AMDIS Talks 2023

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- The Case for Clinical Transformation
 - Neal Chawla, MD FACEP, CMIO, WakeMed, Raleigh, NC
- THE POWER OF REITERATION
 - DR. AARON CHAISE & DR. KUNAL PATEL, UIC CLINICAL INFORMATICS
- SDOH SCREENING
 - Bhrandon Harris, MD, FAAFP, FAMIA, UIC CLINICAL INFORMATICS
- SDOH Inpatient Screening Implementation Pilot
 - Kiron Nair, MD Clinical Informatics Fellow
- Inspiring Future Informaticists
 - Kathee Liang, MD , Family Medicine, 1st Year Clinical Informatics Fellow



The Case for Clinical Transformation

Neal Chawla, MD FACEP
CMIO
WakeMed
Raleigh, NC











THE POWER OF REITERATION DR. AARON CHAISE & DR. KUNAL PATEL **UIC CLINICAL INFORMATICS**











AMDIS 2023 – SDOH SCREENING



Bhrandon Harris, MD, FAAFP, **FAMIA** 6/22/23







MetroHealth

SDOH Inpatient Screening Implementation Pilot

Kiron Nair, MD – Clinical Informatics Fellow





Inspiring Future Informaticists

Kathee Liang, MD

Family Medicine

1st Year Clinical Informatics Fellow

AMDIS Talks 2023



The Case for Clinical Transformation

Neal Chawla, MD FACEP
CMIO
WakeMed
Raleigh, NC





Mission

To improve the health and well-being of our community with outstanding and compassionate care to all

Strategic Plan

Vision

To be the preferred partner for quality care and health through collaboration and transformation of care delivery

Values

Foster trust and transparency * Quality experiences
Financial stewardship * Leadership in safety, innovation and education
Empower & partner with health care team * Partner with others who value our culture

ASPIRATIONAL GOALS

VALUE LEADER

Quality

QUALITY

Top 10 in US

CULTURE OF SAFETY

SAFETY

For patients, families, community & health care team

EXTRAORDINARY

TEAM

Recruit, retain and develop

HEALTHY COMMUNITY

Healthiest capital

county in US

WAKE WAY

*

Every-time behaviors

INNOVATION



Transformation of care and health improvement

PREFERRED PARTNER



With physicians and others for best value

FINANCIAL HEALTH



HIGHEST ETHICS & STANDARDS



In all we do





Optimize Forever?

- We implement
- Then stabilize
- Then optimize

• Do we stay in optimization forever?



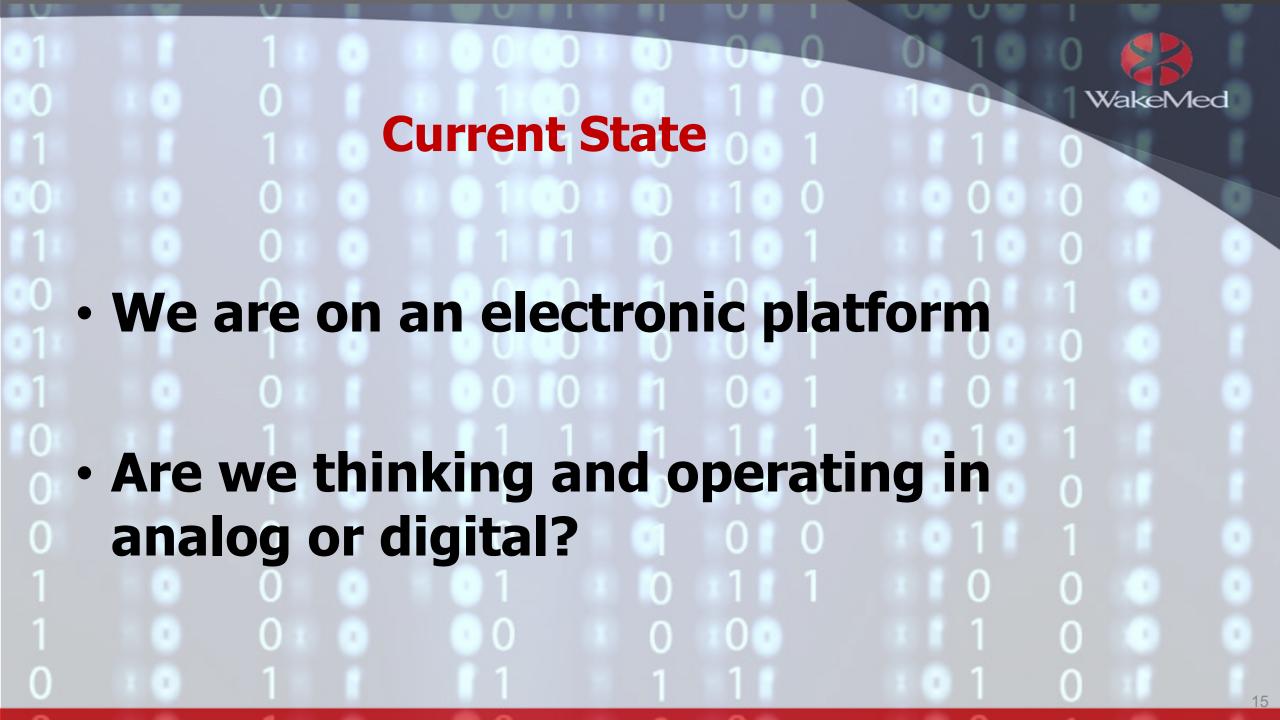
There is something bigger...



Digital Transformation

 Leveraging data to focus on measurable improvements in your organization. (Neal)

 Digital transformation is the integration of digital technology into all areas of a business, fundamentally changing how you operate and deliver value to customers. It's also a cultural change that requires organizations to continually challenge the status quo, experiment, and get comfortable with failure. (Internet)





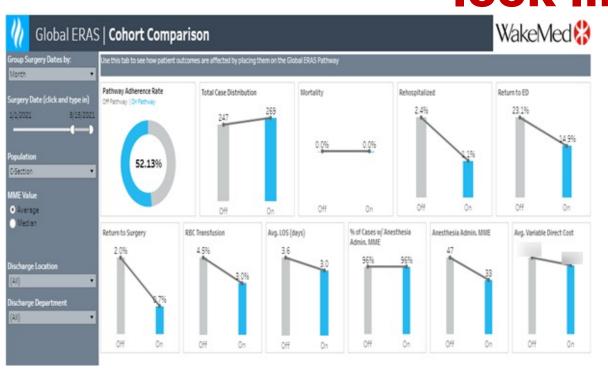
Clinical Transformation in a few words

- Deliberate and measurable care
- Standardize Best Practices
 - Reduce unnecessary variation
 - Pathways
- Work as teams
- Manage, measure and improve outcomes

- Need Data
- Need Process Improvement
- Need the marriage
- Need engagement and adoption from clinical teams

What does Clinical Transformation look like?





