

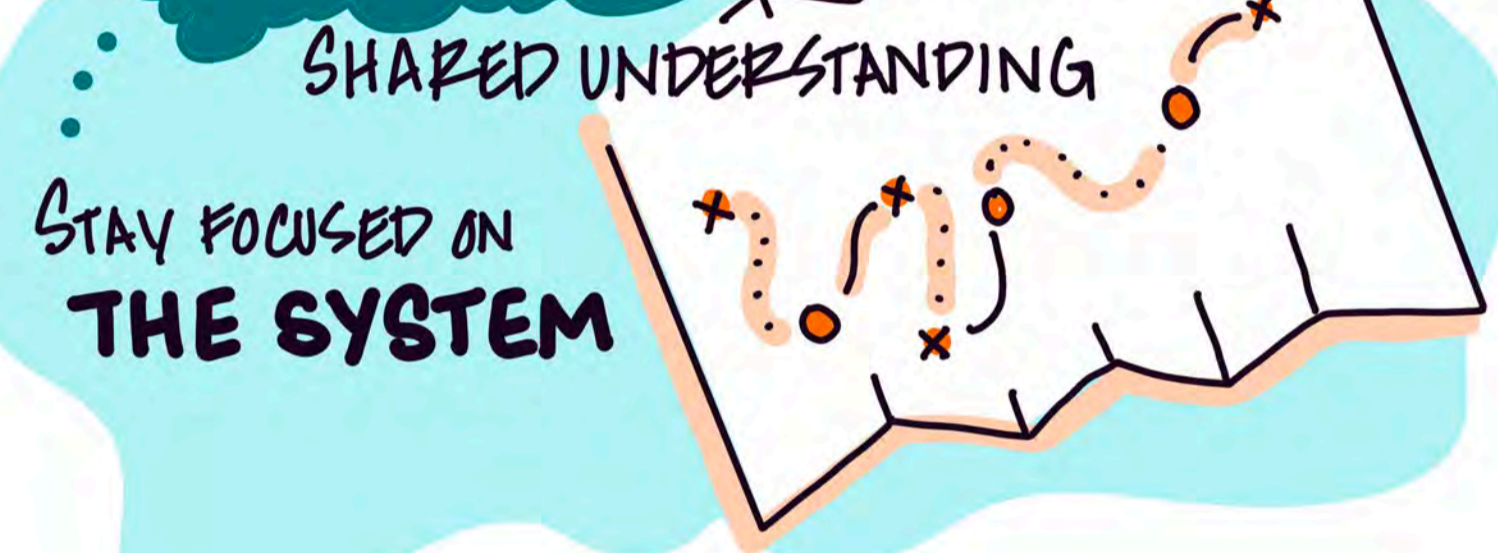
MAPPING WITH PURPOSE

Ashley Comer, Association of Public Health Laboratories

CREATING THE MAP IS THE PROCESS

USE YOUR COMMUNICATION SKILLS

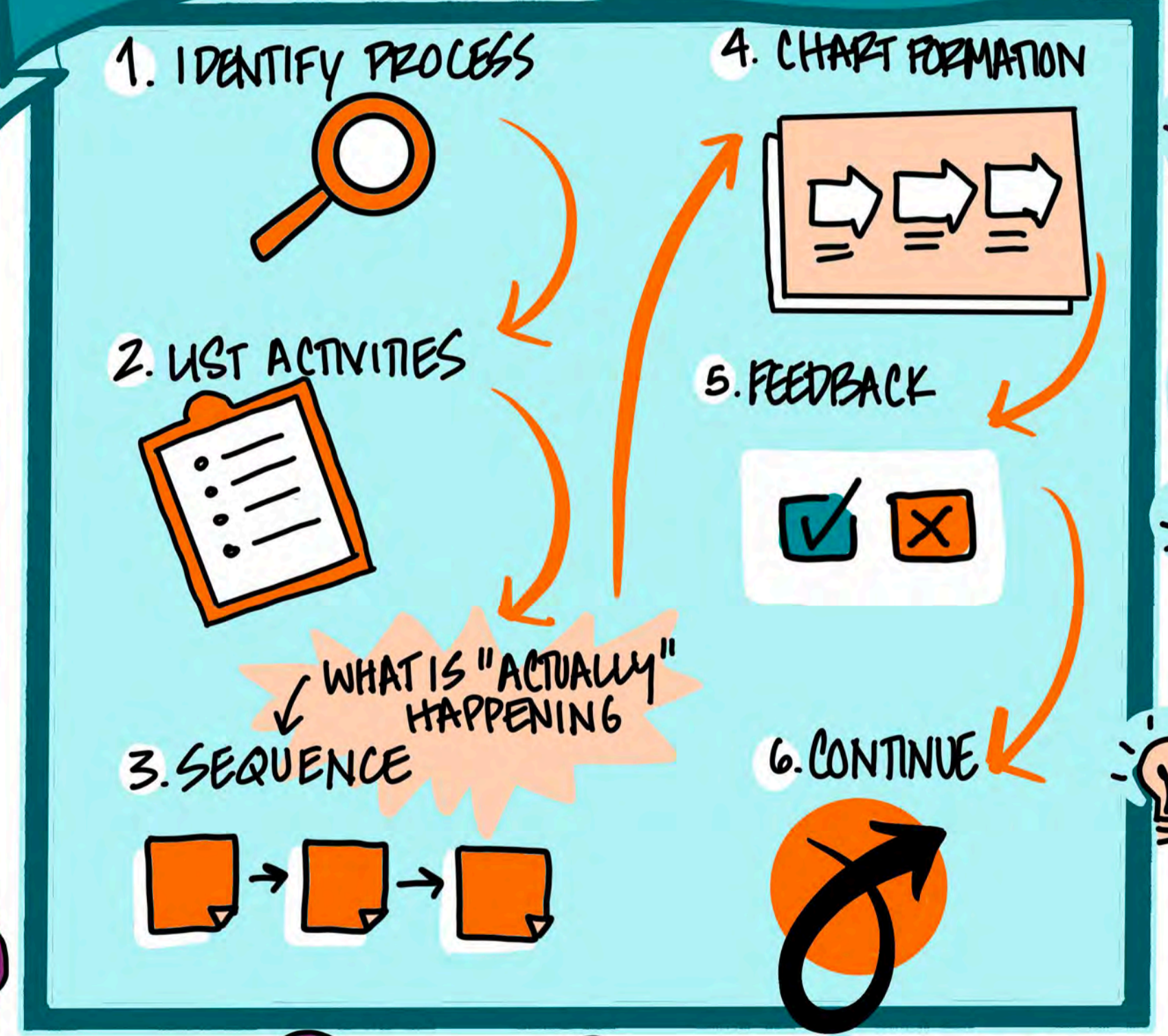
WHY MAP?



