Process Map Webinar

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DOHVE: <u>D</u>esign <u>O</u>ptions for Maternal, Infant, and Early Childhood <u>H</u>ome <u>V</u>isiting <u>E</u>valuation

- Working with US-DHHS to support the federal MIECHV Program
- DOHVE:
  - ✓ Design options for a federal evaluation of evidence-based home visiting programs
  - ✓ Evaluation-related Technical Assistance (TA) for "promising approaches"
  - ✓ TA for grantees' continuous quality improvement, Management Information Systems (MIS), and benchmarks
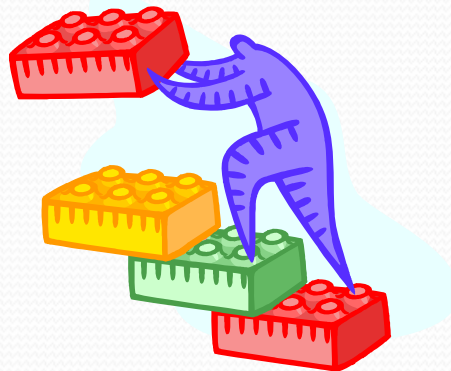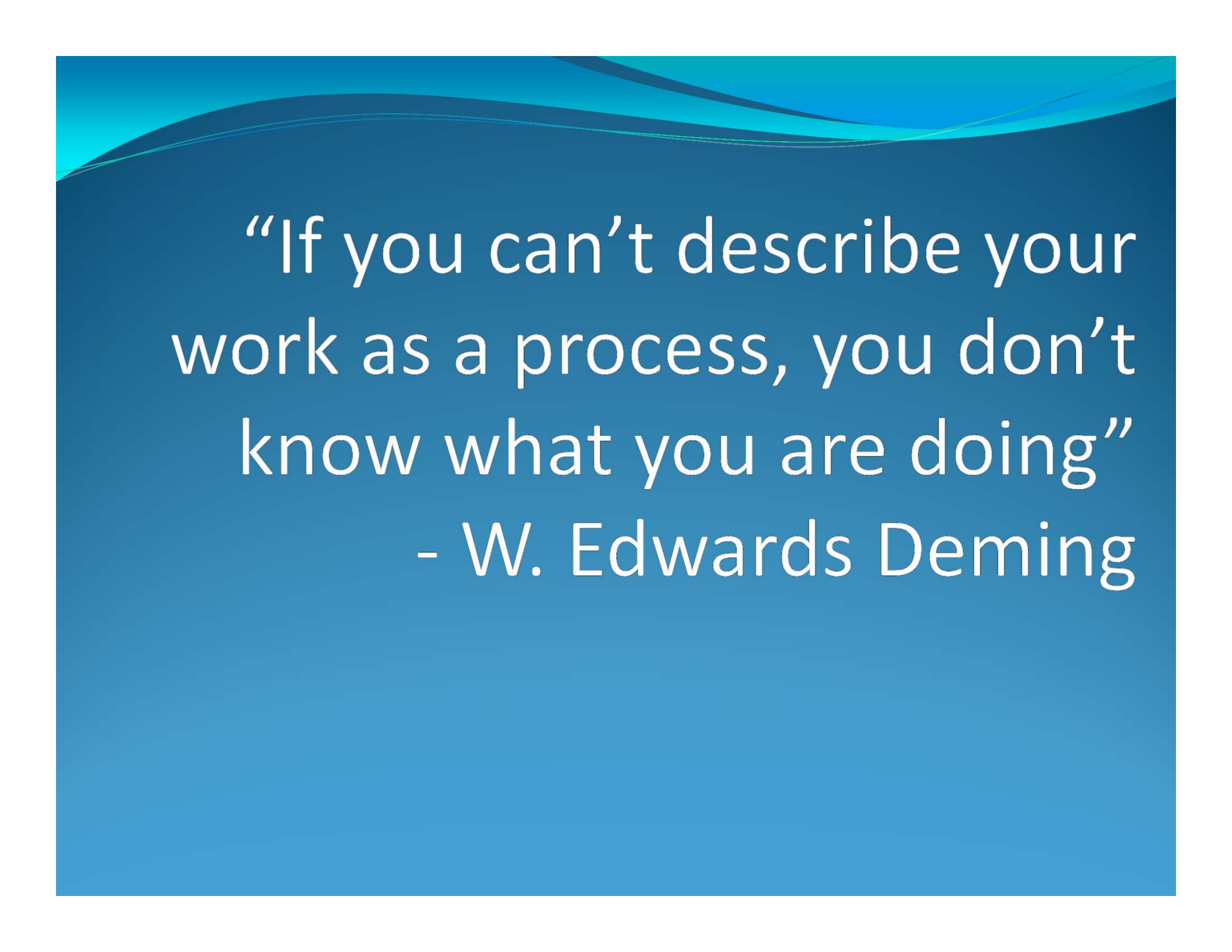
DOHVE TA Team

- James Bell Associates (JBA)
- Cincinnati Children's Hospital Medical Center & Every Child Succeeds
- MDRC

Objectives for Today

- Provide an introduction to process maps
- Illustrate examples of how to develop a process map
- Demonstrate how this tool can be valuable in quality improvement

"If you can't describe your work as a process, you don't know what you are doing"
- W. Edwards Deming

Quality Improvement

- Quality improvement comes from a desire to make things better

- At first glance, quality improvement might seem like more work piled on to an already impossible work load

- But if quality improvement can ultimately lessen that workload, and allow you to provide more efficient/better home visits for your families, leading to better outcomes, isn't it worth it?

