

MDPQC Newborn Hypoglycemia



Implementation Basics and Data Reporting

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Definitions

Quality health care is “doing the right thing, at the right time, in the right way, for the right person – and having the best possible results” -*AHRQ*

Quality Improvement (QI) is a systematic, formal approach to analyzing performance and efforts to improve performance

Continuous Quality Improvement (CQI) is a continuous and ongoing effort to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality.

Quality Improvement

Quality improvement uses data and feedback to:

1. Track and assess performance over time
2. Make necessary changes in processes

QI involves any activities that improve performance on the triple aim:

1. Improving individual and population health
2. Improving patient experience
3. Reducing cost

Continuous Quality Improvement emphasizes that opportunity for improvement exists in every process on every occasion

***QI is a continuous activity, not a one-time thing!**



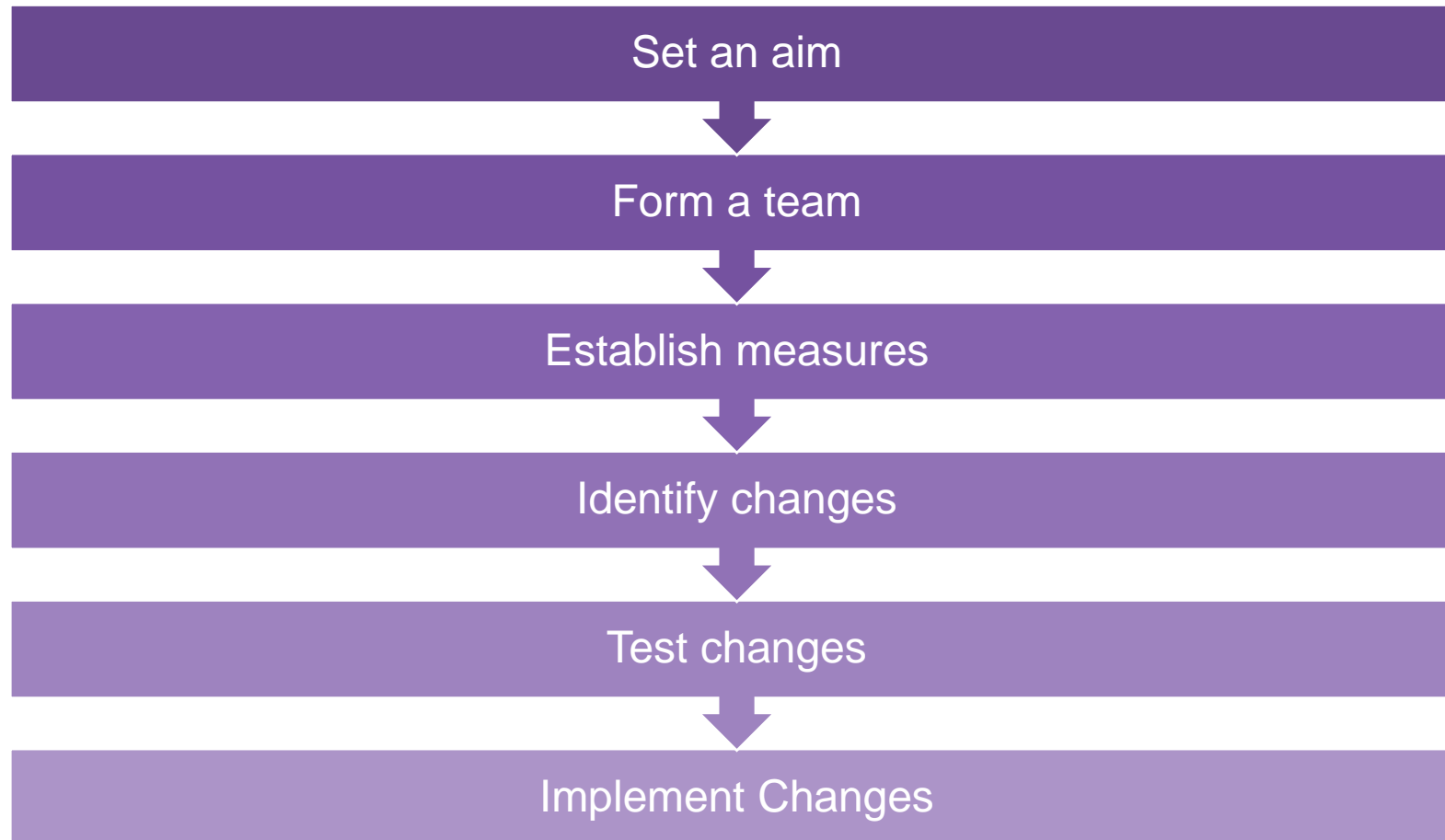
Importance of Quality Improvement

Reasons organizations should consider implementing QI activities:

