



Practical ways to introduce and engage staff to QI

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Boston Public Health Commission

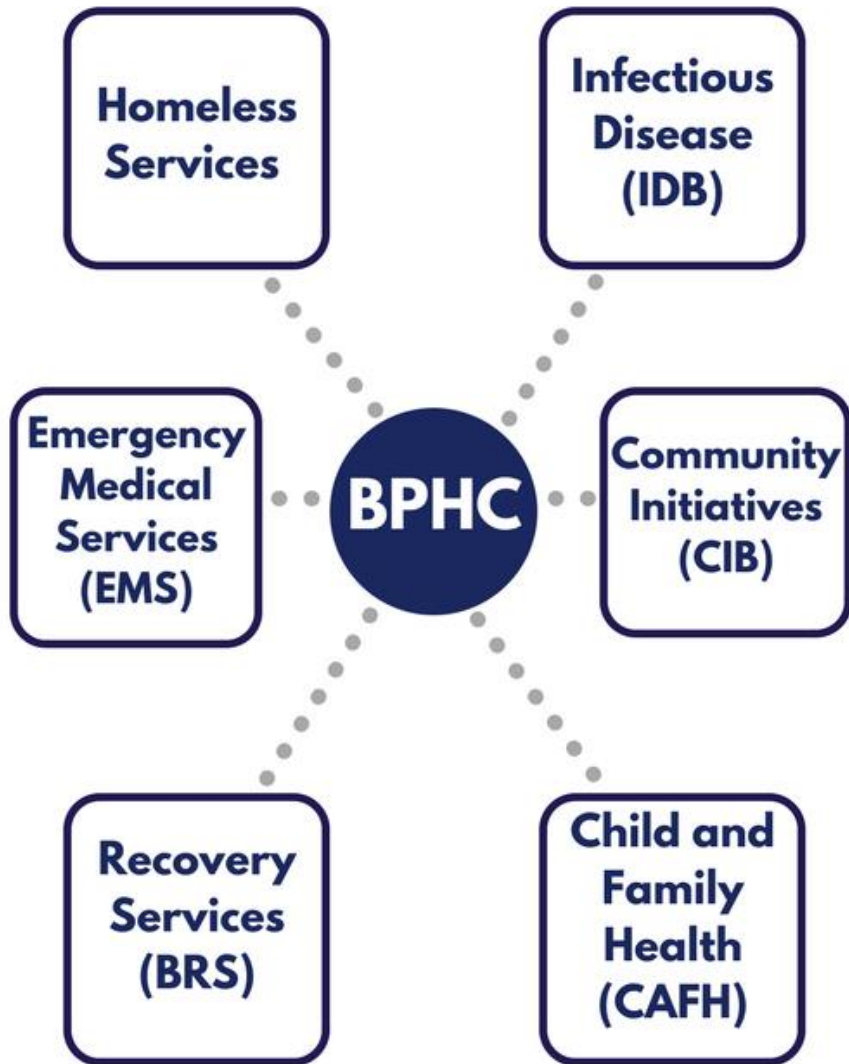
Ohio Public Health Improvement Exchange | Columbus, OH | November 19 - 20, 2019

The Boston Public Health Commission

Our Mission

To protect, preserve and promote the health and well-being of all Boston residents, particularly the most vulnerable.

BPHC PROUDLY SERVES ALL BOSTON RESIDENTS



- ❖ Over 1100 staff
- ❖ 7 Campuses

Recognized by NACCHO as a
2019 Model Practice for:

1. Use of games
2. Integrating health equity
3. Use of case studies
4. Innovative staff engagement
5. QI committee

Fun trainings
and games are
one of our key
drivers of QI
culture change!



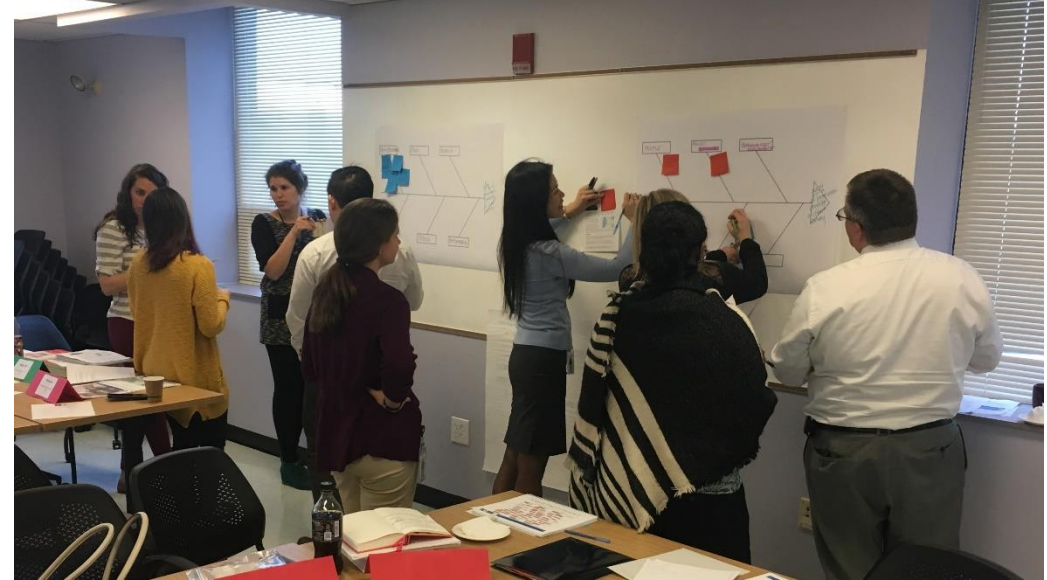
Learning Objectives

- Explain how games can enhance learning of abstract concepts
- Facilitate educational quality improvement games within your own organization

Link to download materials: bit.ly/BPHC-games

Offer Regular Trainings

- ❖ 60 Minute New Hire Orientation
- ❖ 90 Minute Introduction to Quality Improvement
- ❖ Introduction to Performance Management
- ❖ 5-Session Quality Improvement Toolbox Series



92%
said the training
opportunities were
**extremely or
very valuable**
to their work

82%
**definitely
recommend**
Toolbox Series to a
colleague

Why games?

