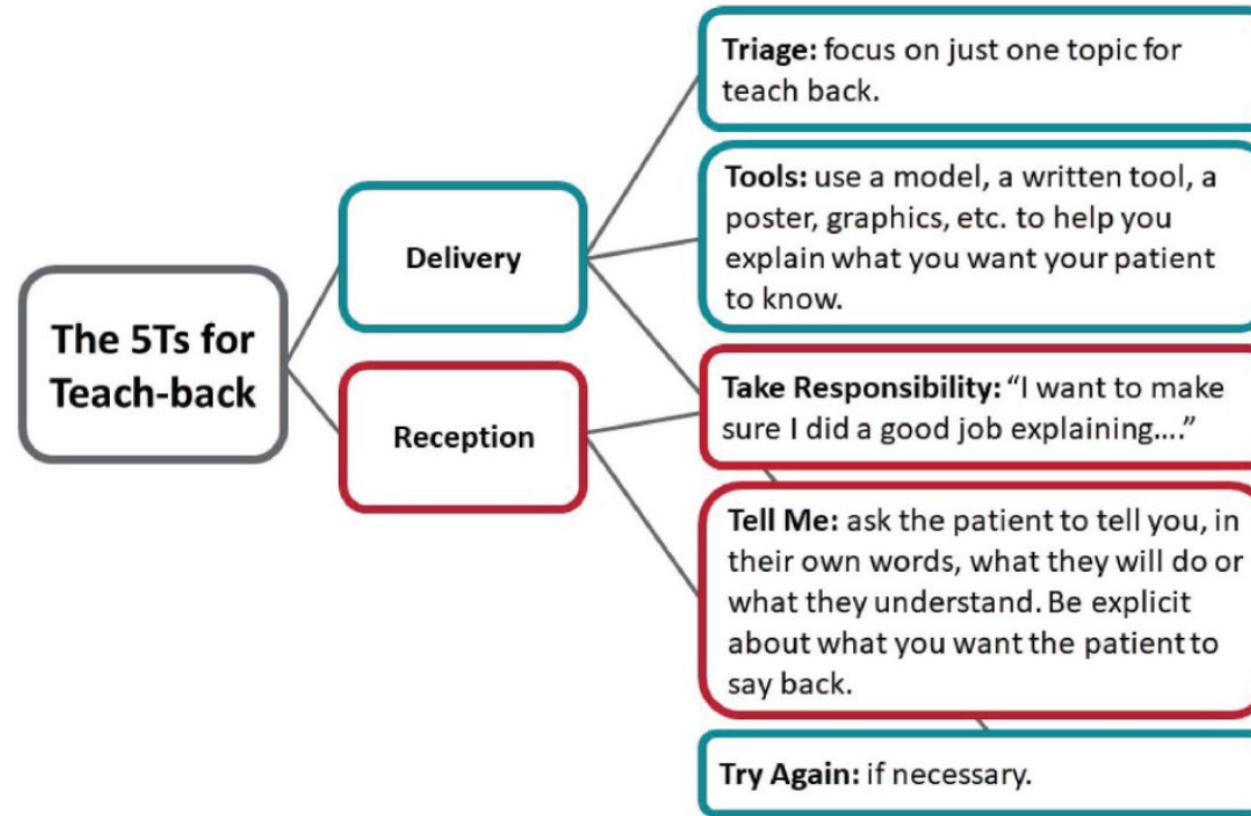
Use Plain Language

Use these words	Avoid these words	Use these words	Avoid these words
reduces swelling	anti-inflammatory	heart doctor	cardiologist
blood thinner	anticoagulant	skin doctor	dermatologist
take before meals	take on an empty stomach	doctor who treats diabetes	endocrinologist
take after meals	take on a full stomach	stomach doctor; doctor for digestion problems	gastroenterologist
high (low) blood sugar	hyper(hypo-)glycemic	doctor for women	gynecologist
high (low) blood pressure	hyper(hypo-)tension	doctor for the brain, spine, and nervous system	neurologist
fats	lipids	cancer doctor	oncologist
overweight	obese	eye doctor	ophthalmologist
weak bone disease	osteoporosis	lung doctor	pulmonologist
not cancer	benign	joint, bone, and immune system doctor	rheumatologist

<https://www.ahrq.gov/patient-safety/reports/engage/interventions/teachback.html>

White, 2015; David & Rhee, 1998; Wilson et al., 2005

Resources – Teach Back





Take aways

- Related to many SDOH
- Providers must address adherence – anticipate potential issues
- Social and community resources are key

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