1. QI activities align with providers' values of offering the most effective services possible for their patients
2. Implementing QI can lead to an improved reputation
3. Using data to make improvements can help increase return on investment
4. Organizations can gain a better understanding of their organization and programs, which can result in better anticipating and responding to changes in demand for services and resources
5. Using data helps organizations understand the link between goals and outcomes, leading to smarter, targeted choice
6. Employees can be energized by opportunities to improve their work processes and feel more invested

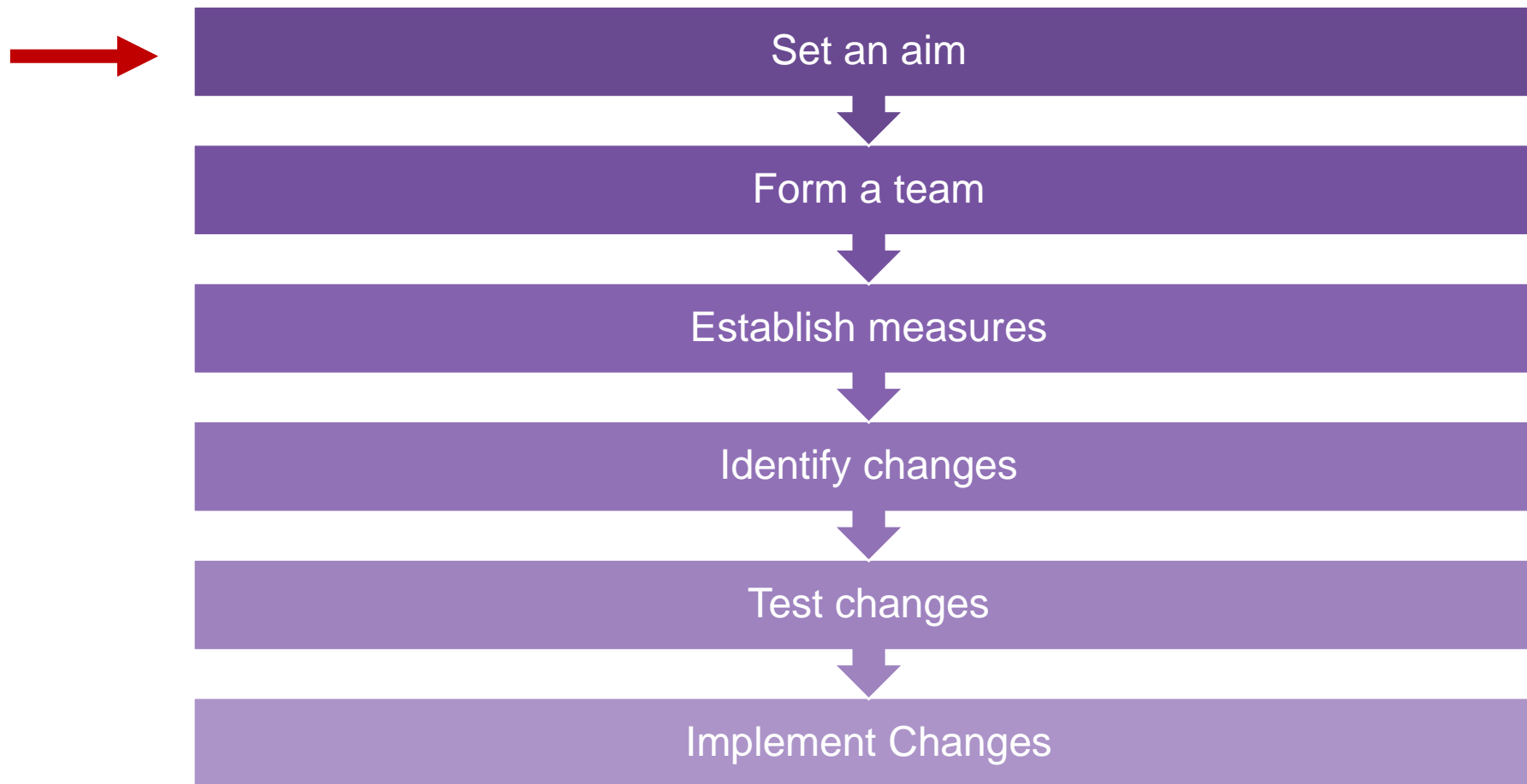
The QI Process

Steps for an improvement team in a clinical setting:



The QI Process

Steps for an improvement team in a clinical setting:



What is MDPQC trying to accomplish?

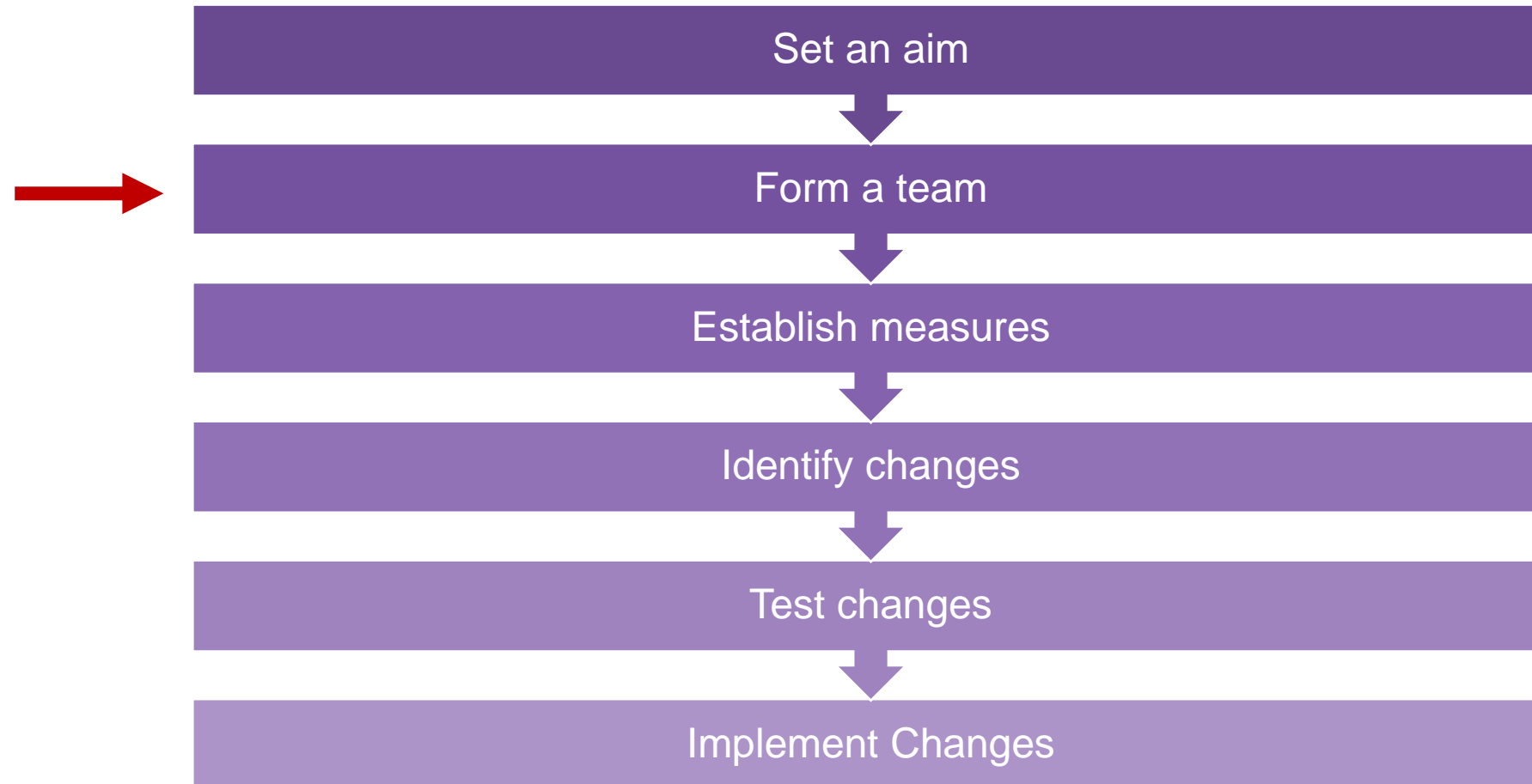
The goals of the initiative are to:

- Support the development and implementation of a protocol for management and care of symptomatic newborns with signs and symptoms of hypoglycemia and asymptomatic newborns at risk for hypoglycemia
- Decrease the number of newborn transfers to a higher level of care
- Decrease the number of IV infusions for hypoglycemia
- Support breastfeeding
- Decrease non-breastmilk supplementation for hypoglycemia
- Increase education among staff and families about best practices



The QI Process

Steps for an improvement team in a clinical setting:



Forming Your QI Team



Hospital Team

- **Neonatal Providers**
- **Nursing**
- **Quality**
- Lab
- OR
- Support Personnel
- IT/EMR
- Others?


Team Activities


- Monthly meetings
- Data collection and review
- Identify opportunities for improvement
- Plan quality improvement work
- Protocol/policy review/development






Key Element: Leadership Commitment

-  Dedicate necessary human, financial, and information technology resources




-  Actions to meet:
 - ✓ Complete Participation Agreement, acknowledging leadership support
 - ✓ Make hospital leadership aware of MDPQC initiative

-  Best practice:
 - ✓ Appoint hospital leader as “champion” of your QI team





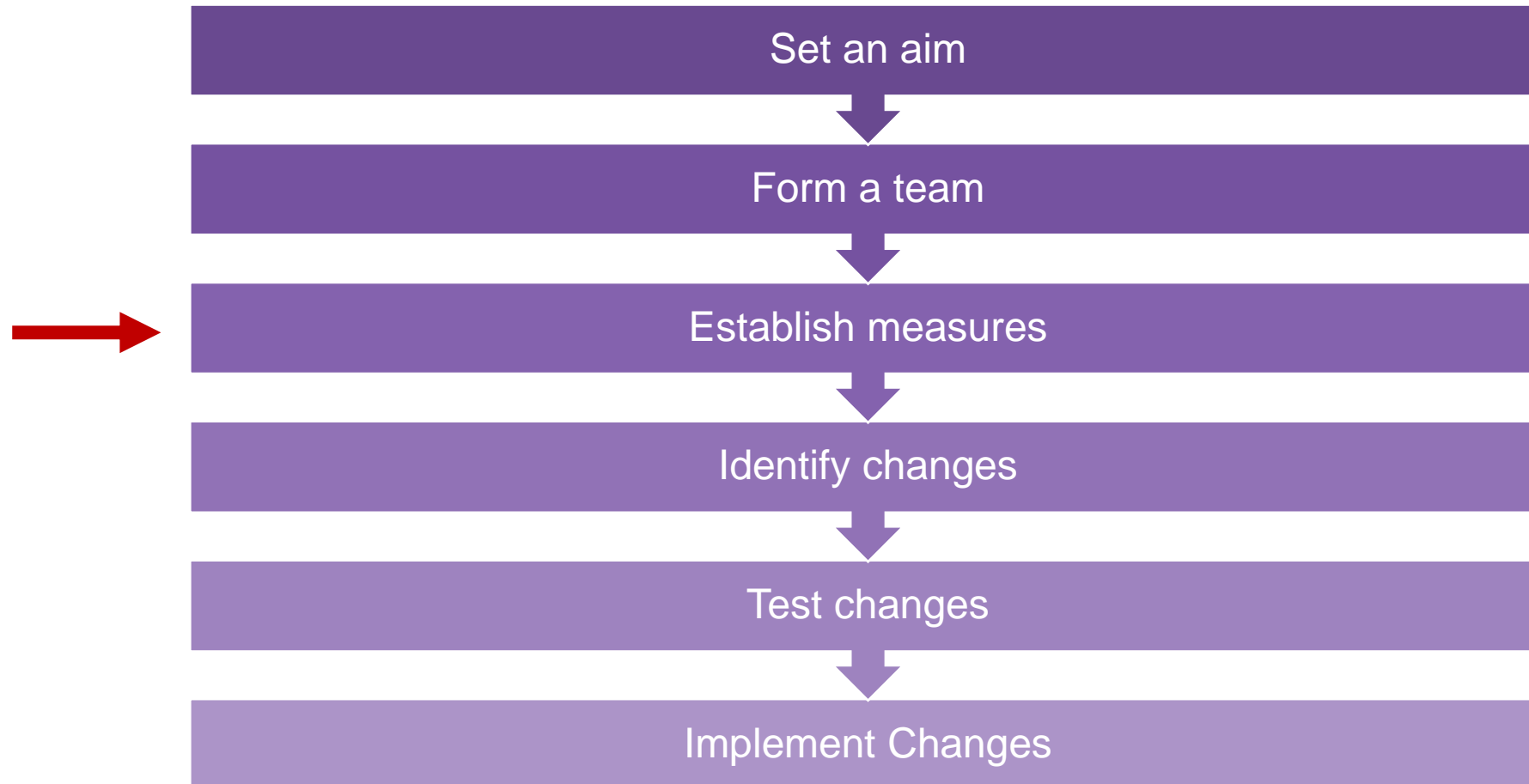
Key Element: Accountability

-  Appoint a leader or co-leaders responsible for program management and outcomes
-  Actions to meet:
 - ✓ Establish your QI team
-  Best practice:
 - ✓ Nurse and Physician




The QI Process


Steps for an improvement team in a clinical setting:






Key Element: Tracking

-  Monitor breastfeeding and glucose level management, impact of interventions, and other important outcomes

-  Actions to meet:
 - ✓ Report MDPQC data monthly

-  Best practice:
 - ✓ Additional optional measures to track internally –
 - Costs
 - Adherence to facility treatment guidelines





Key Element: Reporting



Regularly report information on antibiotic use and resistance to staff

- ✓ MDPQC will create benchmarking reports
 - Comparing your hospital to the state (aggregate)
 - Comparing your hospital to other hospitals (de-identified)



Actions to meet:

- ✓ Share MDPQC benchmarking reports with your team



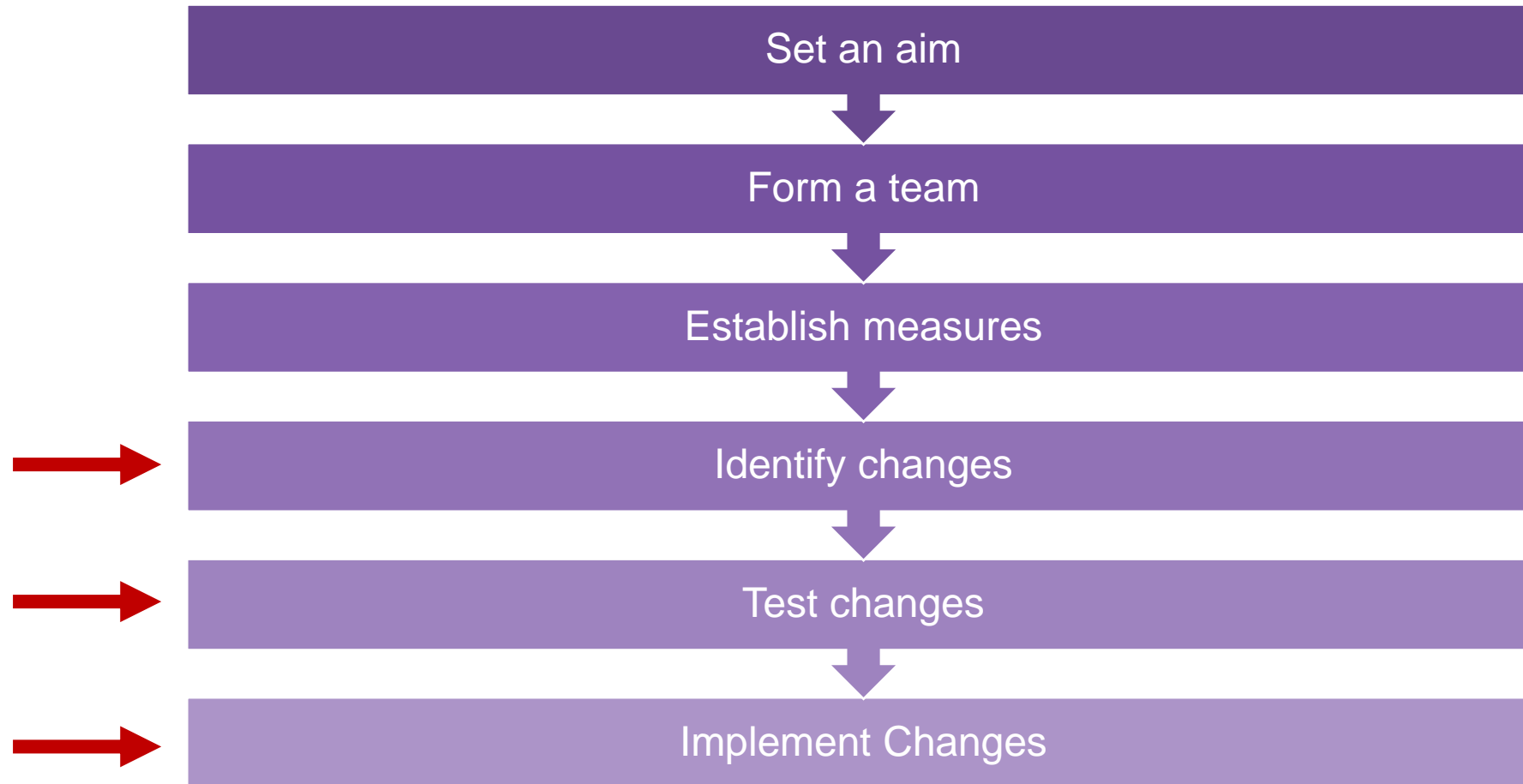
Best practice:

- ✓ Provider-specific tracking and feedback



The QI Process

Steps for an improvement team in a clinical setting:



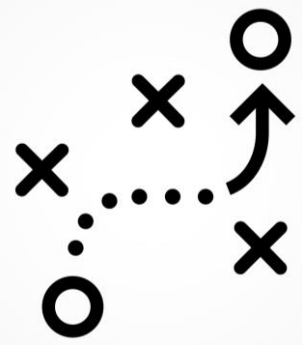
Collaborative Activities

- ♥ Sharing of Tools/Resources/Interventions
- ♥ Monthly Office Hours Calls
- ♥ Learning Events
- ♥ Data submission



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Key Element: Action



Implement interventions to improve management of infants at risk for hypoglycemia



Actions to meet:

- ✓ Review and update protocols
- ✓ Encourage exclusive breastfeeding
- ✓ Optimize use of glucose gel






Best practice:

- ✓ Create facility-specific guidelines





Key Element: Education

-  Educate providers, nurses, and families about hypoglycemia policies, procedures, and best practices
-  Actions to meet:
 - ✓ Provide education about the Collaborative to your hospital care team
-  Best practice:
 - ✓ Incorporate regular (annual) education as part of staff development



QI Models

The QI model is your framework to guide and accelerate improvement projects

- ✓ Model for Improvement/PDSA: Plan-Do-Study-Act**
- ✓ Six Sigma: method of improvement that strives to decrease variation and defects
- ✓ Lean: approach that drives out waste and improves efficiency in work processes so that all work adds value



Model for Improvement

Step 1: Three fundamental questions

Aim

- What are we trying to accomplish?