Introduce an abstract concept

Sustain gains and learning

Apply adult learning principles (multisensory)

Adults are goal oriented

Problem solving and contributing factors analysis

Reinforce importance of measurement

Encourage creativity

Promote team building

Engage staff (it's fun!)



Some research

[J Contin Educ Nurs](#). 1997 Sep-Oct;28(5):231-4.

Gaming: a teaching strategy to enhance adult learning.

[Henry JM](#)¹.

– Author information

1 Wellesley Central Hospital, Toronto, Ontario, Canada.

Adult Education Research Conference

2009 Conference Proceedings (Chicago, IL)

New Territories in Adult Education: Game-based Learning for Adult Learners

Bryce O. Anderson
University of Tennessee

Not just for children: game-based learning for older adults

Nathalie Charlier¹, Michela Ott², Bernd Remmele³, Nicola Whitton⁴

¹ Teacher training in health sciences education, KU Leuven, Leuven, Belgium

² Institute Educational Technology, National Research Council, Genova, Italy

³ Business and Vocational Education, WHL Graduate School of Business and Economics, Lahr, Germany

⁴ Education and Social Research Institute, Manchester Metropolitan University, Manchester, UK

Components of any game

Goal(s)

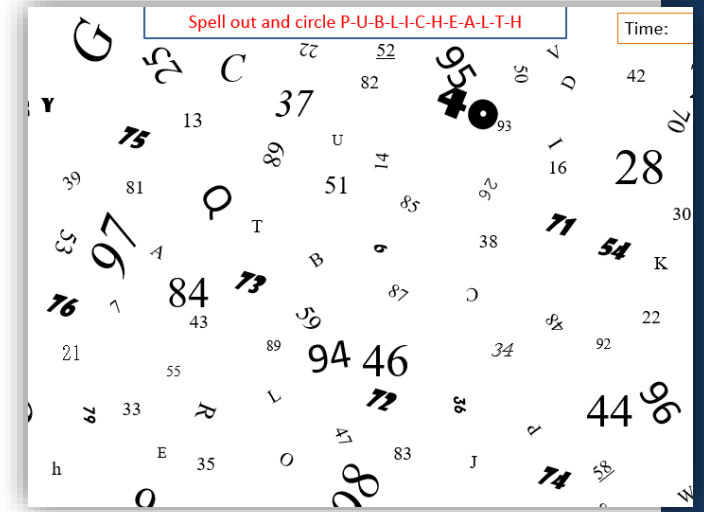
Rule(s)

Challenge

Incentive



Games to make trainings engaging



Games to teach the QI Model

QI is a deliberate *process* to continuously improve **Efficiency, Effectiveness** and **Equity** in a current process/system.

BPHC model: **10 step improvement process**
(Adapted from the *Model for Improvement*)

AIM

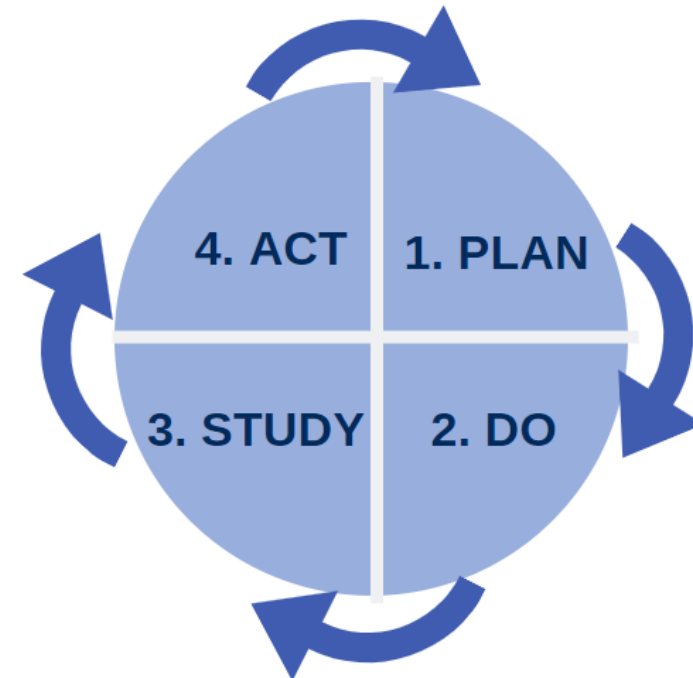
What are we trying to accomplish?

MEASURES

How will we know that a change is an improvement?

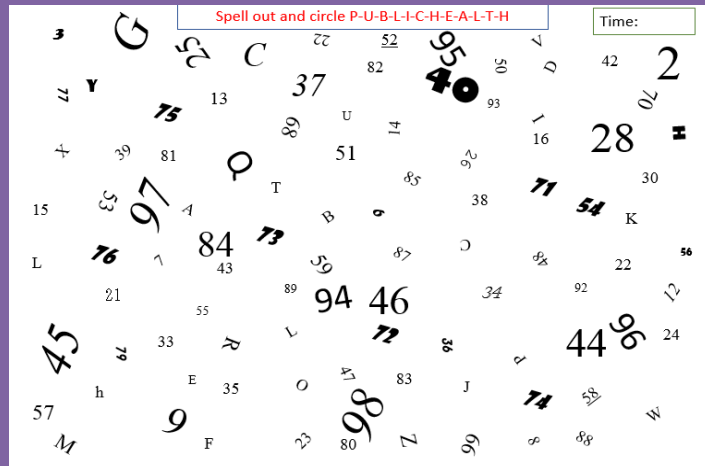
CHANGES

What changes can we make that will lead to an improvement?