- 54% relative reduction in re-hospitalization
- 65% relative reduction in return to surgery
- 33% relative reduction in transfusions
- 33% relative reduction in return to ED
- 10% reduction in direct cost per case

C-Section ERAS



Most Importantly-The Human Impact

- 3 fewer Moms re-hospitalized
- 3 fewer Moms return to Surgery
- 17 fewer Moms return to ED





Cardiac Surgery - v2* - Thoracic Surgery -v2* - Colorectal Cancer Screening* - Alcohol Withdrawol* - Ischemic Stroke* - Strep Throat in Urgent Care* - Hon-ST Elevated Myocardial Infarction* - Sepsis

*NEW IN FISCAL YEAR 2022



Transformation forever?

- Implement
- Stabilize
- Optimize (doesn't stop)
 - (Efficiency/Wellness, Digital Patient Experience, Remote Monitoring, Virtual Nurse, Hospital @Home, etc etc)
- Digital Transformation

Now what?



Now what?

- Data will help understand outcomes and costs
 - Mission and Business

- Needed for Population Health
- Needed for At-risk contracts
 - Or payor partnerships?
 - Or becoming a payer?





Fuzzy Crystal Ball..

- Implement
- Stabilize
- Optimize (forever)
- Transform (understand data)
- Population Health
- Take on risk
- Financial independence / stability?
 - Is this the next?
 - Is this the end?
 - Is there an end?

 One of our important roles is to assist our organizations toward being ready to take on risk contracts, payor partnerships and potentially becoming a payor by going through these phases

Discussion











THE POWER OF REITERATION DR. AARON CHAISE & DR. KUNAL PATEL **UIC CLINICAL INFORMATICS**





WHY SHOULD YOU CARE

- In 2021
 - 1.7 Million Suicide Attempts
 - 48,000 Suicides
 - This was ranked the 11th most common cause of death in America
- In 2016, The Joint Commission (TJC) released a sentinel event alert:
 - "expectation that hospitals screen all patients for suicide ideation using a brief, standardized, and evidence-based screening tool."
- In 2019, TJC scaled back to patients presented to ED with chief complaint of a behavioral health issue



SETTING UP FOR SUCCESS

- First step to any healthcare initiative: Gather all stakeholders
 - ED nurses
 - ED physicians
 - Behavioral health social workers
 - Psychiatrists
 - IS
 - Physician informaticists
- Second step: Create a recurring meeting
- Third step: Do a little work

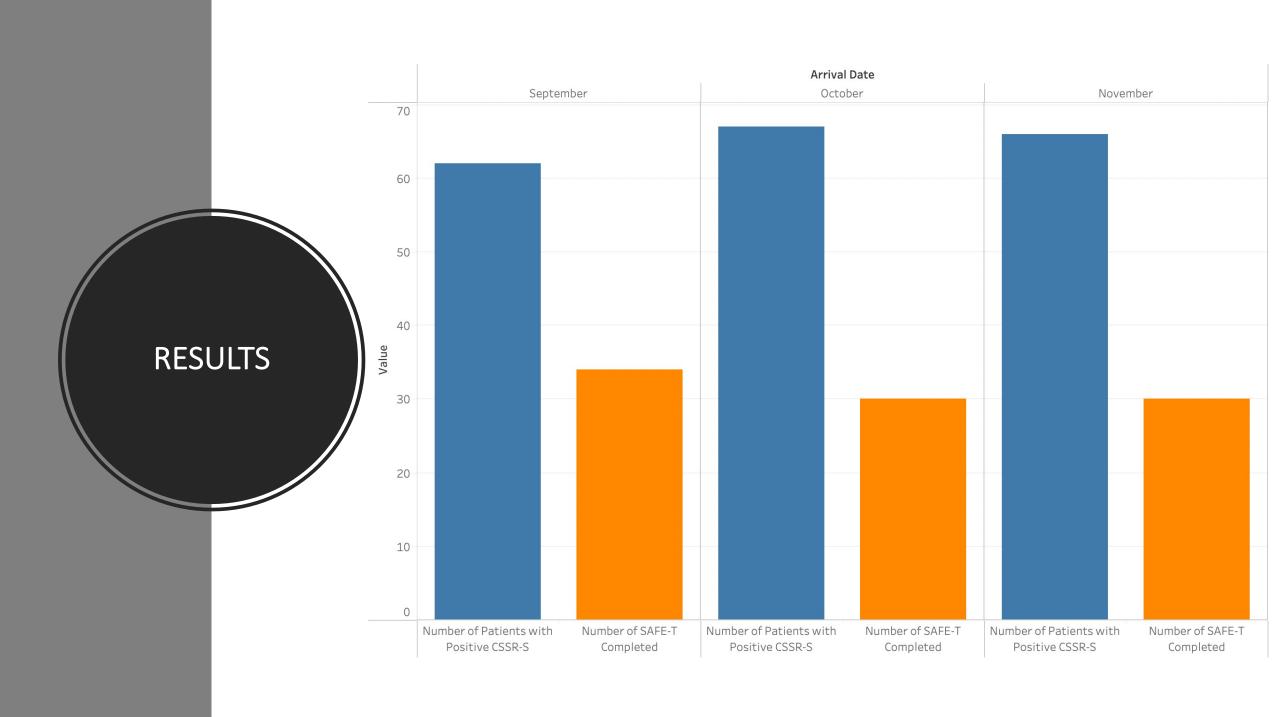
DO A LITTLE WORK

- SAFE-T Questionnaire with Columbia-Suicide Severity Rating Scale (C-SSRS) screening tool was chosen; it is validated, evidenced-based, and recommended by:
 - NIH
 - SAMHSA
 - National Action Alliance for Suicide Prevention
 - DOD
 - · CDC
 - FDA
- ED nurses complete C-SSRS during triage
 - If moderate/high → ED physicians consult psychiatry/behavioral health and order Patient Sitter/Safe Tray
 - Behavioral health social workers or psychiatry residents complete SAFE-T, pending the day of week and time to aid in patient disposition





Success



BACK TO THE DRAWING BOARD:

Evaluate and Reiterate



First, we noticed that a top down approach did not work



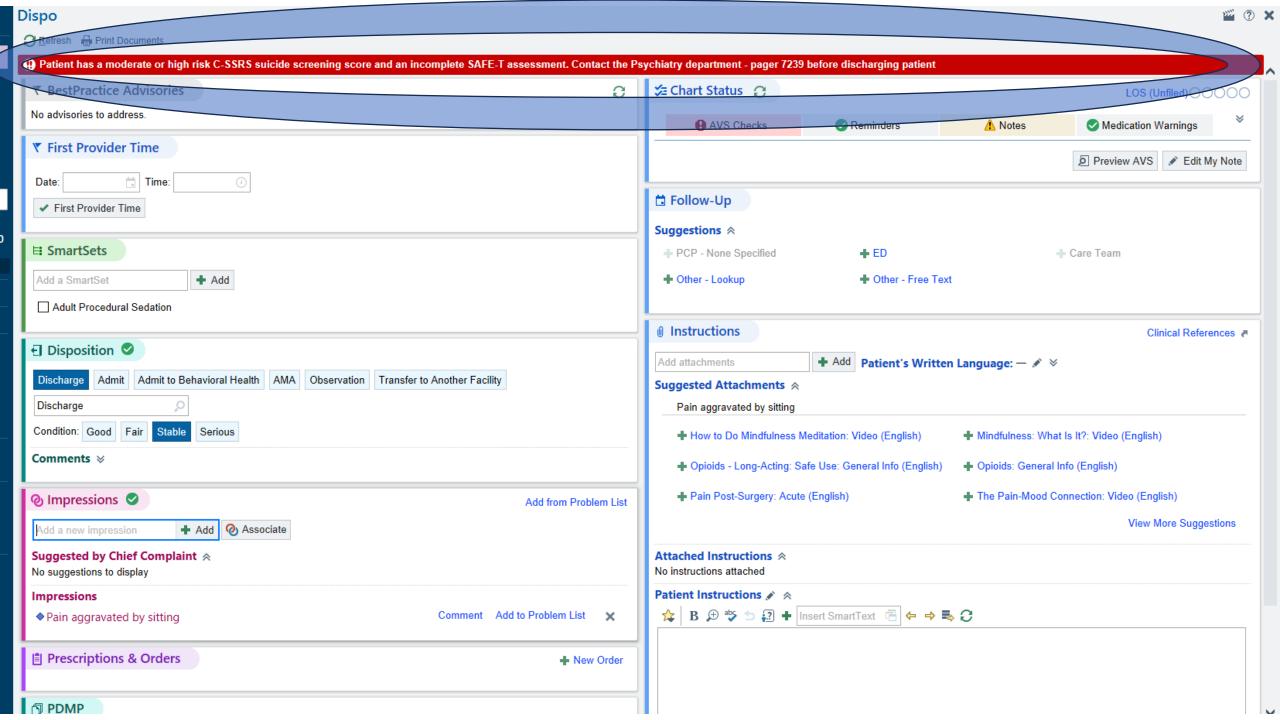
Second, providers did not know which patients screened moderate/high



Third, psychiatry members did not know how to complete a SAFE-T Screen







Resolve these issues before printing



● Contact Psychiatry: C-SSRS suicide screening score is moderate or high and needs a SAFE-T assessment prior to discharge

AVS Selected to print

AFTER VISIT SUMMARY

Pat Foley MRN: 208004

☐ 11/29/2022
☐ EMERGENCY 866-600-2273

💤 Ul Health 🛭 🐠

Today's Visit

Diagnosis

Pain aggravated by sitting

What's Next

You currently have no upcoming appointments scheduled.

Thank you for being a UI Health patient. You may receive a survey via text, email or mail. We value your input and would greatly appreciate you completing this survey to tell us about your experience.

You are allergic to the following

No active allergies

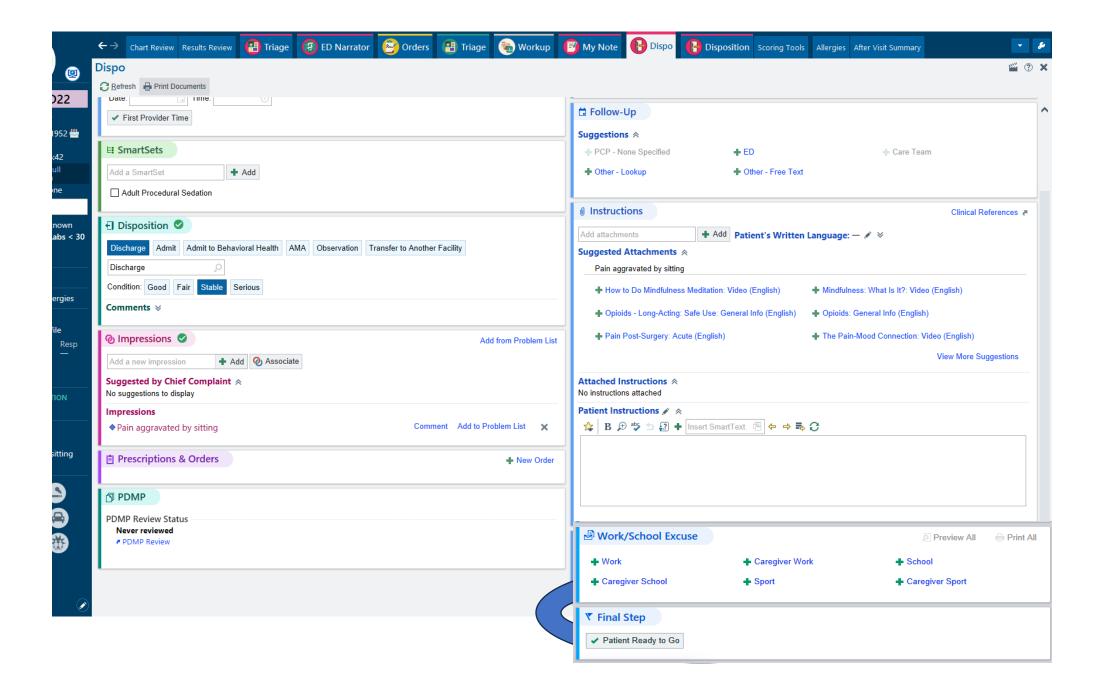


DEEP DIVE #2

An improvement was seen, but we aim to be at 100%

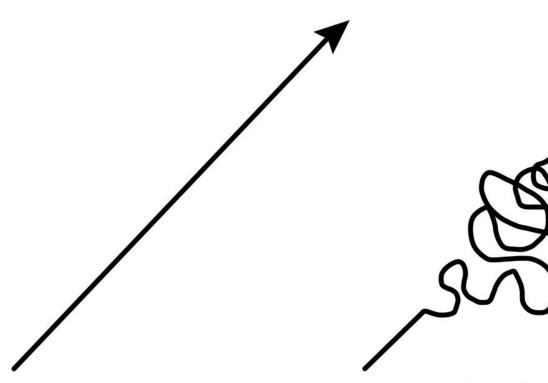
ALL IN ALL

- This is a prime example for informatics: changes to a seemingly simple workflow do not work without several iterations
- You can set yourself up for success
 - but you still might fail, and most likely will... which is OK
 - No process is 100% perfect
- Working cohesively as a team, even across departments, will ultimately bring success
 - Having a supportive and dedicated team makes a big difference in the long run
 - The psychiatry department and emergency medicine department did not get upset by the many iterations; they took a step back and objectively thought about the problem and brainstormed ideas for success