What is a Process Map/Flowchart?

- Purpose: Provides a visual diagram or picture of the sequence of steps to complete a task

- Team Learning: Encourages understanding of how a process is implemented, identifies improvement opportunities, and highlights which steps may impact the performance

- Training Aid: Assists in communicating to others how a process is done

What is a Process Map/Flowchart?

- Shows:
  - Unexpected complexity, unnecessary loops
  - Problem areas (waits/delays/confusion)
  - Outlines the actual versus the ideal flow of the process
  - Possibility for simplification, standardization
  - Contributions to overall product by a variety of roles and individual

Methods

- Pen and paper
- Markers and white board
- Sticky notes or cards and a large flip chart or wall
- Use computer tools- Visio, PowerPoint, etc.

- Identify and involve all key people involved with the process
- Don't worry about drawing it the 'right way' at first
- Sequence is not important when brainstorming steps
- Once all ideas are shared, arrange the activities in the proper sequence
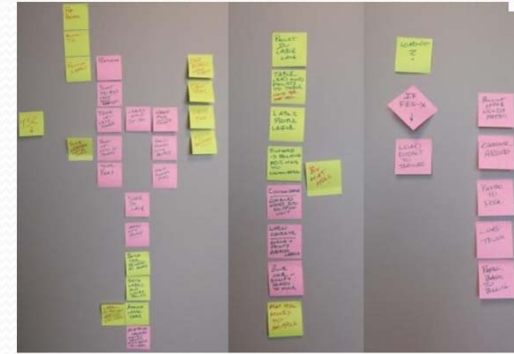
FLOWCHART

Referral

Call forwarded to Call Center

Meet Program Criteria?

Y
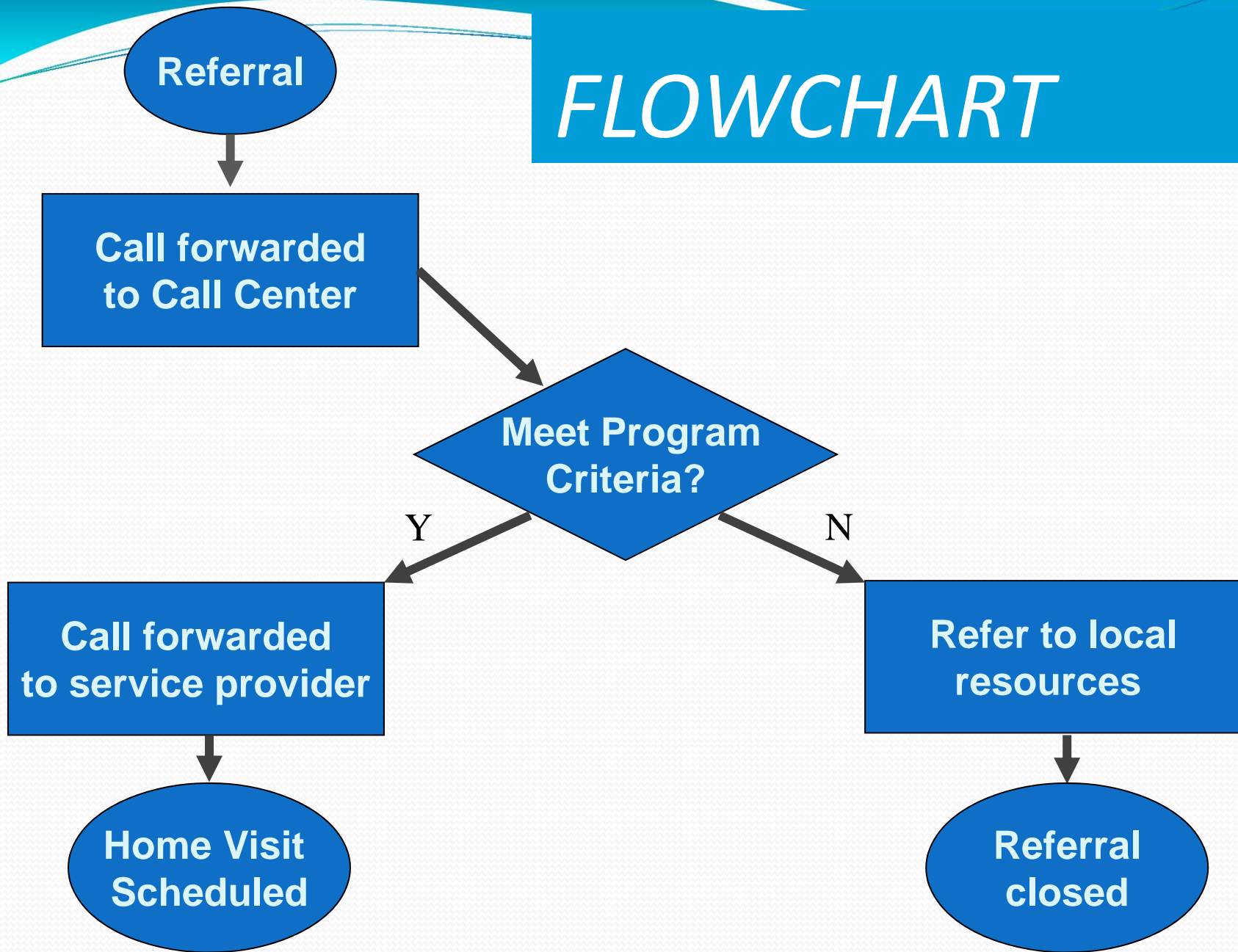
N

Call forwarded to service provider

Refer to local resources

Home Visit Scheduled

Referral closed

Issues in Flowcharting

- Determine the appropriate level of detail
- Consistent use of the symbols
- Who is the audience?
- Boundaries – where does the process start and end?