Games to Introduce QI

Game A: Finding Public Health



Game B: Building Healthy Communities



Spell out and circle P-U-B-L-I-C-H-E-A-L-T-H

Time:

Game A: Finding Public Health

Adapted from the 5S Numbers Game

Finding Public Health

Modification of the 5S Numbers Game



? **WHAT:** A game using a jumble of numbers and letters on a page to introduce staff to the impact of small changes



WHO: Played in teams of two; can be played in groups as big as 50 and larger



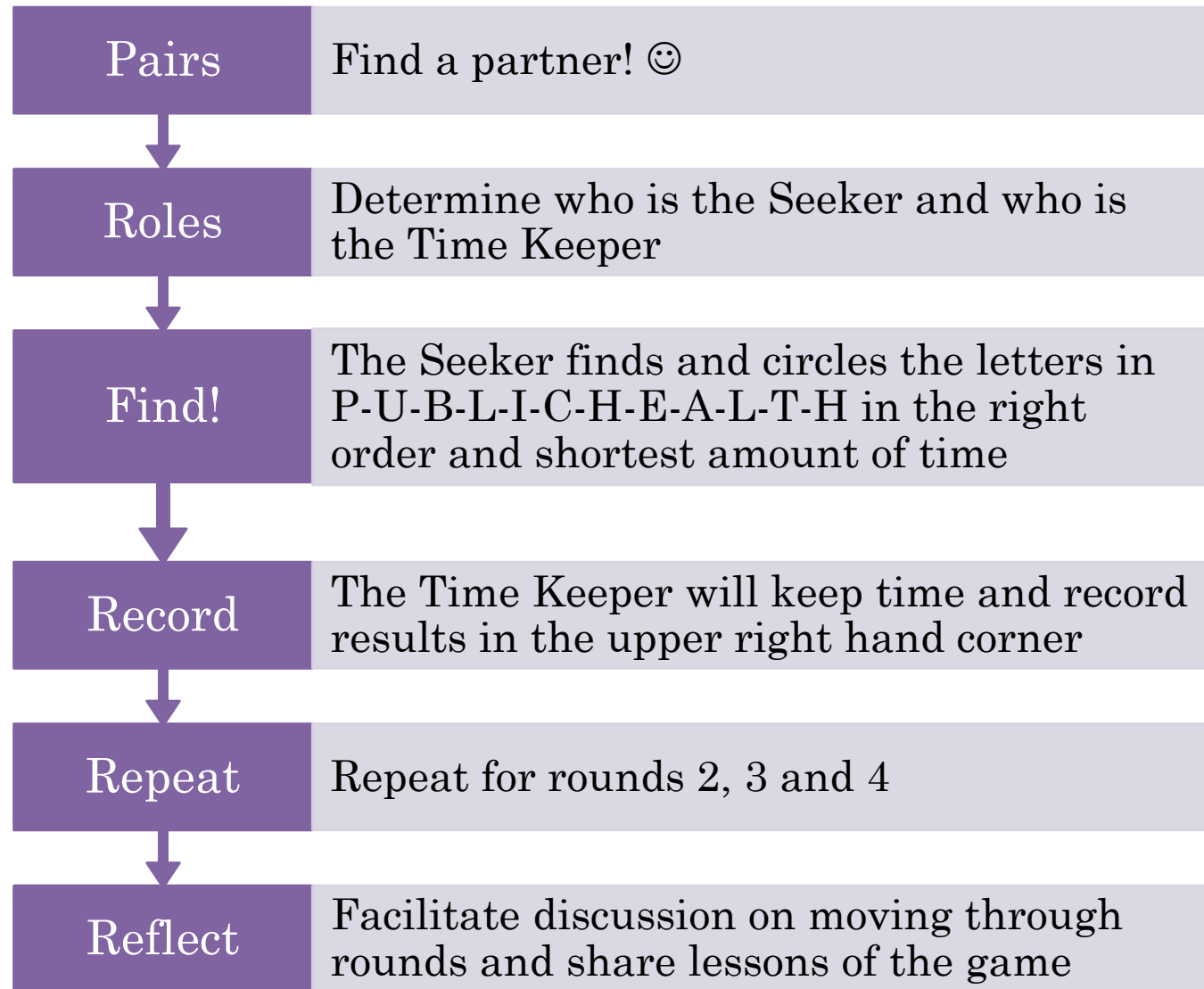
TIME TO PLAY: 20 minutes



MATERIALS:

- Printed copies of Finding Public Health Game (x number of pairs)
- Pens
- Watch/timer
- Incentives (quickest time, bragging rights, prize)

Rules:



Goal:

Find and spell the letters “PUBLIC HEALTH” in order and in the shortest amount of time

Spell out and circle P-U-B-L-I-C-H-E-A-L-T-H

Time: 60 sec
Score: 4 / 12

Scatter plot containing letters and numbers. The word "SAMPLE" is faintly visible in the background. Circled letters include: U, B, P, L.

DO NOT FLIP THE PAGE!



ROUND 1: Baseline

Do your “job” (find
PUBLIC HEALTH!)

Time: _____
Score: __ /12

Spell out and circle **P-U-B-L-I-C-H-E-A-L-T-H**

A collection of scattered letters and numbers on a white background. The letters include: P, U, B, L, I, C, H, E, A, L, T, H, G, Y, L, A, X, T, B, C, D, I, K, L, M, N, O, Q, R, S, V, W, X, Y, Z. The numbers include: 3, 7, 13, 15, 21, 22, 24, 26, 28, 30, 33, 34, 35, 37, 38, 39, 42, 43, 44, 46, 47, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

DO NOT FLIP THE PAGE!



ROUND 2: First change introduced

Remove waste and unnecessary components of the system (the numbers!)

Spell out and circle **P-U-B-L-I-C-H-E-A-L-T-H**

Time:
Score: __ /12

Y J G H M M D O
N K I X
H G Q Z R I
T B O K
F J
M O O Z h
A F U Z J P D W

DO NOT FLIP THE PAGE!