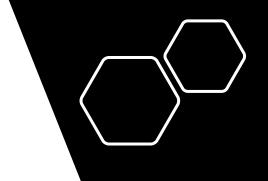
SUCCESS

SUCCESS



what people think it looks like

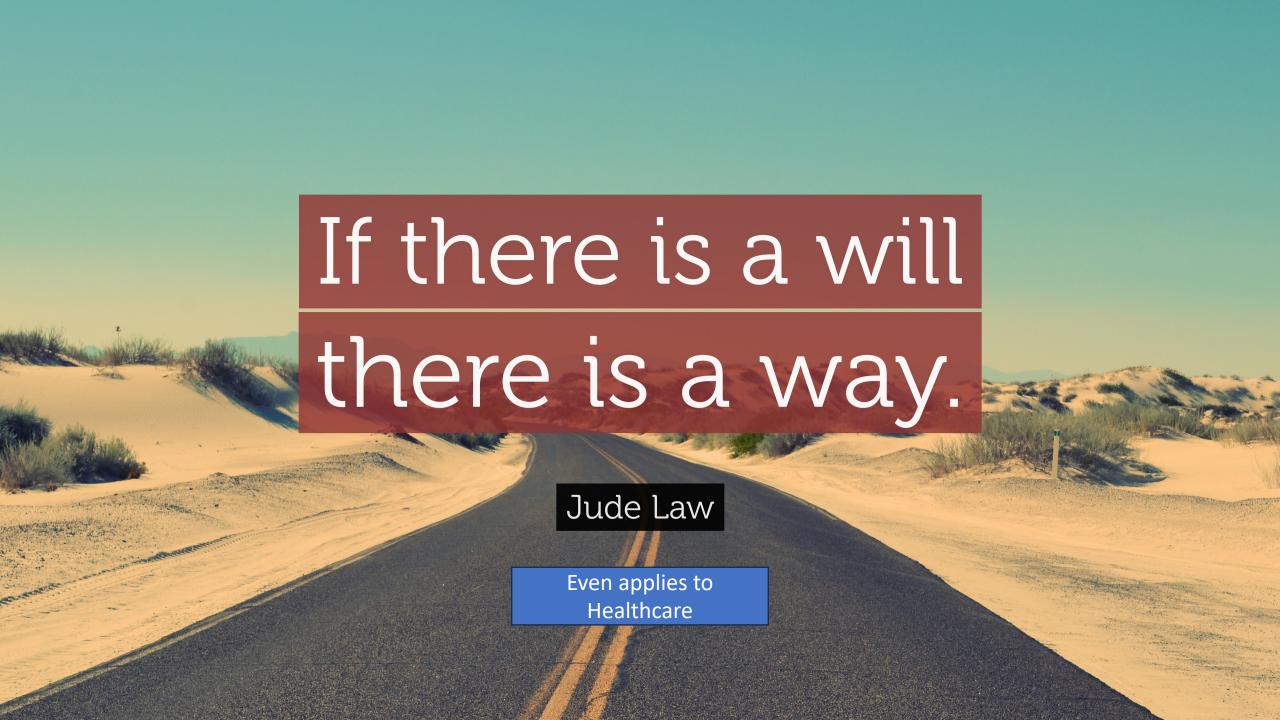
what it really looks like



The End







Discussion...







AMDIS 2023 – SDOH SCREENING



Bhrandon Harris, MD, FAAFP, **FAMIA** 6/22/23





SDOH - SCREENING

- Background
- Solution
- Initial Results
- Future Direction

SDOH – BACKGROUND

Circulation

Volume 138, Issue 4, 24 July 2018; Pages 345-355 https://doi.org/10.1161/CIRCULATIONAHA.117.032047



ORIGINAL RESEARCH ARTICLE

Impact of Healthy Lifestyle Factors on Life Expectancies in the US Population

Yanping Li, MD, PhD*, An Pan, PhD*, Dong D. Wang, MD, ScD, Xiaoran Liu, PhD, Klodian Dhana, MD, PhD, Oscar H. Franco, MD, PhD, Stephen Kaptoge, PhD, Emanuele Di Angelantonio, MD, PhD, Meir Stampfer, MD, DrPH, Walter C. Willett, MD, DrPH, and Frank B. Hu, MD, PhD

BACKGROUND: Americans have a shorter life expectancy compared with residents of almost all other high-income countries. We aim to estimate the impact of lifestyle factors on premature mortality and life expectancy in the US population.

METHODS: Using data from the Nurses' Health Study (1980–2014; n=78 865) and the Health Professionals Follow-up Study (1986–2014, n=44354), we defined 5 low-risk lifestyle factors as never smoking, body mass index of 18.5 to 24.9 kg/m², ≥30 min/d of moderate to vigorous physical activity, moderate alcohol intake, and a high diet quality score (upper 40%), and estimated hazard ratios for the association of total lifestyle score (0-5 scale) with mortality. We used data from the NHANES (National Health and Nutrition Examination Surveys; 2013–2014) to estimate the distribution of the lifestyle score and the US Centers for Disease Control and Prevention WONDER database to derive the age-specific death rates of Americans. We applied the life table method to estimate life expectancy by levels of the lifestyle score.





SDOH - BACKGROUND

The Joint Commission:

- Requirement: the organization assesses the patient's health-related social needs and provides information about community resources and support services (organization determines which health- related social needs to include in the assessment and determines which patient population to assess)
- -Effective January 1, 2023

CMS:

- Requirement: the organization must report the percent of patients admitted to the hospital who are 18 years or older and must be screened for the following 5 domains food insecurity, housing instability, transportation problems, utility difficulties, and interpersonal safety.
- Publicly reportable measure via inpatient quality reporting (IQR)
- Optional reporting calendar year 2023, required reporting by 2024

SDOH - BACKGROUND

VIEWPOINT

Avoiding the Unintended Consequences of Screening for Social Determinants of Health

Arvin Garg, MD, MPH Department of Pediatrics, Boston University School of Medicine, Boston Medical Center, Boston, Massachusetts.

Renée Boynton-Jarrett, MD, ScD
Department of
Pediatrics, Boston
University School of
Medicine, Boston
Medical Center, Boston,
Massachusetts.

Paul H. Dworkin, MD
Department of
Pediatrics, University of
Connecticut School of
Medicine, Farmington;
and Office for
Community Child
Health, Children's
Medical Center,
Hartford, Connecticut.

Screening for social determinants of health, which are the health-related social circumstances (eg. food insecurity and inadequate or unstable housing) in which people live and work, has gained momentum as evidenced by the recent Centers for Medicare & Medicaid Services innovation initiative of \$157 million toward creation of accountable health communities. 1 Funding will allow grantees to test a novel model of health care that includes identifying and addressing social determinants of health for Centers for Medicare & Medicaid Services beneficiaries. The initiative promotes collaboration between the clinical realm and the community through screening of beneficiaries to (1) identify unmet health-related social needs and (2) assist high-risk beneficiaries (ie, >2 emergency department visits and a health-related social need) with accessing available community services.