WHAT...

- LEVEL
- PROCESS OF SCOPE
 - AUDIENCE
 - INTENTION
 - FUTURE VS. CURRENT

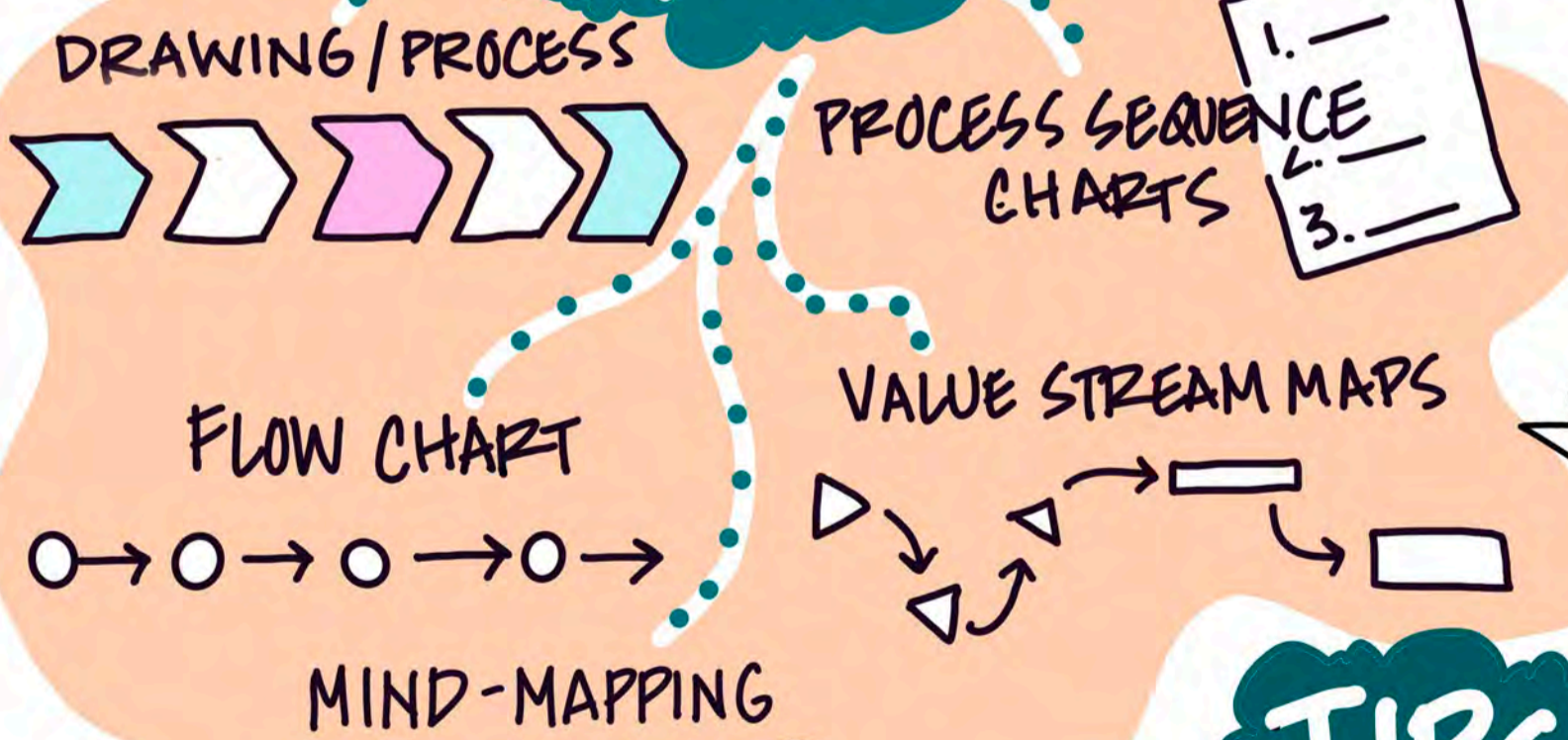
SIMPLE PROCESS MAP



INSIGHTS FROM THE PROCESS

- DEFINE THE SCOPE
- DIVERSITY OF BRAINS
- YOU THINK OF THINGS AS YOU GO
- WE DO SO MUCH WITHOUT THINKING
- KNOW WHO YOU SERVE
- WHAT IS EASY FOR SOME ISN'T FOR OTHERS
- HAVE SOMEONE SYNTHESIZE
- CHECK FOR CLARITY
- START WITH NEEDS ASSESSMENT
- WITH SOMEONE OUTSIDE OF THE PROCESS
- LEARN SOMETHING NEW EACH TIME