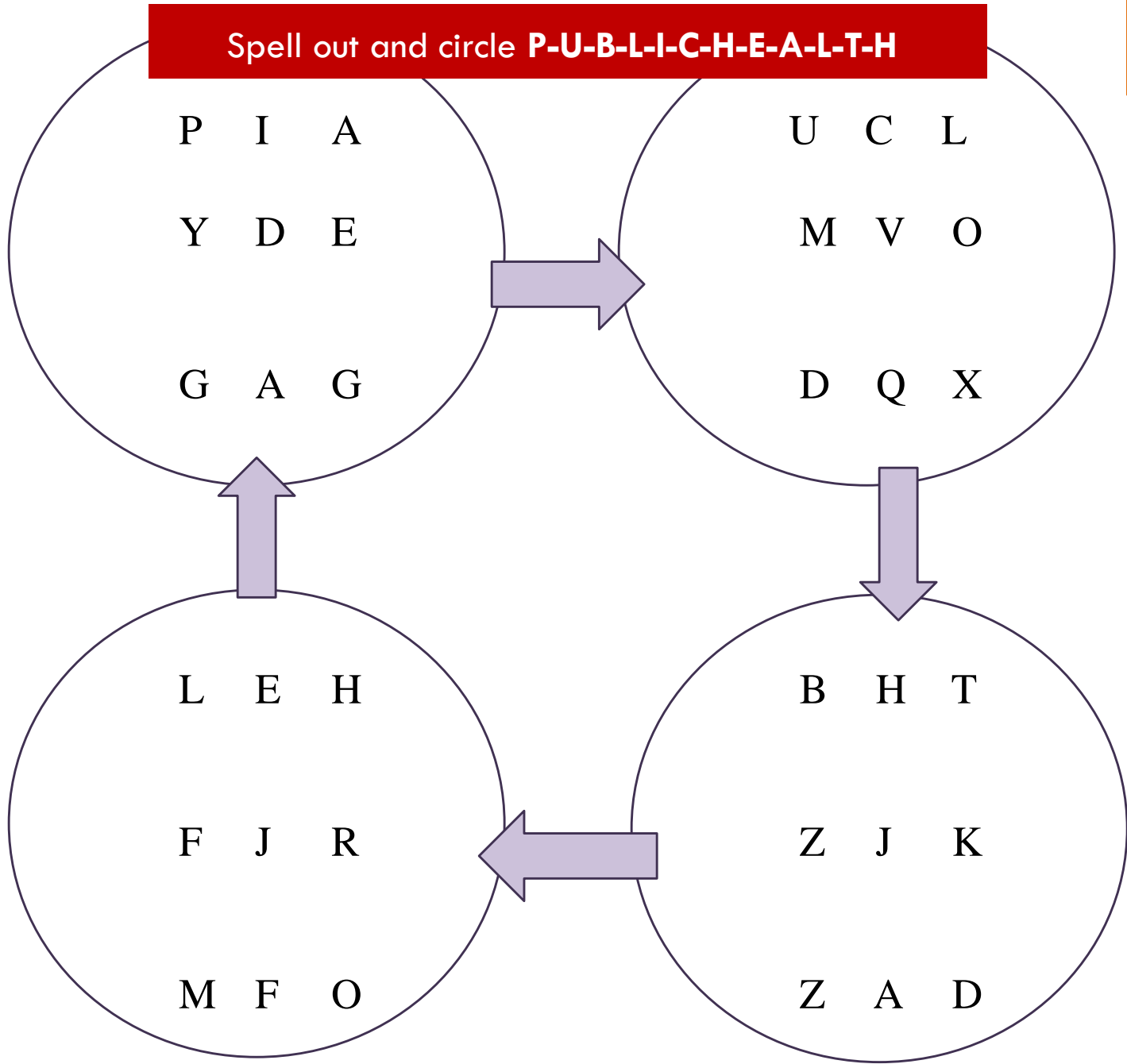


ROUND 3: Third change introduced

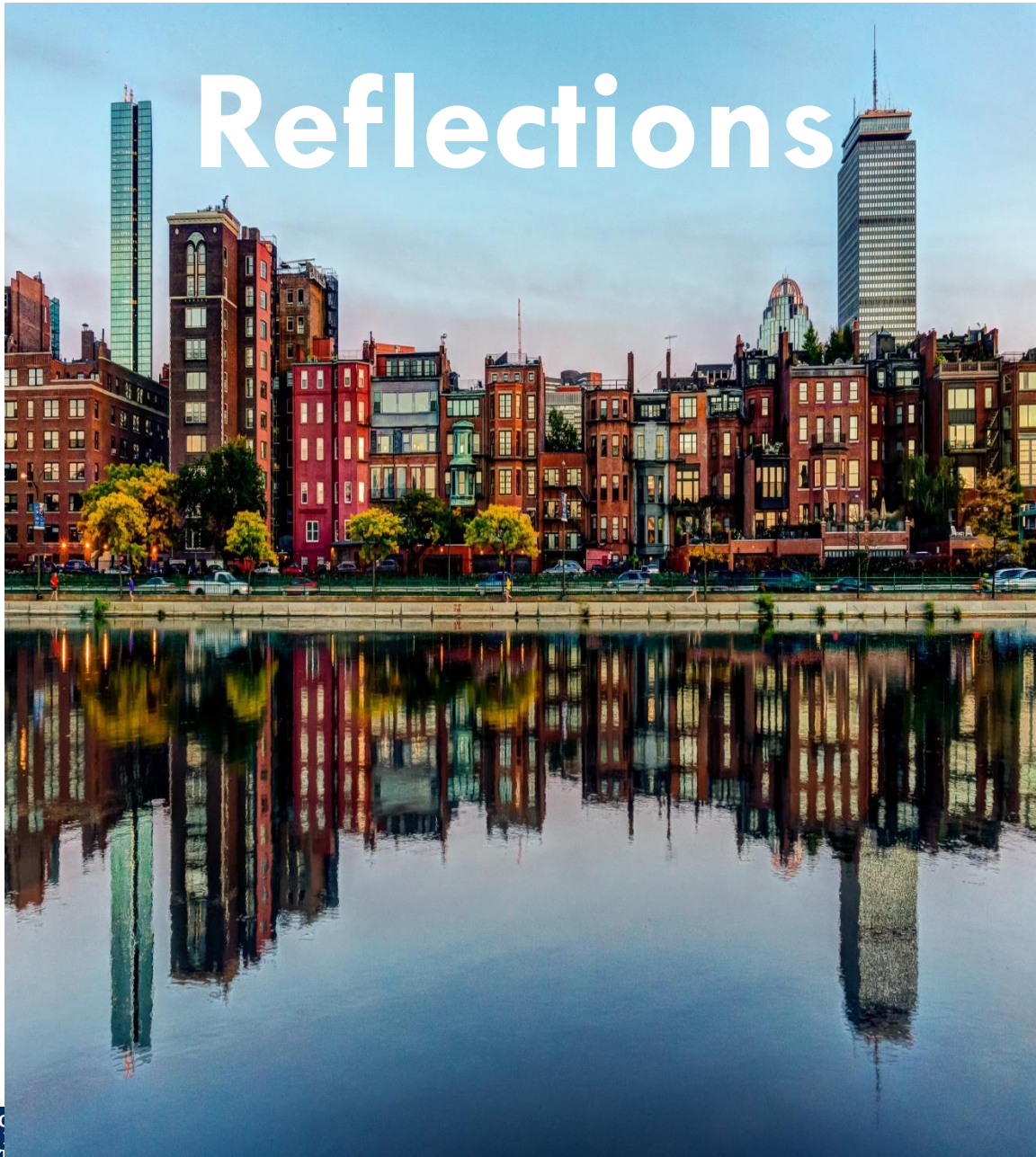
Create a standard, streamlined process (move clockwise around each group of letters to the next letter)