Some health policy makers have embraced screening of social determinants as the next hope for achieving the triple aim of better health, improved health care delivery, and reduced costs because social and environmental factors are thought to contribute half

ment) requires effective care coordination and crosssector collaboration. The relatively few exemplary, evidence-based models (eg, WE CARE, Health Leads, Project DULCE, Safe Environment for Every Kid, Help Me Grow) that use such strategies are limited in scope and reach and must be expanded to address the needs of diverse patient populations.⁶

The sensitive nature of such issues as food insecurity, unemployment, and interpersonal violence also poses unique challenges. Physicians may be uncomfortable routinely inquiring about adverse social circumstances, given their lack of personal experience with such needs and inadequate training on how to respectfully elicit and respond to patients' concerns. In addition, the absence of available services means that needs are often difficult to address, given the tenuous capacity of community resources such as affordable housing, behavioral health services, workforce development and employment, and public transportation.

Thus, despite the potential benefits of identifying and addressing adverse social determinants, there is the potential for unintended harm. Such screening

- 1. Be patient and family-centered and involve shared decision making
- 2. Be conducted within a comprehensive process and system that supports early detection, referral, and linkage to a wide array of community- based services
- 3. Engage the entire practice population rather than targeted subgroups
- 4. Acknowledge and build on the strengths of patients, families, and communities.

SDOH - BACKGROUND

VIEWPOINT

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SDOH - SOLUTION

- 5 Domains
 - Food Insecurity
 - Housing Insecurity
 - Intimate Partner Violence
 - Transportation
 - *Utilities



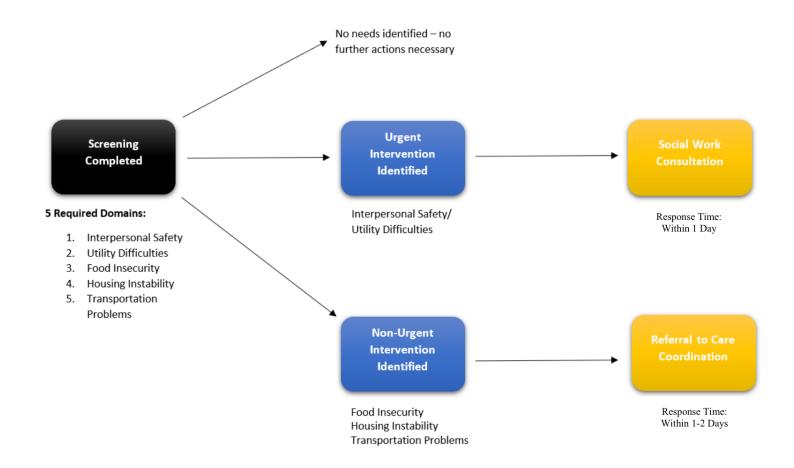
Nurse Driven Protocol All admitted patients (inpatient, 23hr obs) At least once every 6mo **Nursing Admission** Navigator workflow Tiered Approach with Social Work and Care Coordination



SDOH - SOLUTION

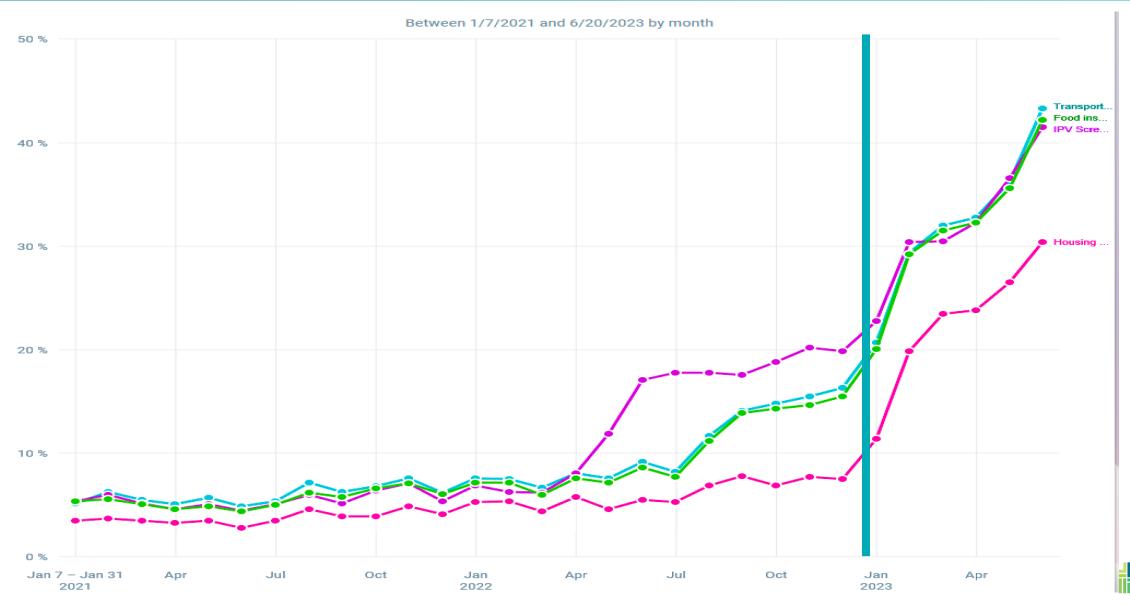
Referral Workflow

Upon completion of screening → silent BPA fire to in-baskets for Social Work and Care Coordination





SDOH – INITIAL RESULTS







SDOH - FUTURE DIRECTION

- Unit by Unit Go-Live
- Expand to outpatient
- Increase community partners and resources for patients
- Physician Workflows
- Patient Workflows

Discussion



MetroHealth

SDOH Inpatient Screening Implementation Pilot

Kiron Nair, MD – Clinical Informatics Fellow



Pilot Project Team

Interdisciplinary Working Group

Care Coordination

- Andrea Colson, Operations Manager
- Allison Turnton, Social Work Supervisor for Population Health

Patient Experience

 Michelle Menke, Manager Patient Education and Accessibility Services

Clinical Informatics

- Dr. Katherine Liang, Cl Fellow
- Dr. Kiron Nair, CI Fellow
- Dr. Johnbuck Creamer, Director of Clinical Informatics for Inpatient Care
- Antonella Vicario, Systems Instructor
- Barb Karvosky, Systems Analyst
- Stacy Farnan, Sr Clinical Informatics Analyst

Nursing

- Kimberlee Legarth, Director of Nursing Services
- Angela Marvin, Nurse Manager
- Ruby Jackson, Nurse Manager