Getting to Know Your Process

- Develop an AIM statement
- Observe the process in action
- Revise your high level process map to include additional elements based on your observation
- Where are opportunities for the process not to be followed, for problems to arise, or steps that can be eliminated?

It's all about planning for the right outcome

Handy Hints for Identifying Aims

- What is the problem you are trying to solve?

- How do you know it is a problem?

- If you "fix" the problem, how will you and everybody else know that it is "fixed"?

- Should include the measure in the aim statement: Increase/decrease from X to Y by date.

Pizza Delivery

- Background:
  - You are the owner of a local pizza restaurant that is having difficulty meeting customer expectations. Customers are complaining that they are not getting their pizza on time. You have called a meeting with your staff to ask for ideas to solve the problem.

AIM Statement

By June 30, 2013, 95% of orders will be delivered within 30 minutes of order being placed.

Why:

Increased customer satisfaction

- **S –** Specific (clearly stated)
- **M –** Measurable (measurable numeric goals)
- **A –** Actionable (within the control/influence of your team)
- **R –** Relevant (aligned with the organization's priorities)
- **T –** Time bound (specific time frame)

Observe & Document the Current Process & Collect Baseline Data

- <u>Do process observations</u>
- List the steps of the process
- Create a high level process flow diagram
- Collect baseline data
- Display data on a run chart

Hints to Begin Our Process Map

- Be clear about the purpose of the process
- What is the output/outcome desired by the customer?
- What are the inputs to the process?
- Who are the key customers & suppliers?

Process: Producing &Delivering Pizza

Customer: You

Output: Delivered Pizza
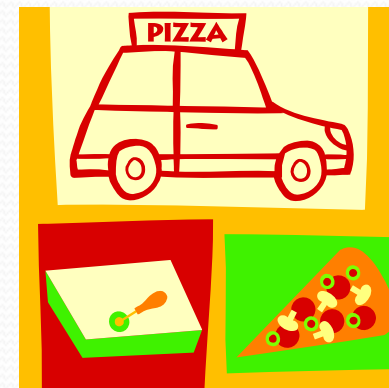
Quality Characteristics:
- Tastes good
- Plenty of Cheese
- Received in 30 minutes from when order is placed
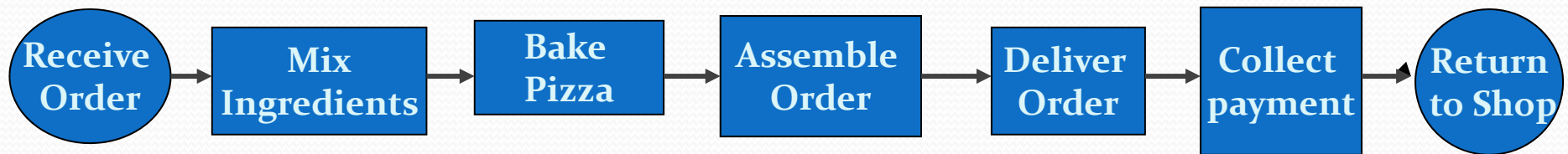
Process: Producing &Delivering Pizza

Supplier: ABC Pizza Shop

Process Boundaries:
- Begins with receiving the order
- Ends with returning to the shop

High Level Process: Producing & Delivering Pizza

Receive Order → Mix Ingredients → Bake Pizza → Assemble Order → Deliver Order → Collect payment → Return to Shop

Measuring Improvement

- While all improvement requires a change- all change is not an improvement

- Determining measures allows you to learn if your change is moving you toward or away from the improvement you are looking for

- Measures should be numeric, clear and specific

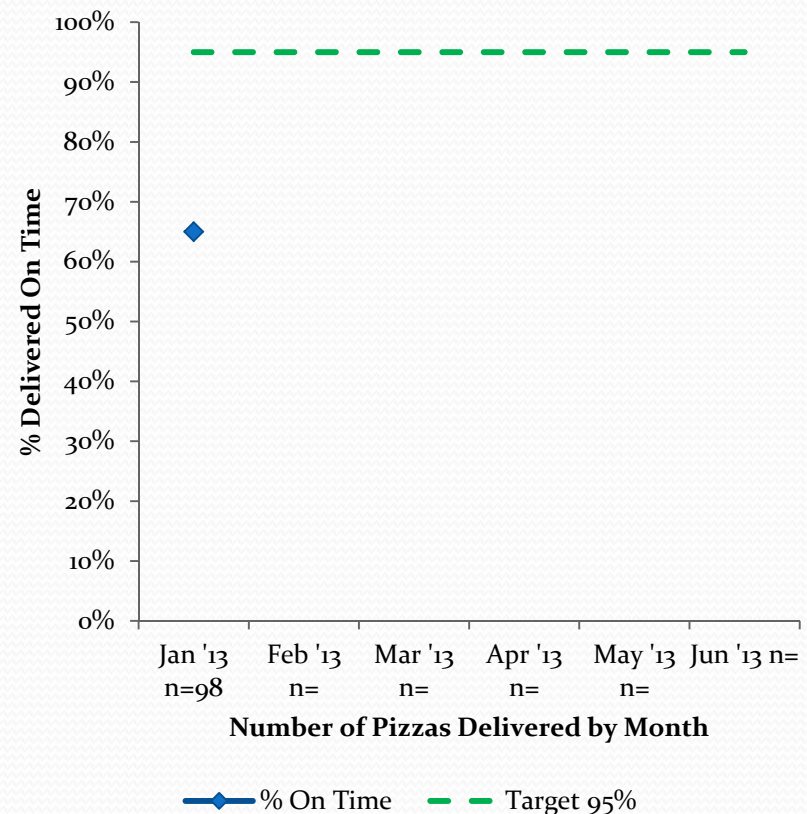- How will we know our pizza's are getting delivered faster?