TYPES



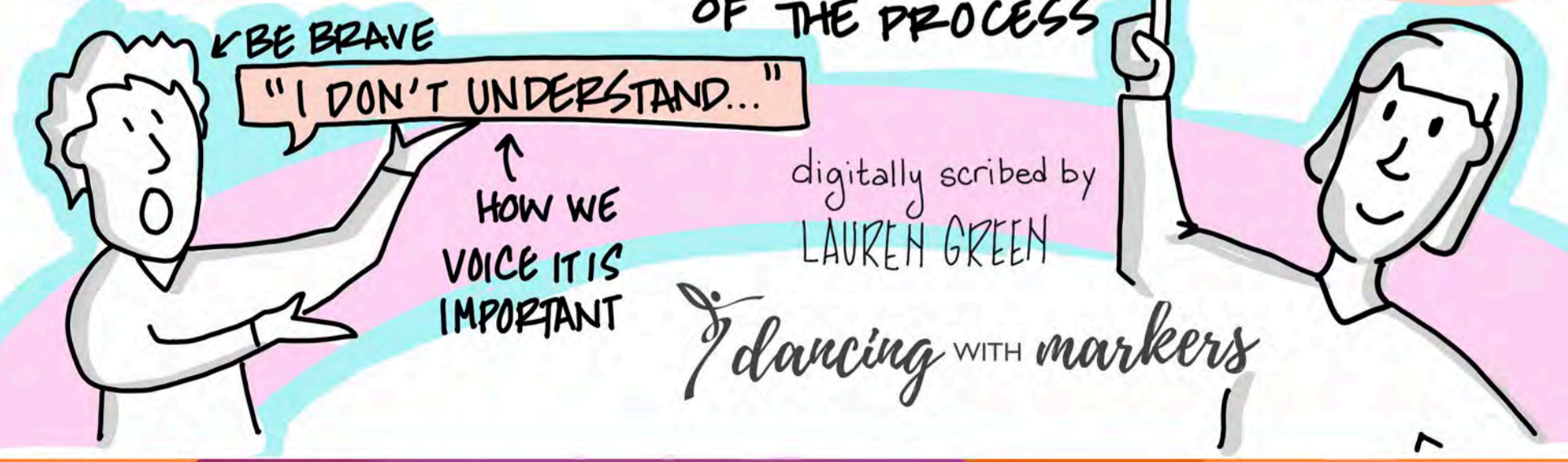
CHALLENGES

COMPLEX & NUANCED

TOO BIG OF SCOPE

TIPS

- BREAK-DOWN INTO PIECES FIRST
- GET INTO "NITTY GRITY" FIRST → HIGH LEVEL
- UPDATE REGULARLY!





IGNITE WITH THE QI PROJECTS COLLABORATIVE

QI Projects Collaborative Alumni and Current Teams
With Hilary Fryman, RN, BSN, Tennessee Department of Health

implementing electronic test ordering and resulting

TENNESSEE

- PROJECT: IMPLEMENT OZ
- GOAL: 20 HOSPITALS IN 2021
- RESULTS: 20 MORE HOSPITALS ONBOARDED IN 2022
- NEXT STEPS: DECREASE ERRORS



VIRGINIA

- PROJECT: ELECTRONIC MESSAGING SYSTEM
- GOAL: EDUCATE / ENGAGE HOSPITALS TO PROMOTE NBS PORTAL
- RESULTS:
 - FORMED AN ADVISORY NETWORK
 - HOSPITALS WERE MORE INVESTED IF THERE WAS A STATEWIDE SOLUTION
- NEXT STEPS: CONTINUE TO PARTNER AND LEARN



IOWA

- PROJECT: OTTER PROJECT
- GOAL: WORK WITH OBGYN'S TO IMPROVE NBS EDUCATION DURING PRE-NATAL PERIOD
- RESULTS:
 - EDUCATIONAL HANDOUT
 - BE FLEXIBLE - ONE SIZE FITS NONE



educating providers

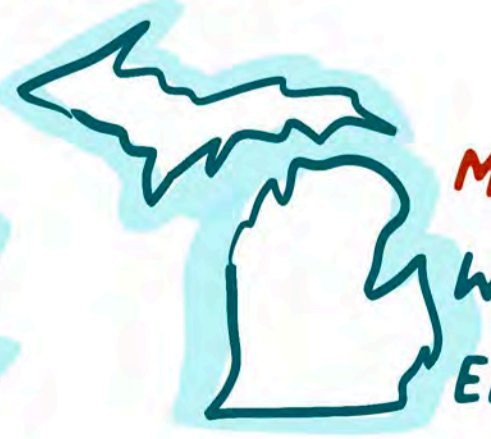
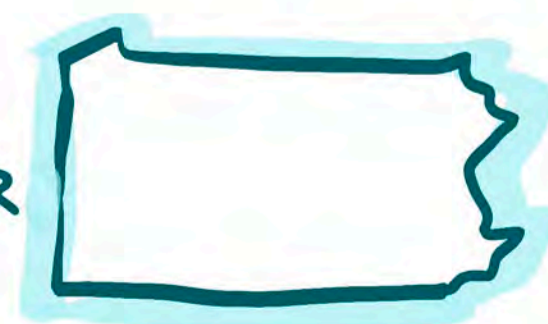
MICHIGAN