Population Health Research Institute

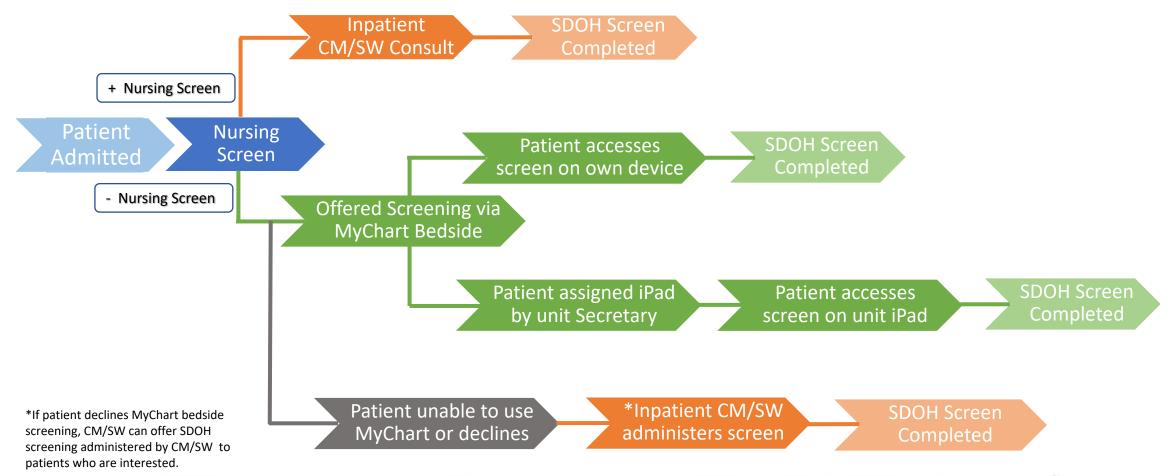
- Dr. Sarah Sweeney, PHRI Fellow
- Institute for Hope
 - Mark Kalina, Sr Analyst
 - Ekaterina Dubovikova, Change Management Advisor
- Information Systems (IS)
 - Noelle Wiser, Systems Analyst



Considerations

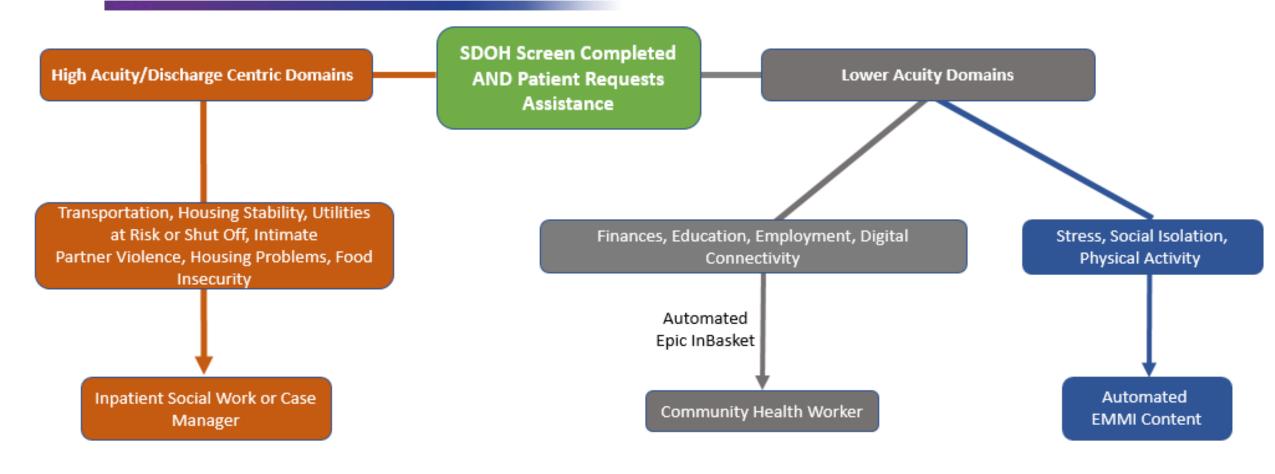
- Expand inpatient SDOH screening from established workflow with limited screening.
- Augment CM/SW workflow by early identification of patient needs for broader capture and follow up.
- Engage patients using MyChart Bedside for self-administered screening, to decrease staff burden.
- Use 24-Question SDOH screen that was being used in the Ambulatory setting for data consistency and for streamlined workflows to address positive screens.
- 6 East (Orthopedic Floor), 8 East (Medicine Floor) chosen as pilot sites

Inpatient SDOH Screening Workflow





Filtering Requests for Assistance



No changes to Nursing Admission Screen. Alcohol/Drug, Tobacco Use and Depression Per Usual Care Nursing Admission Screen Pathway.

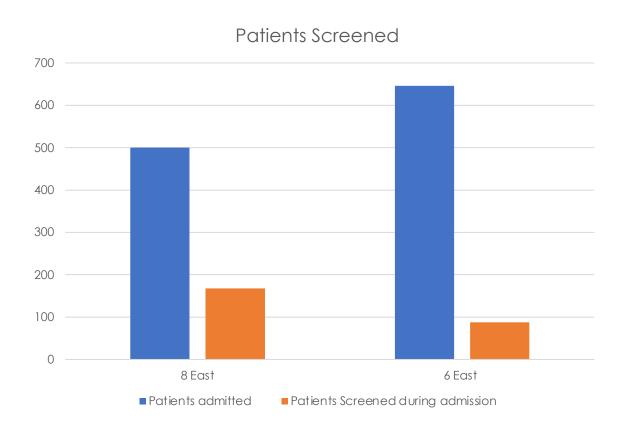


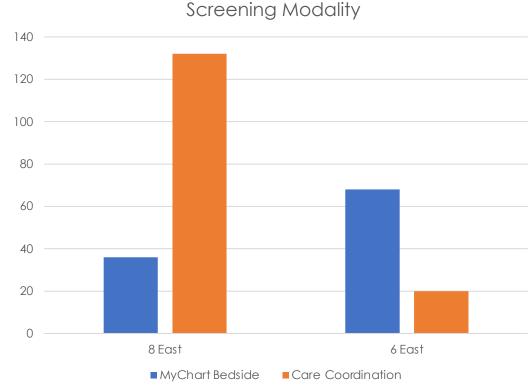
Screening Status Notification System

- = Questionnaire assigned in MyChart but not yet completed
- = Marked "Patient not assessed (assess when pt able)"
- = Patient declined guestionnaire via MyChart or via Flowsheet ("Patient Declines")
- = SW/CM attention needed/positive screen
- = Questionnaire completed. Screened negative or SW/CM issues were addressed or marked "Unable to assess patient" via flowsheet.
- These symbols flow from both MyChart Bedside responses as well as from the CM/SW Flowsheet
- Populate in a column that is added to the patient list