Collect Baseline Data

Reasons for Late Pizza Deliveries:

(Quantifying Process Failures)

- Wrong Address - 23
- Wrong Order - 17
- Not Enough Drivers - 5
- Complex Order - 2
- Driver Lost - 37
- Stuck in Traffic - 12

Pizza Deliveries by Month

% Delivered On Time

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

Jan '13 n=98   Feb '13 n=   Mar '13 n=   Apr '13 n=   May '13 n=   Jun '13 n=

Number of Pizzas Delivered by Month

◆ % On Time   – – Target 95%

Identify & Quantify Process Failures

- For each major step in the process, note what typically goes wrong
- Note the frequency with which each breakdown occurs
- Note which of the breakdowns create the most serious problems with achieving the desired outcome of the process

Drivers of Change

- What is ideal or evidence based?
- Important to revisit as you understand the project more
- Help focus the selection of changes to test
- What are the top 5 high level process failures that stand in the way of you achieving your AIM?

WHAT- Defining Our Drivers

- Order recorded accurately
- Pizza needs to be made timely
- Sufficient number of delivery drivers
- Vehicles available and fully operational
- Getting to the delivery location efficiently
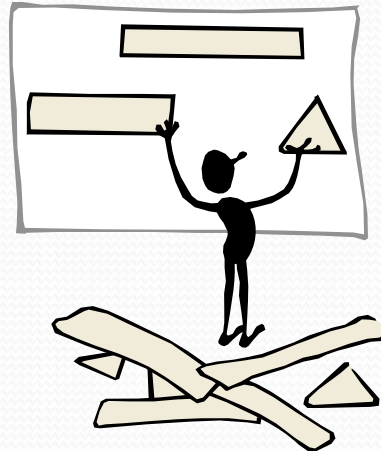
Simplified FMEA
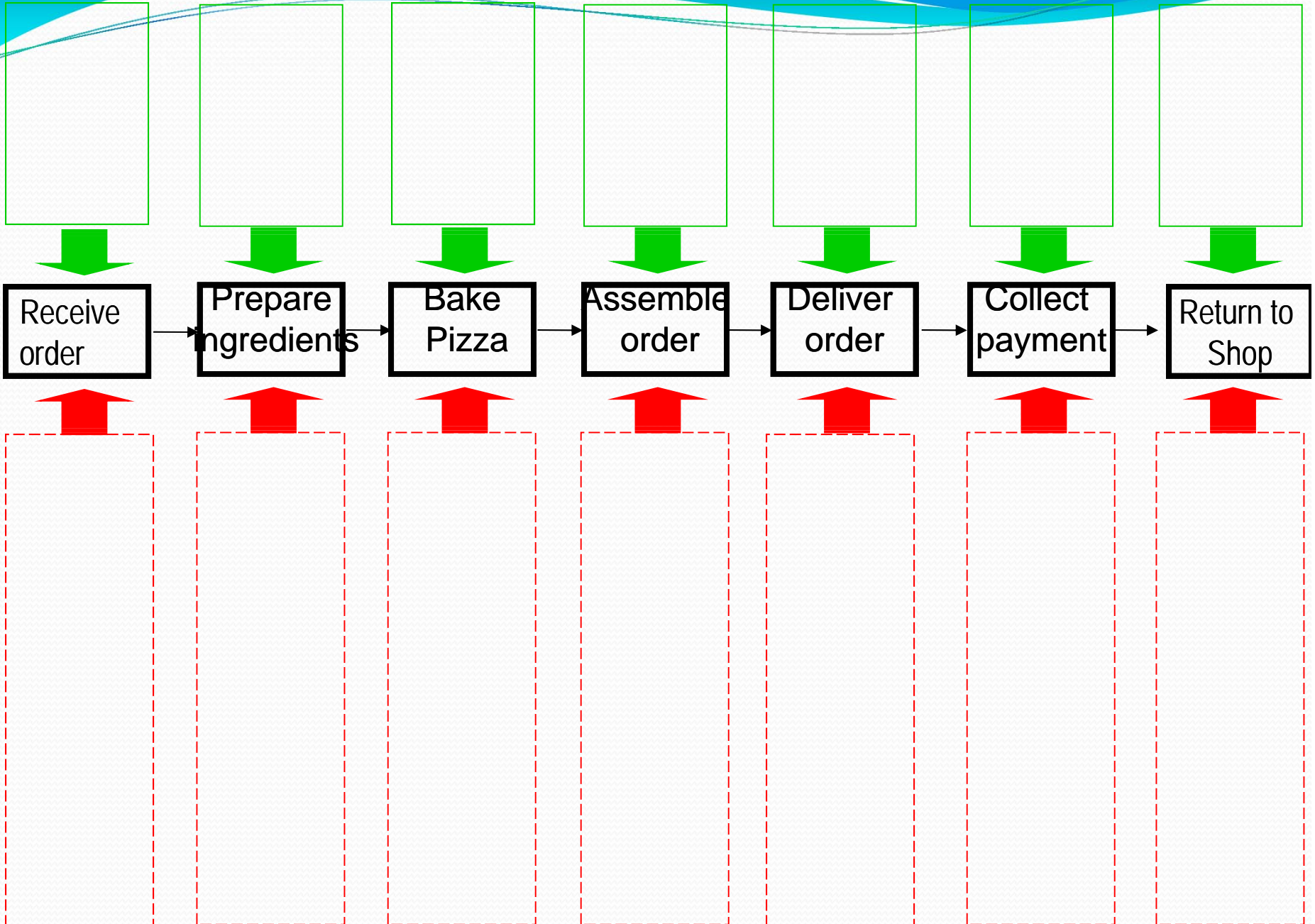## (Failure Mode Effect Analysis)