- PROJECT: CRITICAL CONGENITAL HEART DISEASE (CCHD) CQI
- GOAL: IMPROVE PULSE OXIMETRY SCREENING RATES AMONG THE HOMEBIRTH COMMUNITY
- RESULTS: INCREASE IN REPORTING RATES
- NEXT STEPS: HOPE TO SEE REPORTING RATE INCREASE FURTHER



2023 National Meeting
April 26-28, 2023 • An APHL™ Event

PENNSYLVANIA
GET RESULTS SOONER
- HL7 IN HOSPITALS



MICHIGAN
WHAT IT WOULD LOOK LIKE IF
EDUCATION WAS DONE PRENATALLY?





IGNITE WITH THE QI PROJECTS COLLABORATIVE

QI Projects Collaborative Alumni and Current Teams
With Hilary Fryman, RN, BSN, Tennessee Department of Health

enhancing nbs program's quality assurance framework



NEW YORK

- PROJECT: HOSPITAL COMMUNICATION PORTAL
- GOAL: MAKE THE PORTAL EASY TO NAVIGATE

MINNESOTA

- PROJECT: LONGITUDINAL FOLLOW-UP DATA
- GOAL: ACCURATE AND CONSISTENT DATA; ARE WE ASKING THE RIGHT QUESTIONS



- UAB: WHAT DO SICKLE CELL DISEASE PATIENT OUTCOMES LOOK LIKE WITH DIFFERENT NEWBORN SCREENING FOLLOW UP MODELS- CAN WE IDENTIFY BEST PRACTICES?

IOWA

- PROJECT: COOP PROJECT

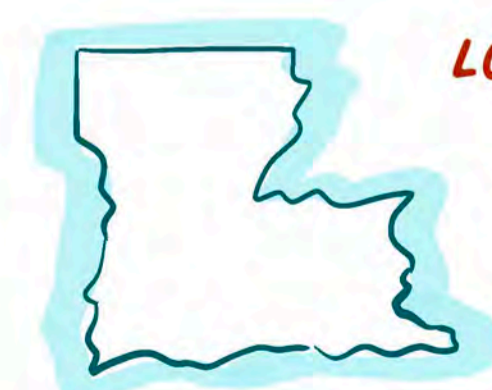
- RESULTS: GROWTH, MINIMUM QUALITY DATA SET, GUIDES, 45 NEW PDSA CYCLES
- NEXT STEPS: CONTINUE TO BUILD MORE COMPLETE DATA SETS



- VIRGINIA: CONTINUITY OF OPERATIONS (COOP) IN FOLLOW-UP



- NORTH DAKOTA: LONG-TERM FOLLOWUP - CARE COORDINATION MODEL



- LOUISIANA: LEAN SIX SIGMA MODEL USED TO REDUCE TURNAROUND TIME OF SAMPLE COLLECTION TO RESULT REPORTING BY IMPROVING SPECIMEN TRACKING AND PROCESS WORKFLOW.

- GOAL:
 - FOCUS ON BUILDING A COMMUNICATION PLAN
 - WHEN TO ACTIVATE, WHO CAN ACTIVATE
- NEXT STEPS: COOP RESOURCE WEBSITE AND HOW TO DEACTIVATE



2023 National Meeting

April 26-28, 2023 • An APHL™ Event

dancing WITH markers



IGNITE WITH THE QI PROJECTS COLLABORATIVE

QI Projects Collaborative Alumni and Current Teams

With Hilary Fryman, RN, BSN, Tennessee Department of Health

improving screening sensitivity

UTAH

PROJECT: DEVELOPMENT OF COMPUTATIONAL SUPPORT TOOLS

GOAL:
- VISUALIZE THE POPULATION IN MULTI-VARIABLE FASHION
- HARMONIZATION

NEXT STEP: DEVELOPING THE ALGORITHMS



TENNESSEE

PROJECT: 2ND TIER CONGENITAL ADRENAL HYPERPLASIA (CAH) CQI PROJECT

GOAL: DECREASE FALSE POSITIVE AND IMPROVE POSITIVE PREDICTIVE VALUE

RESULTS: PAUSED INTERNAL VALIDATION

NEXT STEPS: UPDATE INSTRUMENTS AND RESTART VALIDATION



GEORGIA

IMPLEMENTATION OF CLIR POST-ANALYTICAL TOOLS FOR POMPE AND MPS I

ALASKA

DETERMINE STATE CCHD PREVALENCE BASELINE BY REVIEWING REPORTED CCHD SCREENS AND BIRTH DEFECTS REGISTRY

CCHMC

CENTER-IMPROVING TIMELINESS AND ACCURACY OF HEMOGLOBINOPATHY DIAGNOSIS USING GENETIC TESTING CONFIRMATORY TESTING

improving sample quality

DECREASE UNSATISFACTORY SAMPLES

GEORGIA



PARTNERING WITH HOSPITALS - "BADGE BUDDIES"