Data Review 02/11/ - 06/08







Requests for Assistance

SDOH Domain	Total
Food	18%
Transportation	15%
Finances	12%
Utilities	12%
Physical Activity	11%
Stress	10%
Housing Stability	8%
Social Connection	6%
Housing Problems	2%
Internet Access	6%

^{*}Requests for assistance were higher on 6E (31%) than 8E (11%)



Implementation Challenges

Process Issues

Inconsistent roll out of MyChart bedside/distribution of tablets

Staffing

- Turnover in secretary staffing leads to process breakdown
- High level of positive SDOH screens increases workload of CM/SW for positive screens
- Many patients unable to self-screen increasing CM/SW workload to find screening resources

Technology

- Difficulty using MyChart Bedside on personal devices
- Device specific challenges such as difficulty connecting to MH Guest network

Patient Related Challenges

- Admitted patients with physical and cognitive difficulty self-screening
- Screen only available in Enalish/Spanish, Text not able to be enlarged

SDOH Questionnaire

- Too long 24 questions (excluding Request for Assistance and UniteUS consent)
- Difficult for Patients, SW/CM, and Virtual Nursing
- Patients do not complete full screen/all domains, incomplete capture of needs



2nd Iteration Aims

AIM #1: Pilot a shorter SDOH screening questionnaire to increase % of patients screened for high acuity needs

AIM #2 Increase the use of MyChart Bedside by admitted patients by engaging appropriate staff

AIM#3: Continue to assess the challenges and opportunities for CM/SW to attempt to screen all admitted patients for SDOH

OVERARCHING GOAL: Increase Inpatient SDOH screening rates to 50% (80% touched)



AIM #1 - Shorten Screen



SDOH Screen I

Prioritize discharge centric domains that align with CMS requirements

SDOH DOMAIN	Social Factors Questionnaire
Food Security	In the last 12 months, have you worried your food would run out before you had money to buy more?
	In the last 12 months, did the food you bought just not last and you didn't have money to buy more?
Transportation Needs	In the last 12 months, has lack of transportation kept you from medical appointments or from getting medications?
	In the last 12 months, has lack of transportation kept you from meetings, work, or getting things needed for daily living?
Interpersonal Safety	In the last 12 months, have you been: afraid of your partner or ex-partner?
	In the last 12 months, have you been: humiliated or emotionally abused in other ways by your partner or ex-partner
	In the last 12 months, have you been kicked, hit, slapped, or otherwise physically hurt by your partner or ex-partner
	In the last 12 months, have you been forced to have any kind of sexual activity by your partner or ex-partner?
Housing Instability	In the last 12 months, were you ever unable to pay the rent or mortgage on time?
	In the last 12 months, how many places have you lived?
	In the last 12 months, did you ever sleep in a shelter or not have a steady place to sleep?
Utility Difficulties	In the last 12 months, has the electric, gas, oil, or water company threatened to shut off your services? Yes, No, Currently shut off
Digital connectivity	Do you currently have internet access at home? / Do you have internet access on a device or in another location?

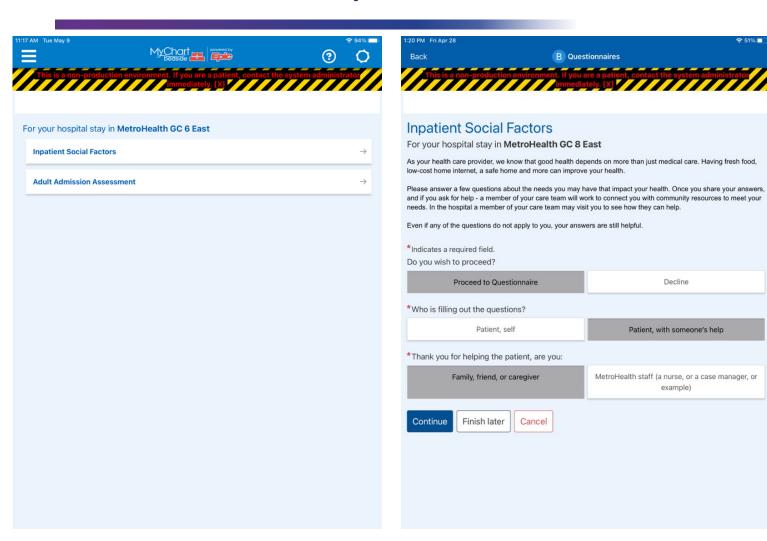
SDOH Screen II

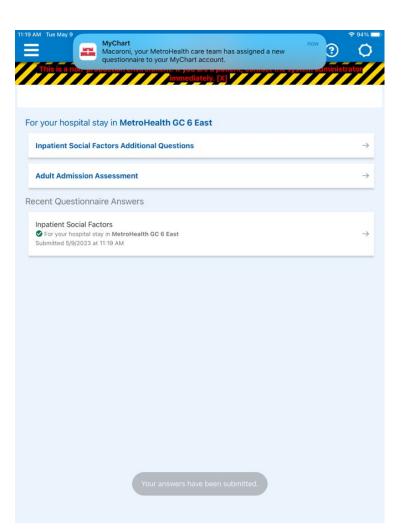
Lower acuity domains, optional second section

SDOH DOMAIN	QUESTIONS
Financial strain	Is it hard to pay for basics like food, housing
Physical activity	On average, how many days per week do you engage in moderate to strenuous exercise
	On average, how many minutes per day do you engage in exercise at this level?
Stress	How often do you feel stress these days (tense, restless, nervous, anxious, or trouble sleeping)?
Social connectedness	In a typical week, how often do you talk on the phone with family, friends, or neighbors?
	How often do you get together with friends or relatives?
	How often do you attend church or religious services?
	Do you belong to any clubs or organizations (such as church groups, unions, fraternal, athletic, or school)?
	How often do you attend meetings of the clubs or organizations you belong to?
	Are you currently married, widowed, divorced, separated, never married, living with a partner?
Housing problems	Do you have any problems at home with: Pests, Mold, Lead Paint or Pipes, Water Leaks, Smoke detectors missing/not working
Education	What is the highest level of school you completed, or the highest degree you have received?
Employment	What is your current employment status?



Modified Screens on MyChart Bedside







Updated CM/SW Flowsheet

Food Insecurity

Within the past 12 months, you worried that your food would run out before you got the money to buy more.

Within the past 12 months, the food you bought just didn't last and you didn't have money to get more.

Transportation Needs

In the past 12 months, has lack of transportation kept you from medical appointments or from getting medications?

In the past 12 months, has lack of transportation kept you from meetings, work, or from getting things needed for daily living?

Intimate Partner Violence

Within the last year, have you been afraid of your partner or ex-partner?

Within the last year, have you been humiliated or emotionally abused in other ways by your partner or ex-partner?

Within the last year, have you been kicked, hit, slapped, or otherwise physically hurt by your partner or ex-partner?

Within the last year, have you been raped or forced to have any kind of sexual activity by your partner or ex-partner?