Spell out and circle P-U-B-L-I-C-H-E-A-L-T-H

Time: _____
Score: ___ /12



Reflections

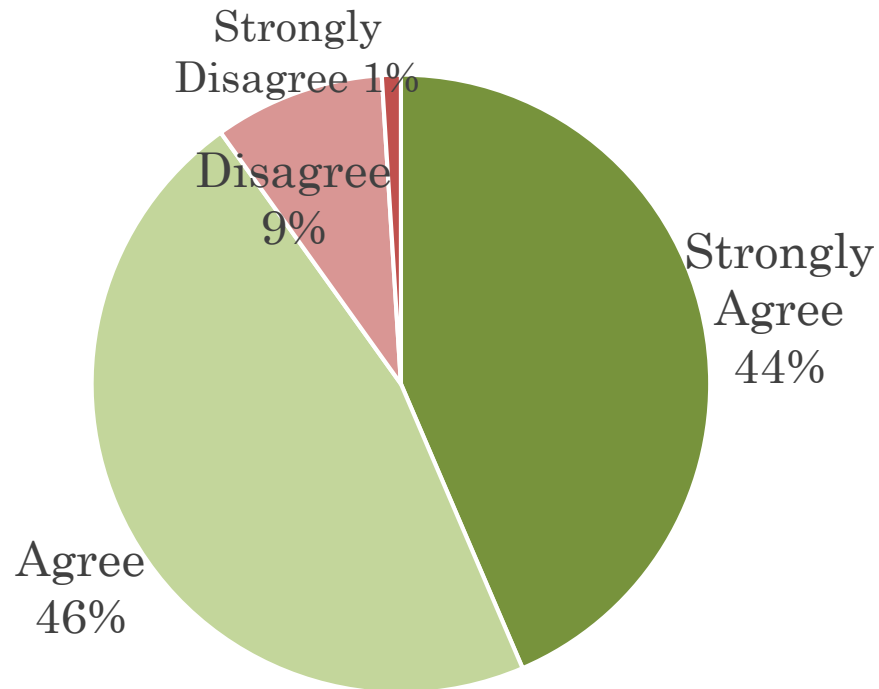


- What do you think of the game?
- Did your time change between the first and last round?
- What reflections do you have from this?

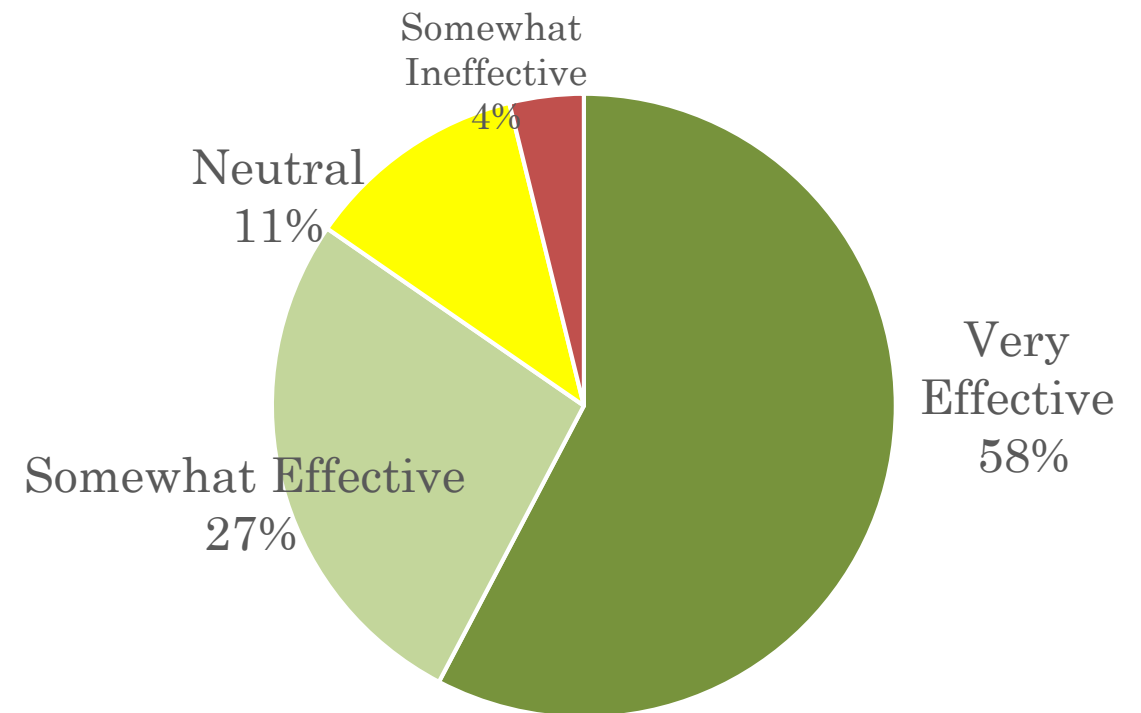
Finding Public Health The Game in Action

Facilitated in BPHC's bi-monthly New Hire Orientation, with over 600 staff to date.