ARIZONA



LOOKING AT SECOND SPECIMENS FOR LARGE SPECIMEN SITE

COLORADO



LOOKING AT THE AMOUNT OF MISSING INFORMATION ON THE FORM

2023 National Meeting

April 26-28, 2023 • An APHL™ Event

dancing WITH markers

IGNITE WITH THE QI PROJECTS COLLABORATIVE

QI Projects Collaborative Alumni and Current Teams
With Hilary Fryman, RN, BSN, Tennessee Department of Health

improving timeliness

PUERTO RICO

- PROJECT: MS / MS INSTRUMENTATION
- GOAL: INCREASE TAT FOR THE PERCENT OF SPECIMENS WITH A TIME CRITICAL RESULT REPORTED
- RESULTS:
 - WE'VE IMPROVED TIME AND DECREASED REPEATS
 - EDUCATIONAL ACTIVITIES HAVE HELPED DECREASE UNSATS
- NEXT STEP: COMPLETE INSTALLATION AND IMPLEMENT SMA TESTING

KANSAS

- PROJECT: SUNDAY COURIER
- GOAL: IMPROVE TRANSIT TIME (2.75 DAYS FROM COLLECTION TO LAB)
- RESULTS: GETTING 25% OF SPECIMENS 1 DAY SOONER
- NEXT STEPS: CONTINUE TO IMPROVE

OREGON

- PROJECT: PREPAID ENVELOPES FOR MIDWIVES
- GOAL: 48 HOURS OR LESS FOR TRANSIT TIME
- RESULTS: NEED MORE COMMUNICATION WITH MIDWIVES
- NEXT STEPS: HOPE TO IMPLEMENT 2 NEW COURIERS IN THE STATE

SOUTH CAROLINA

- PROJECT: COURIER SERVICE
- GOAL: RECEIVED BY LAB WITHIN 24 HOURS OF COLLECTION
- RESULTS: 2022 - 1.4 DAYS
- SHOUTOUT: NEW 7 SPOT CARDS

WASHINGTON

- PROJECT: COURIER IMPLEMENTATION AND QUALITY & COMPLIANCE DATA ENHANCEMENTS PROJECTS
- GOAL: IMPROVE TRANSIT TIME BY PROVIDING A STATE COURIER
- RESULTS: ELIMINATION OF PAPER MAILERS; DECREASE CALL VOLUME; SAVING ON POSTAGE

CALIFORNIA

- PROJECT: IDEAL INITIATIVE
- GOAL: REDUCE TRANSIT TIME BY 25%, FOCUS ON SMALL RURAL HOSPITALS
- RESULTS:
 - 90% IMPROVEMENT IN BASELINE DATA
 - IMPROVED DASHBOARD
- NEXT STEPS: SUSTAINABILITY; MORE KNOWLEDGE SHARING; MORE DASHBOARD UTILIZATION

WISCONSIN

HOW TO CREATE IMPROVED TIMELINES IN THEIR LAB

NEW JERSEY

REDUCE THE TIME FROM SPECIMEN COLLECTION TO ARRIVAL

VIRGINIA

STREAMLINE THE DATA ENTRY AND RESULTING OF PKU TREATMENT SAMPLES

TEXAS

SCANNING DEMOGRAPHICS INTO THEIR SYSTEM - REDUCING DATA ENTRY

LEVERAGING SYSTEMS DESIGN THINKING IN NEWBORN SCREENING

Kinsey Anderson, MPH, Kansas Department of Health and Environment
With Kelly Kramer, MPH, Washington State Department of Health and Fran Altmaier, Arizona Department of Health Services