- Create a <u>high level</u> process map/flow chart
- Through brainstorming with your team, identify possible causes of failures for each high level process block
- Ideally, you would <u>collect data</u> to identify the <u>frequency</u> of each cause
- Ideally, you would rate <u>how critical</u> each possible failure is regarding its <u>effect on the desired outcome</u> of the process

Process Name: Producing & Delivering Pizza
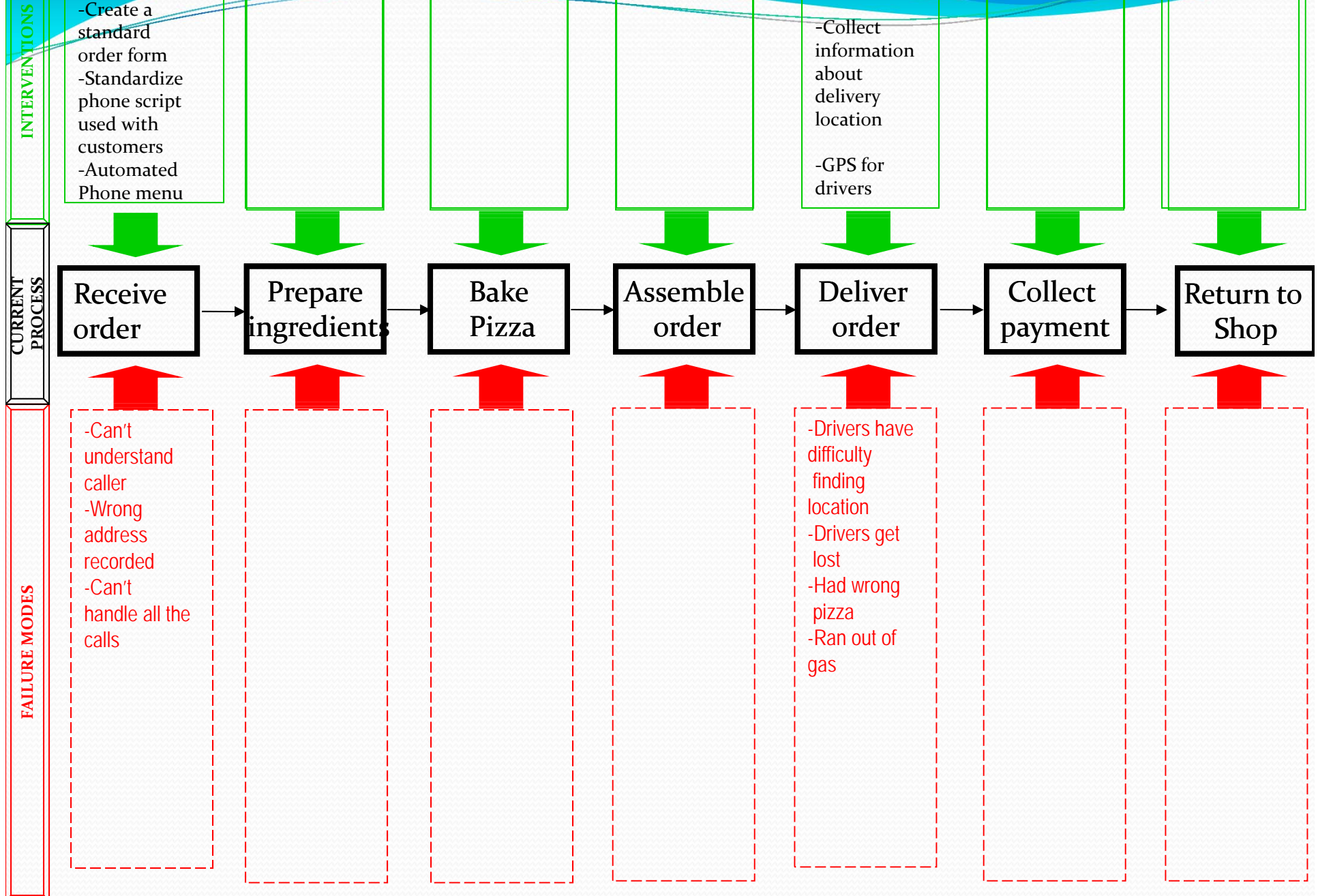
Cincinnati Children's
change the outcome®