I was well engaged during this session. (n = 95)



How effective was the game in promoting your understanding of continuous improvement? (n = 52)



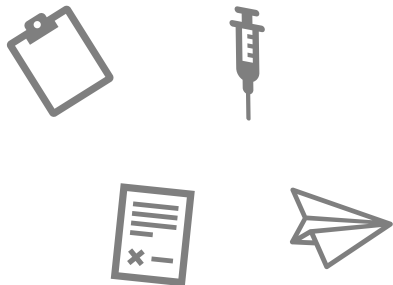
Ideas to modify the game

1. Can play in more rounds:

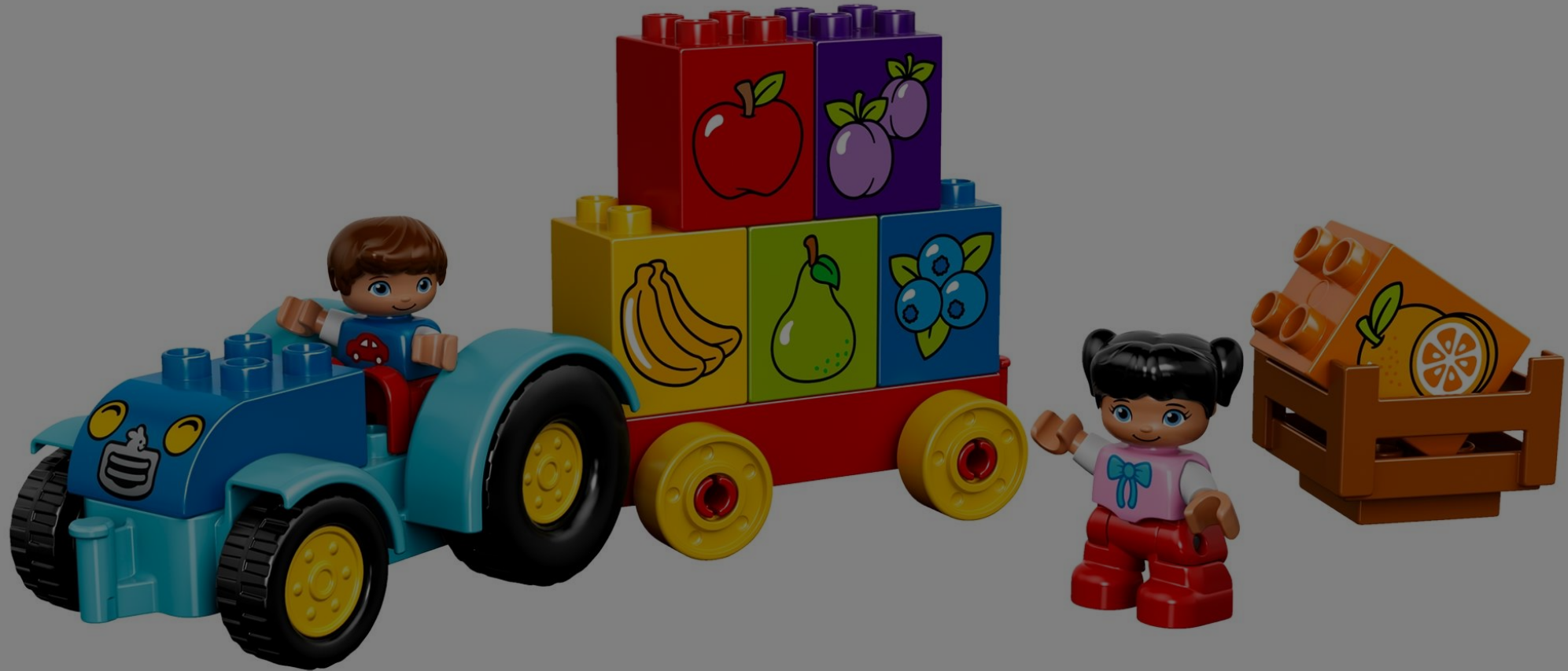
For example, add a round where all letters are the same shape and orientation

2. Can adapt to audience:

Instead of finding “public health,” find and circle “health equity,” “recovery” or “viral suppression”. Find and circle symbols and supplies i.e. everything required to administer flu shots



3. Can tailor your examples and narrative to mirror changes made in past QI projects



Game B: Building Healthy Communities

Building Healthy Communities

? **WHAT:** A game that uses plastic blocks to introduce staff to the impact of small process changes and change management



WHO: Played in teams of five; can be played in groups as big as 50 and larger depending on available materials



TIME TO PLAY: 20 minutes



MATERIALS:

- Building Healthy Communities blocks set (1 set per team)
- Printed copies of Building Healthy Communities Game and Change Agent Guides (1 each per team)
- Pens
- Incentives (most effective team, prizes)



Roles in the Game

Healthy Community Builders

- Build two components of a healthy community



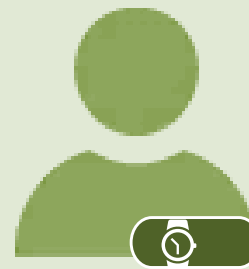
Building Inspectors

- Compare assembled blocks to the plans (photos) to ensure they are accurate and complete



Time Keeper /Recorder

- Keep track of time
- Record time for each round



Change Agent

- Implement changes in between each cycle



Rules:

Roles

Each team will have 2 Healthy Community Builders; 1 Building Inspector; 1 Time Keeper; and 1 Change Agent

Build

Healthy Community Builders build a community garden and a fresh produce truck

Record

Time Keeper records time in upper right hand corner

Act

Change Agent implements a process change without talking to the Builders

Repeat

Repeat for rounds 2, 3 and 4

Reflect

Facilitate discussion on moving through cycles and lessons of the game

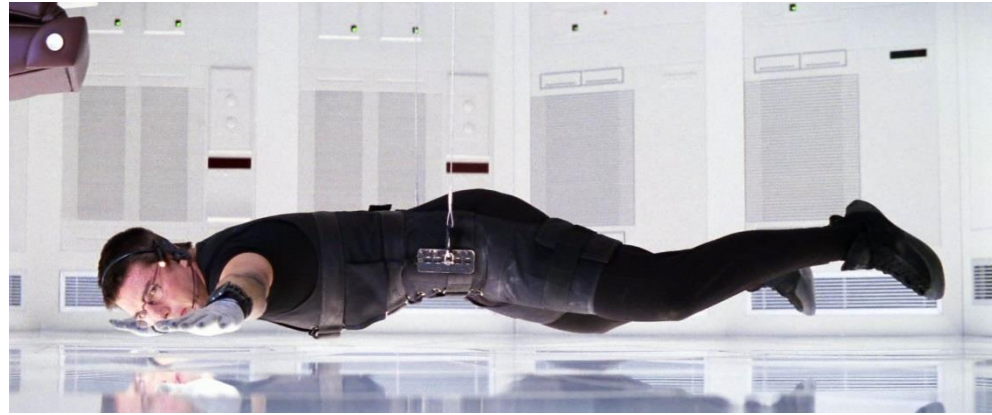
Goal:

Build two components of a healthy community as quickly as possible.

Cycle 1

Time:





Change Agent: Implement Change 1

Cycle 2

Time:





Change Agent: Implement Change 2

Cycle 3

Time:





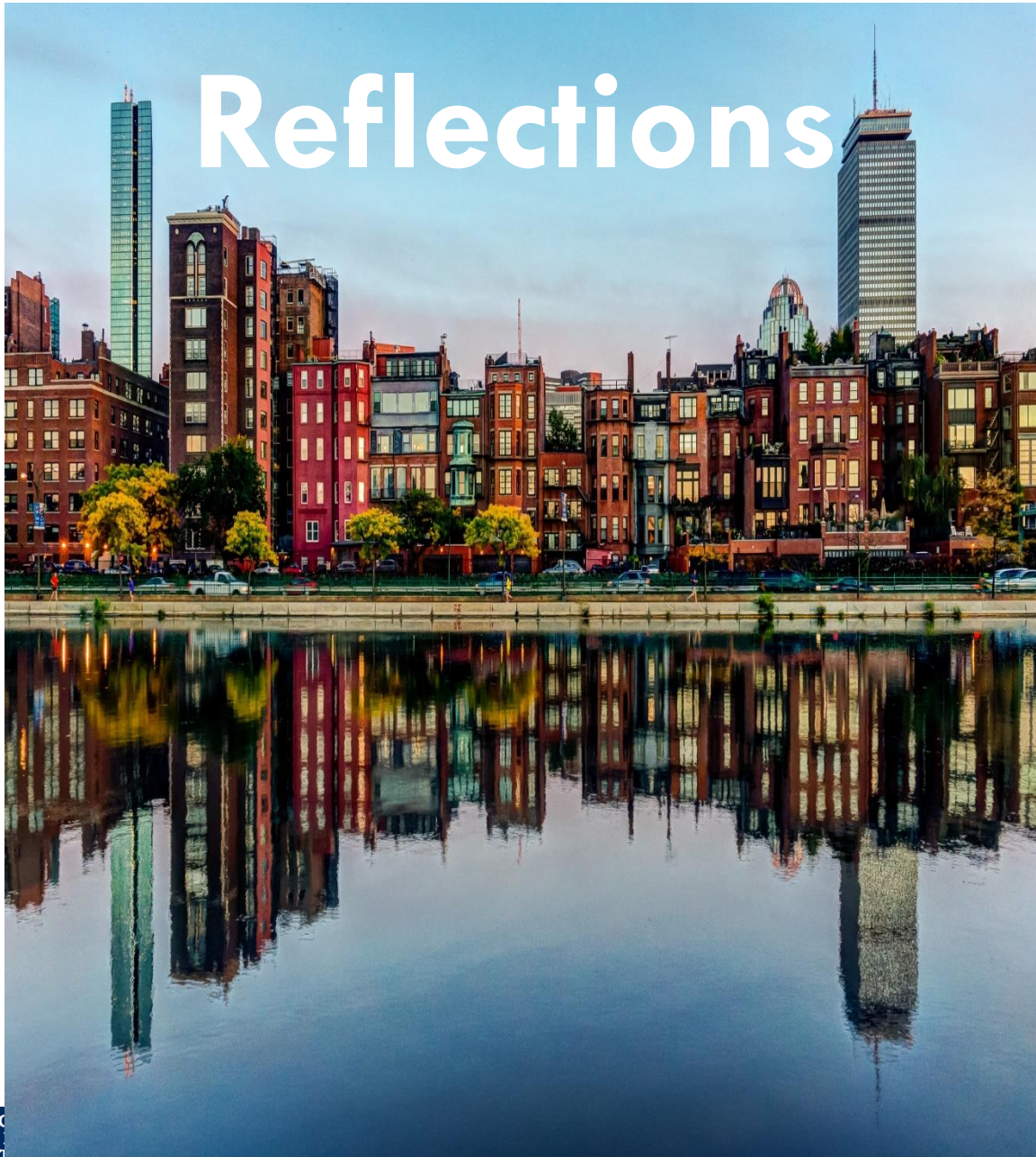
Change Agent: Implement Change 3

Cycle 4

Time:



Reflections



- What do you think of the game?
- What obstacles did you face when building the garden and truck?
- What effect did the small changes have on the outcomes?
- What reflections do you have from this?