WICKED PROBLEMS

LOST TO FOLLOW-UP
NO A+B=C FORMULA

COMPLEX SYSTEMS

TRYING TO UNDERSTAND A COMPLEX SYSTEMS IS COMPLEX

LINEAR

PROBLEM-SOLVING OFTEN FAILS



MAP THE SYSTEM

- RICH PICTURES
- STOCK & FLOW MODELS
- CONNECTION CIRCLES
- CAUSAL LOOP DIAGRAMS & SYSTEM DYNAMICS

DESIGN THINKING

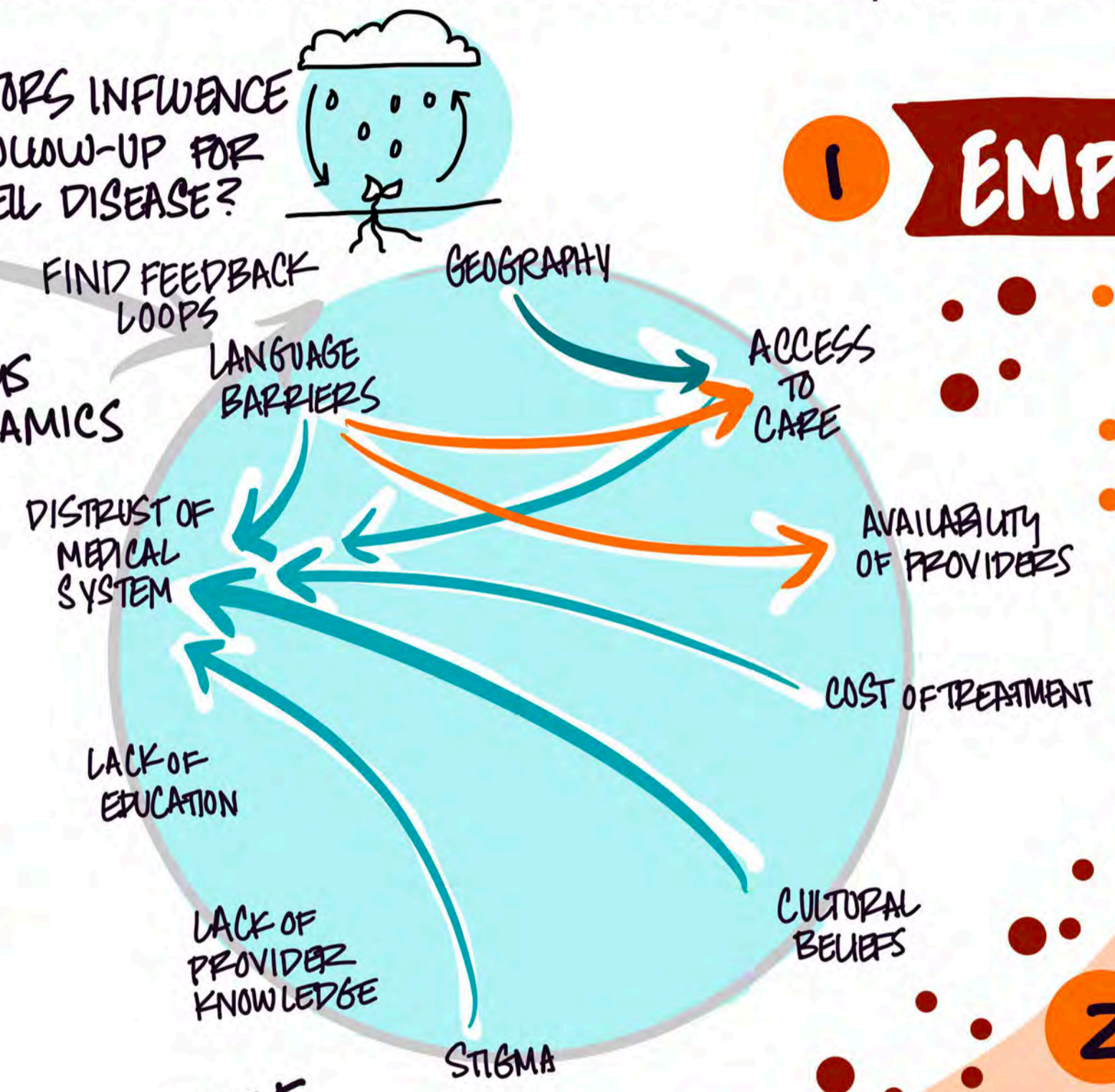
- IS SOLUTION-FOCUSED
- STARTS WITH PEOPLE & THEIR NEEDS
- A METHOD AND A MINDSET
- CONTEXT DEPENDENT

UNDERSTANDING WORKSPACE

SYSTEMS THINKING

- IS PROBLEM-FOCUSED - ARNOLD & WADE
- INTERCONNECTEDNESS
- SYNTHESIS - THE WHOLE & ITS PARTS
- FEEDBACK LOOPS
- CAUSALITY - ONE THING DEPENDS ON ANOTHER
- EMERGENCE - OUTCOMES
- SYSTEMS MAPPING

WHAT FACTORS INFLUENCE LOST TO FOLLOW-UP FOR SICKLE CELL DISEASE?