INTERVENTIONS

CURRENT PROCESS

| Receive order | → | Prepare Ingredients | → | Bake Pizza | → | Assemble order | → | Deliver order | → | Collect payment | → | Return to Shop |

FAILURE MODES

Process Name: Producing & Delivering Pizza

Cincinnati Children's — change the outcome®

INTERVENTIONS

- Create a standard order form
- Standardize phone script used with customers
- Automated Phone menu

- Collect information about delivery location

- GPS for drivers

CURRENT PROCESS

Receive order → Prepare ingredients → Bake Pizza → Assemble order → Deliver order → Collect payment → Return to Shop

FAILURE MODES

- Can't understand caller
- Wrong address recorded
- Can't handle all the calls

- Drivers have difficulty finding location
- Drivers get lost
- Had wrong pizza
- Ran out of gas

Small Scale Testing

- Generate a number of ideas- involve representatives from each group that will either be involved in the testing or will be impacted by the change

- Identify which ones are testable

- Test those that are related to your drivers
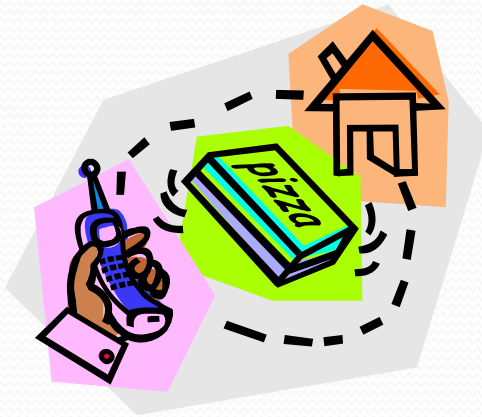
- Study the results

HOW- Improving Our Delivery

- Order recorded accurately
  - Standardize script to collect information from customer
  - Standardize order entry form
    - Pizza makers will know where to find requested toppings and any special instructions
  - Automated phone menu
    - Route delivery orders to one line, pick up orders to a different line
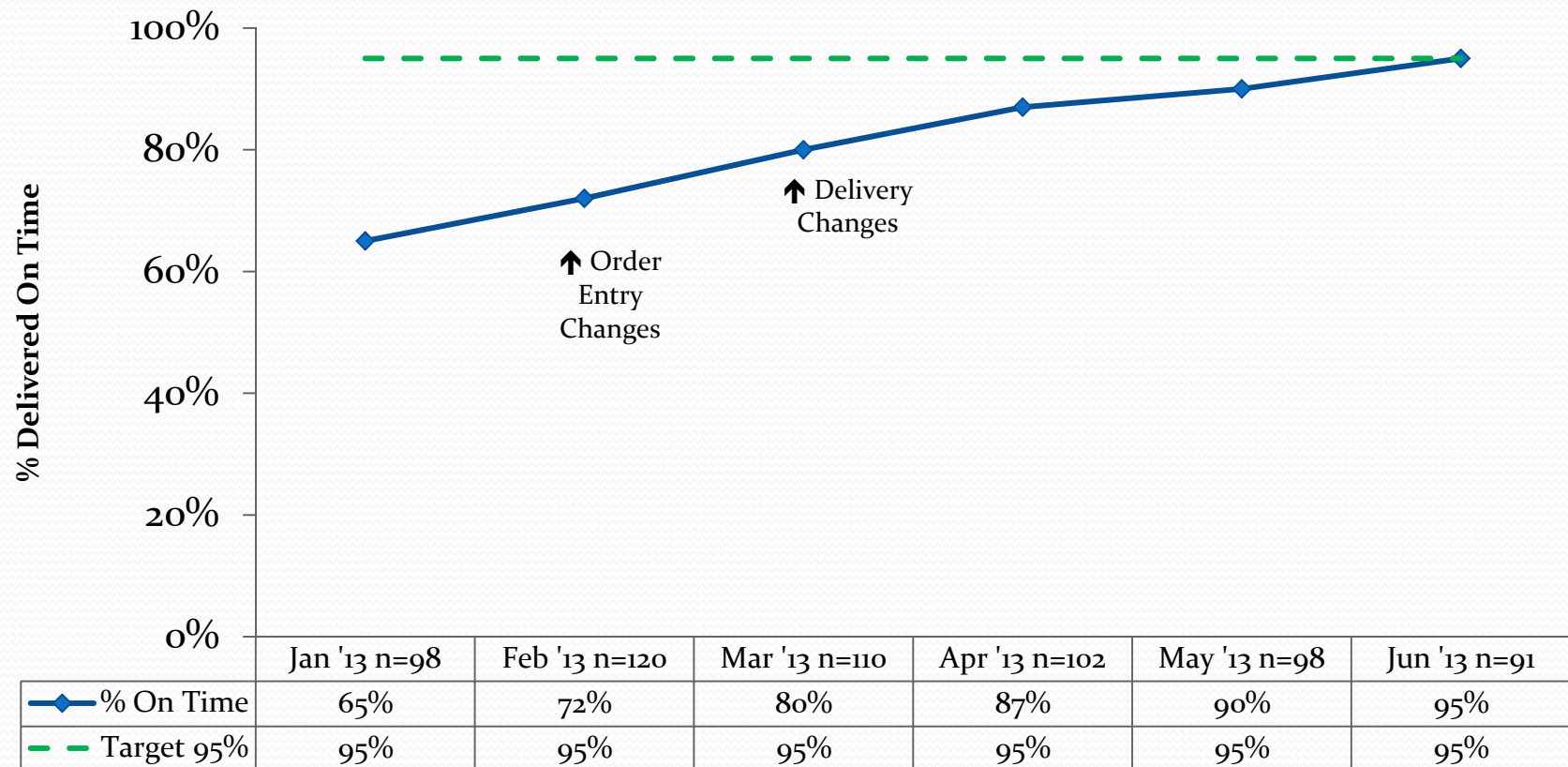
HOW- Improving Our Delivery