Building Healthy Communities The Game in Action

- Utilized in both internal and external teams to introduce to principles of quality improvement



BPHC's Accreditation
Domain Team Leaders



BPHC Health Equity Advisory Committee

Ideas to modify the game

1. Roles are flexible

For example, use 1 healthy community builder, or have facilitator serve as timekeeper. You can also allow the change agent to speak to the builder.

2. Can play in fewer rounds

For example, omit round 3, or have teams build only the community garden

3. Play with different building blocks

For example, building a school, clinic, local business, grocery store

Connection to QI Principles

AIM
What are we trying to accomplish?



Spelling “public health” or assembling a healthy community in as short a time as possible

MEASURES
How will we know that a change is an improvement?

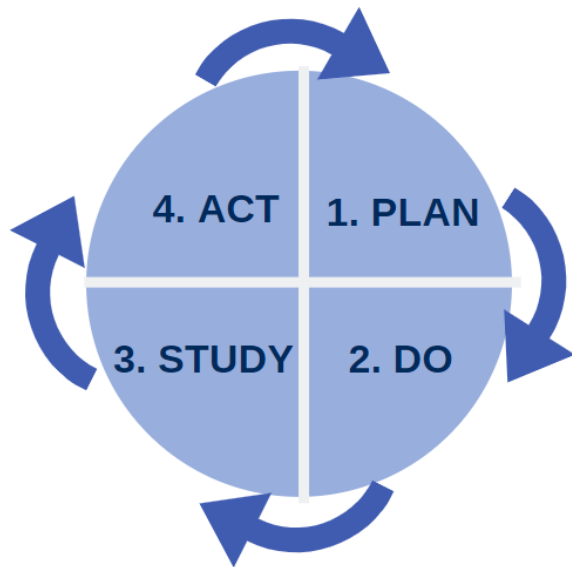


Measuring time taken

CHANGES
What changes can we make that will lead to an improvement?


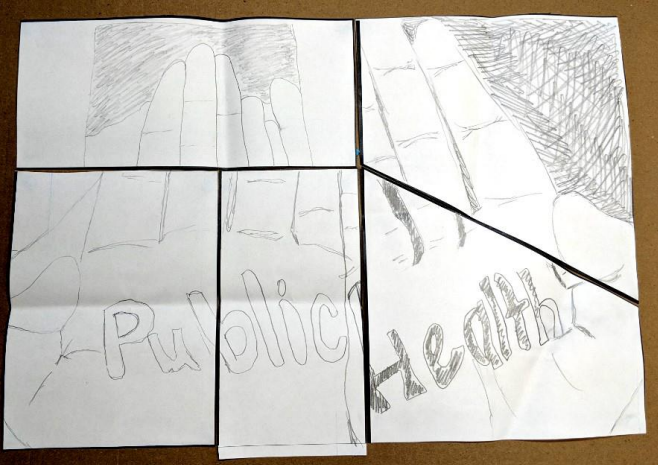


Removing waste, creating a process, removing unnecessary steps... *Ask your participants for other change ideas!*



Cycles of testing and reflection

Other games at BPHC

Game	Description	Pictures
Mr. and Ms. Potato Head	Participants brainstorm and select changes to the process of building potato heads. Ms. Potato head is included to represent attention to health equity.	
Picture Drawing Game – Ready, Set, Go!	Participants each get a piece of a larger picture to draw. At the end they put the pieces together and realize that there is a lot of room for improvement and a system.	

Other games at BPHC (continued)

Game
Red Bead game

Description
 Participants are under pressure to increase the proportion of red beads pulled from the bucket, but no substantial changes to the process mean that their scores are random and don't improve.



Game
Matching measures game

Description
 Participants receive slips of paper with measures on them, which they must match to the corresponding plan or program.

Community Health Improvement Plan	<i>I. Achieve racial and ethnic health equity</i>	<i>II. Coordinate and integrate health care and community prevention services</i>	<i>III. Build and increase resilience in communities impacted by trauma</i>	<i>IV. Improve health outcomes through education, employment, and transportation</i>
BPHC Strategic Plan	<i>I. Strategic Leadership</i>	<i>II. Health Equity</i>	<i>III. Informatics and Surveillance</i>	<i>IV. High Performing Public Health Programs</i>
BPHC Executive Priorities		<i>I. Improve treatment and prevention of prescription drug overdose</i>	<i>II. Strengthen the partnership between BPHC and the healthcare community to improve population health</i>	<i>III. Advance health equity</i>

Materials to share

- “Finding Public Health” Game
 - Slides, Handout and Facilitation Guide
- “Building a Healthy Community” Game
 - Slides, Change Agent Guide, Legos purchasing links, and Facilitation Guide
- “Ready, Set, Go!” Picture Drawing Game
 - Facilitation Guide and Template
- Slides from this session

Download here: bit.ly/BPHC-games

Additional Resources:

<http://www.ihl.org/education/IHIOpenSchool/resources/Pages/AudioandVideo/QI-Games-The-Red-Bead-Experiment.aspx>

Games at the BPHC

“BPHC demonstrated an inclusive and enthusiastic approach ... developing innovative and fun ways to foster staff engagement”

PHAB Site Visitors

*“Liked the word search activity!” -
Training attendee, BPHC
staff*

*“Really engaging way to demonstrate QI”
-Training attendee,
BPHC staff*

*“The game was a great experience. Working as a team and peeling back the layers of clutter and confusion to make the process easier and foster in something that can be implemented in the office.”
-Training attendee, BPHC staff*

Adapting for Your Organization

What worked well and did not work as well with these games?

Can you see yourself using these games? How could you adapt them for your organization?

What other games do you use to promote an understanding of quality improvement?

For leading
BPHC on its
journey to
quality
improvement
culture change
since 2015

Special thank you to
Osagie Ebekozien

Thank you!

Please let us know if you try out one of these games,
and let us know of new games you've facilitated!

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