1 EMPATHIZE

d.school
BEGINNER'S MIND

- UNDERSTAND STAKEHOLDER EXPERIENCES
- WHAT/HOW/TELL ME ABOUT PERSONAS & EMPATHY MAPS



2 DEFINE

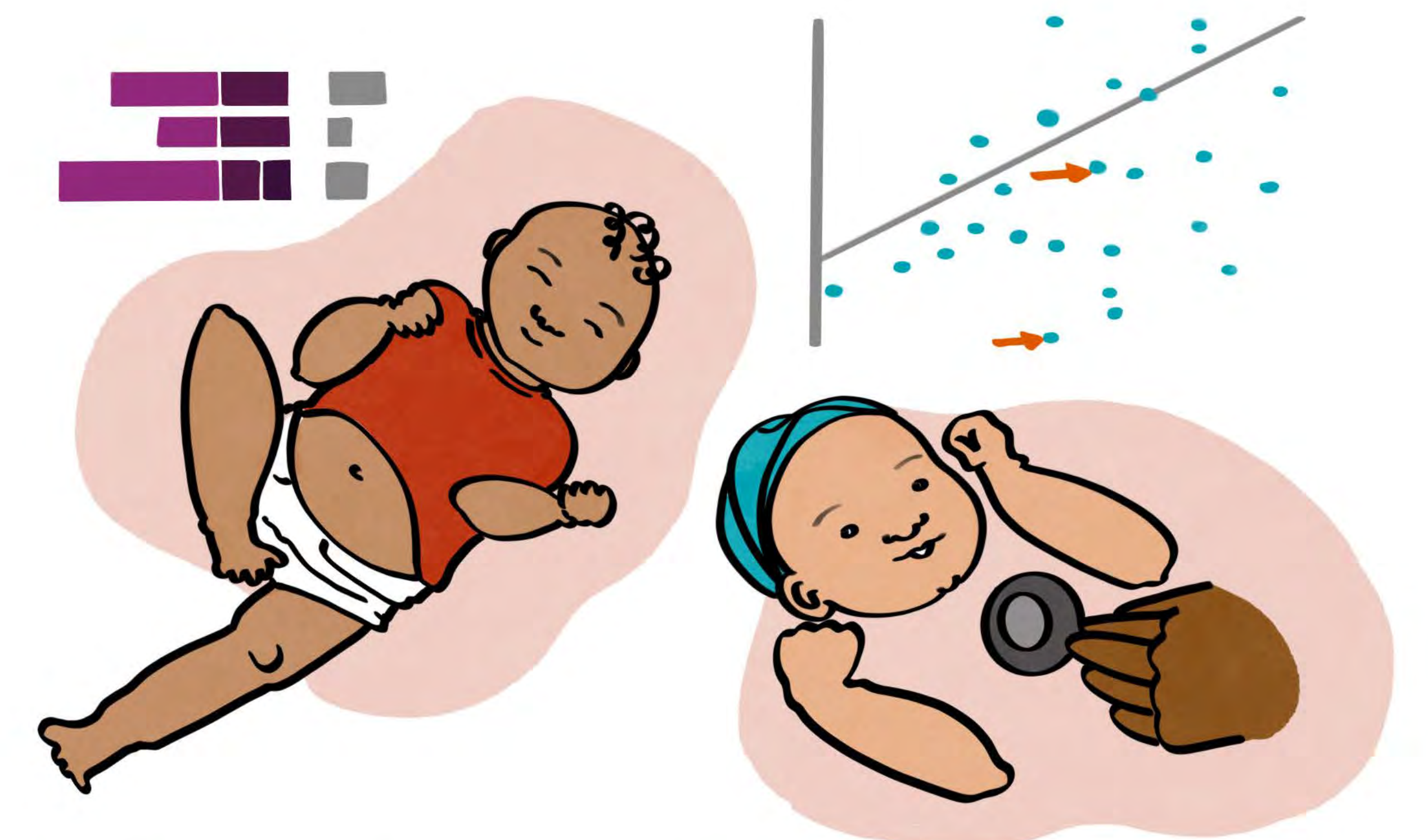
- PREPARE & REVIEW DATA
- ORGANIZE DATA - AFFINITY
- WRITE USER NEEDS - IMPACT URGENCY MATRIX
- PRIORITIZE NEEDS
- NEEDS → REQ'TS

- IDEATE
- PROTOTYPE
- TEST




AS A PARENT OF A NEWBORN I WANT INFO ON STATE RESOURCES SO THAT I CAN HELP MY BABY LIVE THEIR BEST LIFE.
→ MEDICARE
↳ BETTER ACCESS TO CARE

SO, YOU COLLECTED DATA, NOW WHAT? CLEAN AND VISUALIZE DATA IN A MEANINGFUL WAY




Sarah Mckasson, MPH, Association of Public Health Laboratories

With Amy Gaviglio, MS, CGC, Connecticut Consulting, APHL and Kathy Chou, PhD, New York State Department of Health