- Getting to the delivery location
  - Standardize script to collect information from customer
    - Clarify apartment, house, business, etc.
    - Collect phone number for follow up if needed
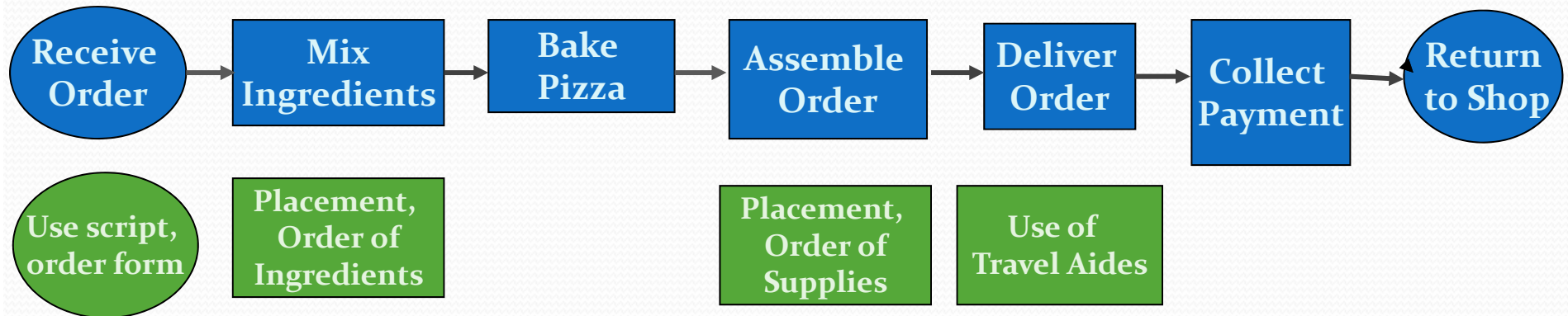 - Provide maps/GPS for drivers
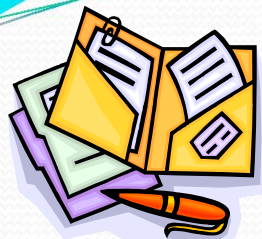
Documenting Our Journey

Pizza Deliveries by Month

	Jan '13 n=98	Feb '13 n=120	Mar '13 n=110	Apr '13 n=102	May '13 n=98	Jun '13 n=91
% On Time	65%	72%	80%	87%	90%	95%
Target 95%	95%	95%	95%	95%	95%	95%

How is our process different now?

Receive Order → Mix Ingredients → Bake Pizza → Assemble Order → Deliver Order → Collect Payment → Return to Shop

Use script, order form

Placement, Order of Ingredients

Placement, Order of Supplies
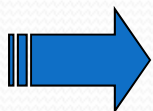
Use of Travel Aides

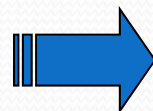# How Elements From The Home Visit Become Quality Indicators

Tools (Family Success Report, Forms Calendar, Home Visit Planning Guide, etc.) are used to prepare for each home visit
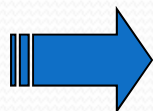
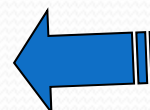Home visit takes place with a blend of curriculum, interacting with child,

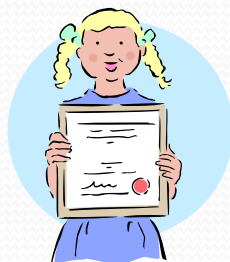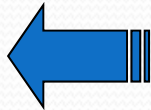introducing program goals and completing appropriate forms and inventories.

Paperwork from visit is collected accurately as indicated by the developmental period
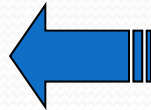
Reports are created by analyzing the data entered into the database. Sixteen Quality Indicators summarize achievement of the age based milestones for the eligible families at each agency. Additionally data is analyzed for achievement by the system.

One month after the developmental period is complete, the home visitor celebrates the age based milestones achieved with the family.