Housing Stability

In the last 12 months, was there a time when you were not able to pay the mortgage or rent on time?

In the last 12 months, how many places have you lived?

In the last 12 months, was there a time when you did not have a steady place to sleep or slept in a shelter (including now)?

Housing and Utilities

Do you have problems with any of the following?

In the past 12 months has the electric, gas, oil, or water company threatened to shut off services in your home?

Digital Connectivity

Do you currently have internet access at home?

Do you have access to the internet on a device or in another location?

Request for Assistance

We may be able to connect you with resources and agencies that can help you by making a referral on your behalf. Would you lik...

UniteOhio

Does the Patient Agree to UniteOhio

Date

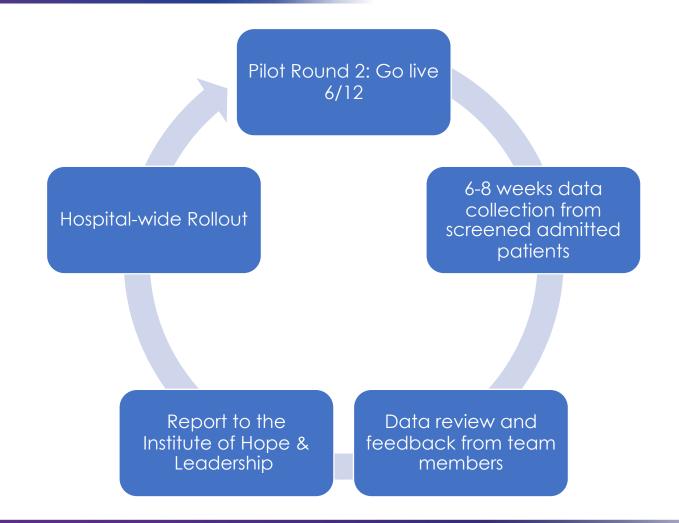
Assessment and Discharge Planning Evaluation

SDOH Completed?

SDOH Risks Addressed



Pilot Plan







MetroHealth

Thank you for your attention! We welcome your feedback.



Discussion



Inspiring Future Informaticists

Kathee Liang, MD

Family Medicine

1st Year Clinical Informatics Fellow

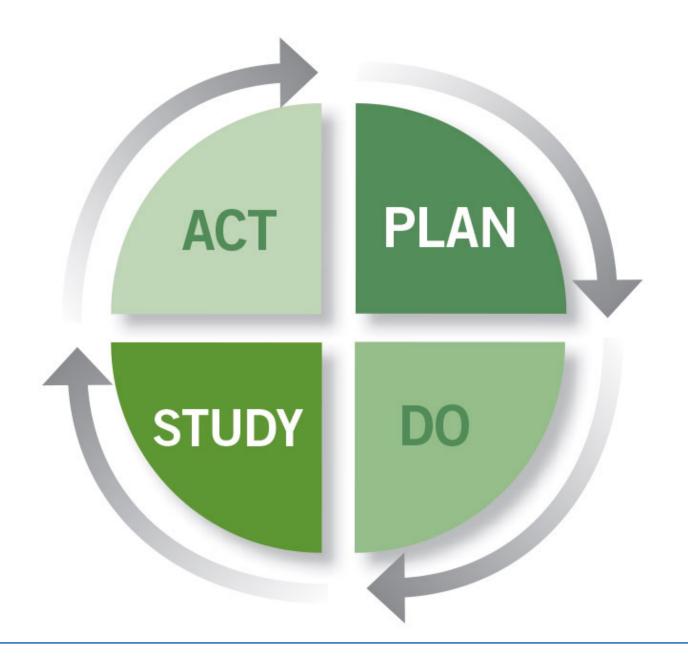




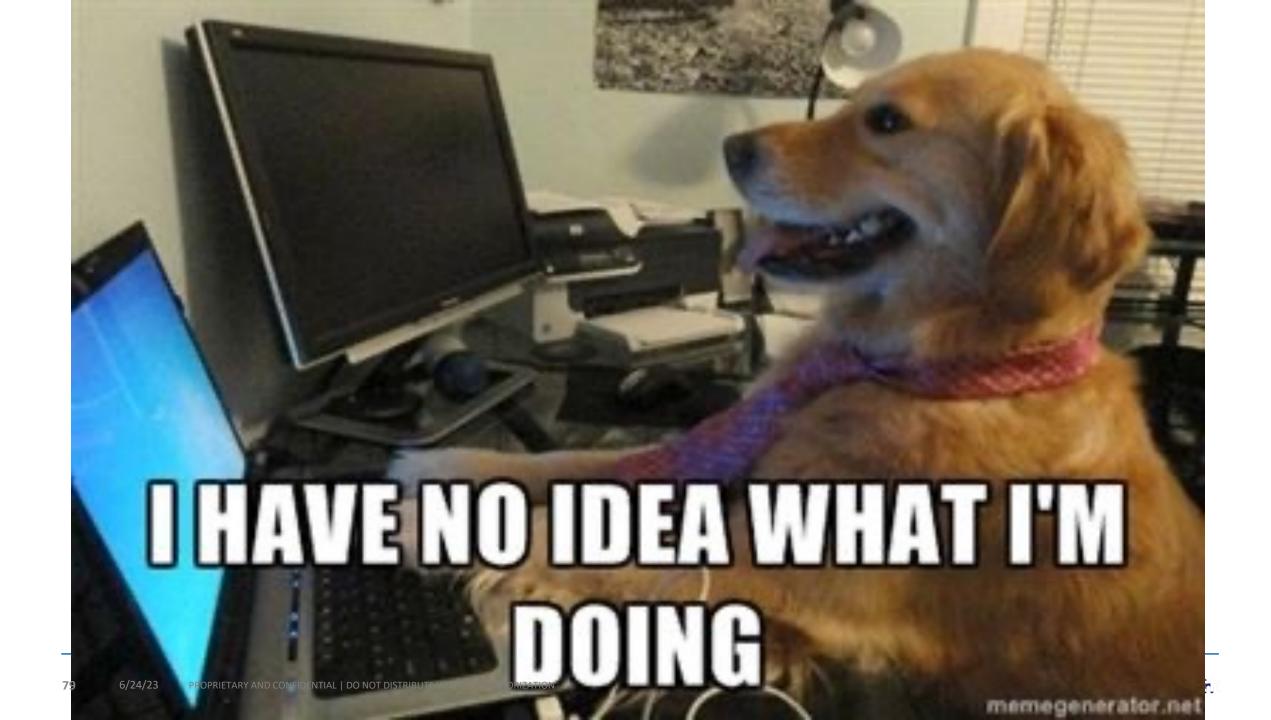














1. Take a chance

- 1. Take a chance
- 2. Unexpected opportunities

- 1. Take a chance
- 2. Unexpected opportunities
- 3. Structured pipeline



Thank you for your time!

Discussion