DATA CLEANING PROCESS

- ACCURACY
- VALIDITY + RELIABILITY
- CREDIBILITY
- QUALITY
- REDUCE BIAS



EFFECTIVE DATA VISUALIZATION

- ADDS CREDIBILITY
- ENFORCES POINT
- PICTORIAL SUPERIORITY EFFECT
- GRAPHS + FORMULAS ADD CREDIBILITY

1 CREATE A CODEBOOK

- ALL RELEVANT INFORMATION TO DECIPHER YOUR DATA SET

2 REMOVE DUPLICATES

- TO ENSURE ACCURATE REPORTING

3 MANAGE INCOMPLETE DATA

- ASSESS TRUE ZERO VS. NULL
- TO REPRESENT FULL SAMPLE

4 IDENTIFY OUTLIERS

- DETERMINE AN ACCEPTABLE RANGE

5 VALIDATE

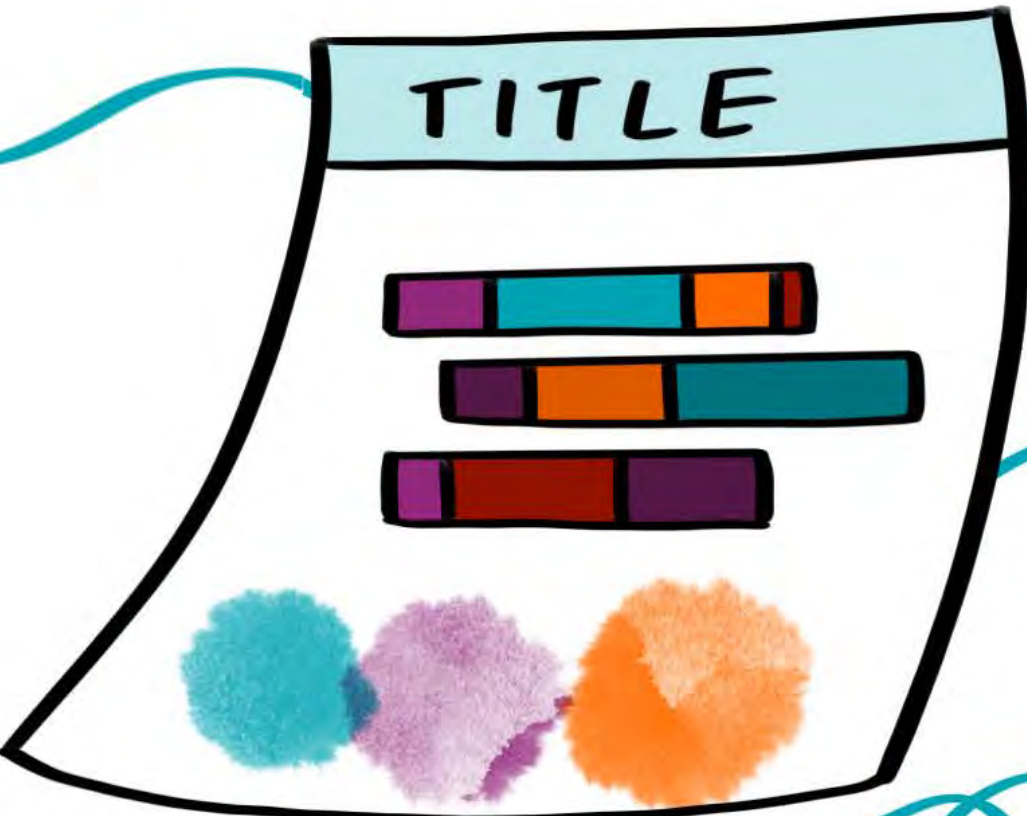
- NOTICING ERRORS AND ENSURING ACCURACY

DATA IS MESSY AND COMPLEX



CONSIDERATIONS

- WHAT IS YOUR POINT?**
- DON'T BE GENERAL
 - DON'T LET AUDIENCES MAKE MEANING WITHOUT YOU
- WHO IS YOUR AUDIENCE?**
- WHAT IS THEIR NUMERIC LITERACY?



TITLE

DESCRIPTIVE TITLE

DIAGRAM, CHART, GRAPH TYPES MATTER

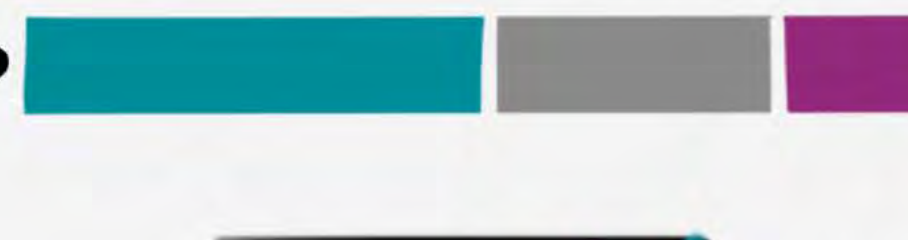
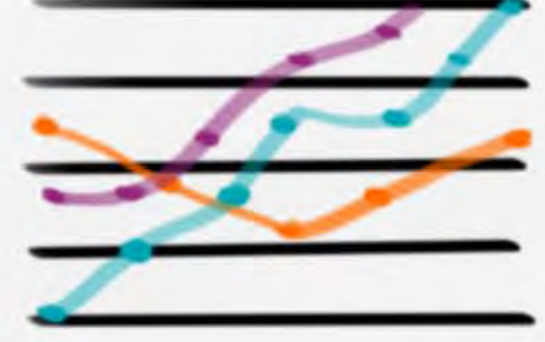
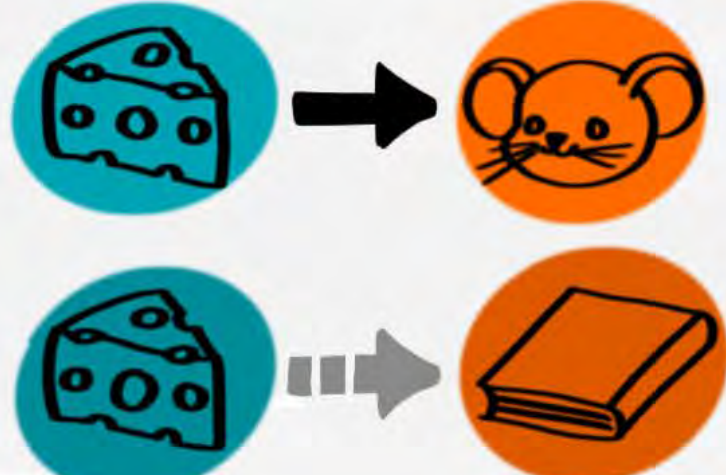
COLOR MAKES A DIFFERENCE

EASIER TO UNDERSTAND (Iconary) vs. **CONFUSING** (Bar Chart)

WHICH CHART TYPES ARE BEST?

- MAKE CHARTS MORE ACCESSIBLE**
- REDUCE CLUTTER REDUCE CONFUSION!**

IDEAS

- SURVEY DATA >>>>  >>>> DIVERGENT STACKED BAR CHART
- CHANGE OVER TIME >>>>>  >>>>> LINE GRAPHS
- SHOWING >>>>>>  >>>>>> DIAGRAMS