Using data collected over time, home visitor reviews the scores and outcomes associated with the forms and inventories collected. She takes this information in addition to the curriculum and plans for the next home visit.
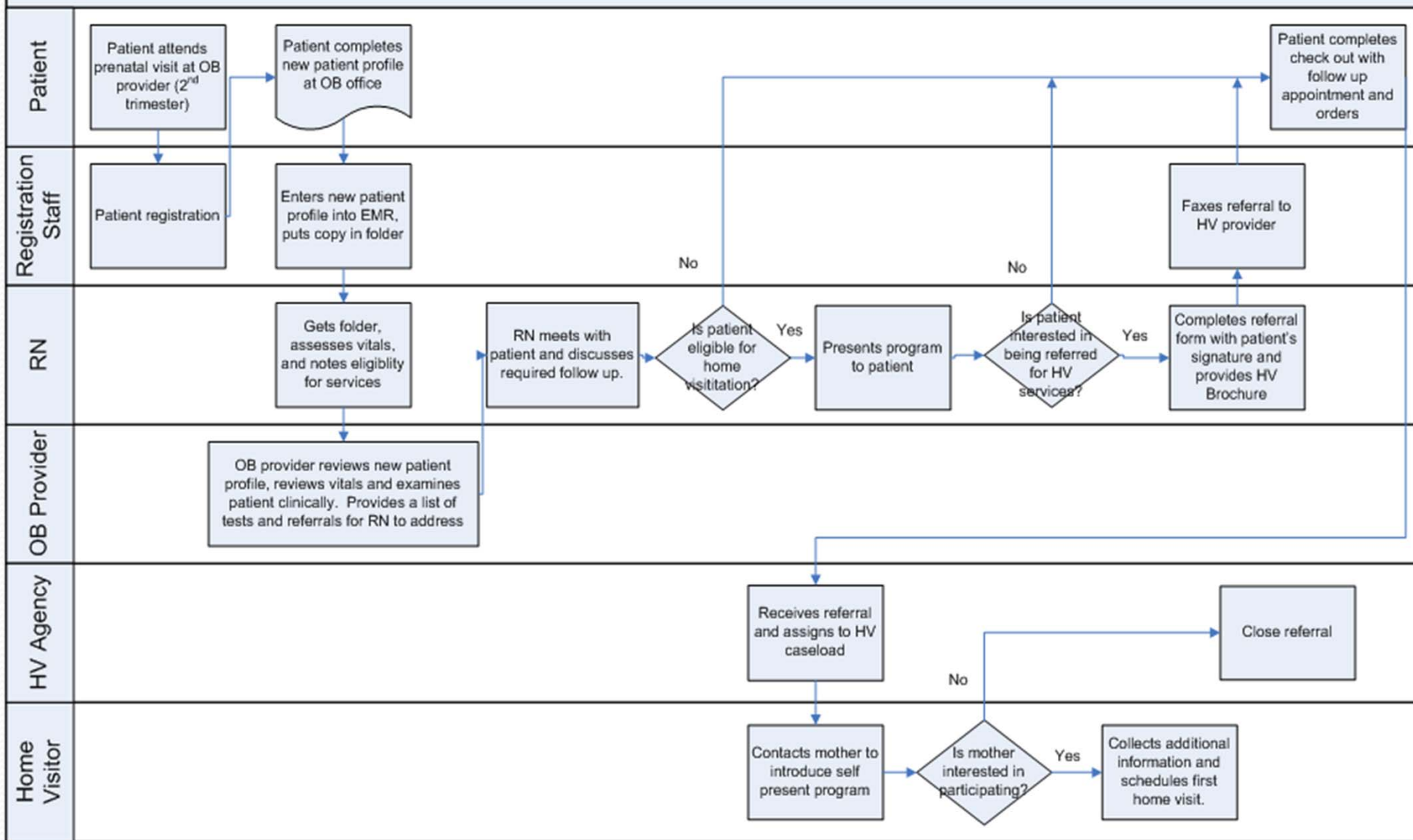
Home Visitor enters information into database timely and accurately

Prenatal Referral for Home Visiting Services

Patient
- Patient attends prenatal visit at OB provider (2ⁿᵈ trimester)
- Patient completes new patient profile at OB office
- Patient completes check out with follow up appointment and orders

Registration Staff
- Patient registration
- Enters new patient profile into EMR, puts copy in folder
- Faxes referral to HV provider

RN
- Gets folder, assesses vitals, and notes eligiblity for services
- RN meets with patient and discusses required follow up.
- Is patient eligible for home visitation? — No / Yes
- Presents program to patient
- Is patient interested in being referred for HV services? — No / Yes
- Completes referral form with patient's signature and provides HV Brochure

OB Provider
- OB provider reviews new patient profile, reviews vitals and examines patient clinically. Provides a list of tests and referrals for RN to address

HV Agency
- Receives referral and assigns to HV caseload
- Close referral

Home Visitor
- Contacts mother to introduce self present program
- Is mother interested in participating? — No / Yes
- Collects additional information and schedules first home visit.

High Level Process Map- Depression Screening

Agency 1
- Mom is enrolled in program and baby has been born
- HV administers the EPDS at 10 weeks

Agency 2
- Mom is enrolled in program
- HV administers a client self assessment at time of enrollment using the Maternal Health Assessment Form
- Mental Health provider administers the EPDS at 2 weeks post partum depression visit

- Data are entered timely into required state-wide database
- Reports are generated from state-wide database showing percent of depression screens administered over the percent of eligible moms
- State wide rate and individual agency/county rates are calculated by Epidemiologist
- Monthly reports are distributed to agency/county Project Managers showing state wide rate and individual agency performance
- CQI committee meeting is held and results are discussed with participants from all agencies/counties and state.
- During meeting, opportunities for process improvement and mitigation of barriers are discussed. Best practices are also identified.
- Next steps for improvement are identified for each of the participants

Make it easy to do the right thing

Minimize steps to accomplish task but maximize opportunities to avoid system failures

Build redundancy into the system- protect against single component failure

Final Thoughts…

- Have clear identification of process owners and steps to success

- Analyze process outcomes, not just final goal. Process matters!

- Be transparent- we are learning our way into a new system, failures or learning opportunities are to be expected!

"If you can't describe your work as a process, you don't know what you are doing"
- W. Edwards Deming

For More Information

- Contact your DOHVE Liaison
- http://www.mdrc.org/dohve/dohve_resources.html