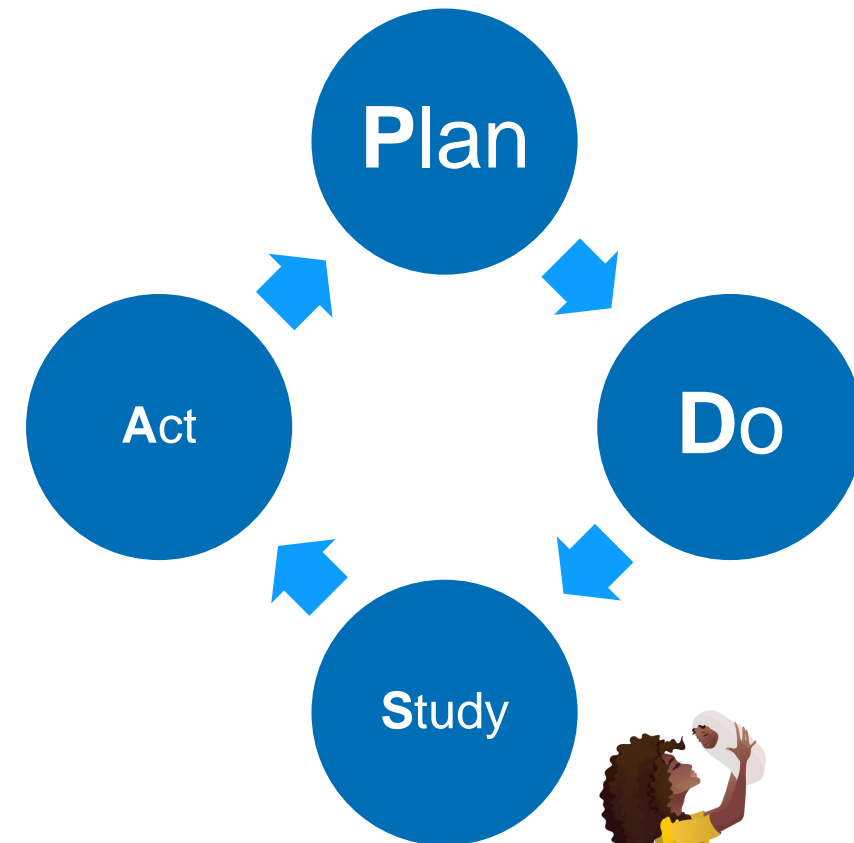
Measure

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

Change

- What change can we make that will result in improvement?

Step 2: PDSA Cycle



Model for Improvement

Step 1: Three fundamental questions

Aim

- What are we trying to accomplish?

Measure

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

Change

- What change can we make that will result in improvement?

Setting an Aim

What are we trying to accomplish?

- Should be specific and measurable
- Important to understand current state of the problem or opportunity
- Aim statement addresses 3 points:
 1. How good?
 2. By when?
 3. For whom (or what system)?

Example: By December 2024, 100% of hospitals participating in the MDPQC newborn hypoglycemia initiative will have a hypoglycemia protocol that has been updated within the past 2 years.

Aim

- What are we trying to accomplish?

Measure

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

Change

- What change can we make that will result in improvement?



Choosing Measures

How will we know that a change is an improvement?

- What do you want to learn about and improve?
- What measures will be most helpful for this purpose?
- What is the operational definition for each measure?
- What is your goal?
- What is your baseline?

Aim	• What are we trying to accomplish?
Measure	• How will we know that a change is an improvement?
Change	• What change can we make that will result in improvement?

Types of Measures

Aim

- What are we trying to accomplish?

Measure

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

Change

- What change can we make that will result in improvement?

1. **Outcome measures:** Where are we ultimately trying to go?
2. **Process measures:** Are we doing the right things to get there?
3. **Balancing measures:** Are the changes we are making to one part of the system causing problems in other parts of the system?

Selecting Changes

What changes can we make that will result in the improvements we seek?

- Not every change is an improvement
- How to identify changes to test:
 - ✓ **Brainstorming:** spontaneously generating ideas as a group
 - ✓ **Observation:** generating ideas based on what team members see
 - ✓ **Ideal design:** generating ideas based on the “perfect world” scenario
 - ✓ **Shared experiences:** generating ideas based on personal experience with the issue
 - ✓ **Change concepts:** offer topics to discuss as a team that may generate ideas for change

Aim

- What are we trying to accomplish?

Measure

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

Change

- What change can we make that will result in improvement?

Change Concepts

Improve Work Flow

- Minimize handoffs
- Find and remove bottlenecks
- Use automation
- Adjust to peak demand

Change the Work Environment

- Conduct training
- Implement cross-training
- Focus on core processes and purpose
- Develop alliances/cooperative relationships

Enhance the Customer Relationship

- Listen to customers
- Focus on the outcome to a customer
- Work with partners

Manage Time

- Reduce setup or startup time
- Reduce wait time

Manage Variation

- Standardization (create formal process)
- Develop operational definitions
- Develop contingency plans

Design Systems to Avoid Mistakes

- Use reminders
- Use differentiation

Focus on a Service

- Offer service any time
- Offer service any place
- Emphasize intangibles



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Langley GL, Moen R, Nolan KM, Nolan TW, Norman CL,

Provost LP. The Improvement Guide: A Practical Approach to Enhancing Organizational Performance (2nd edition).

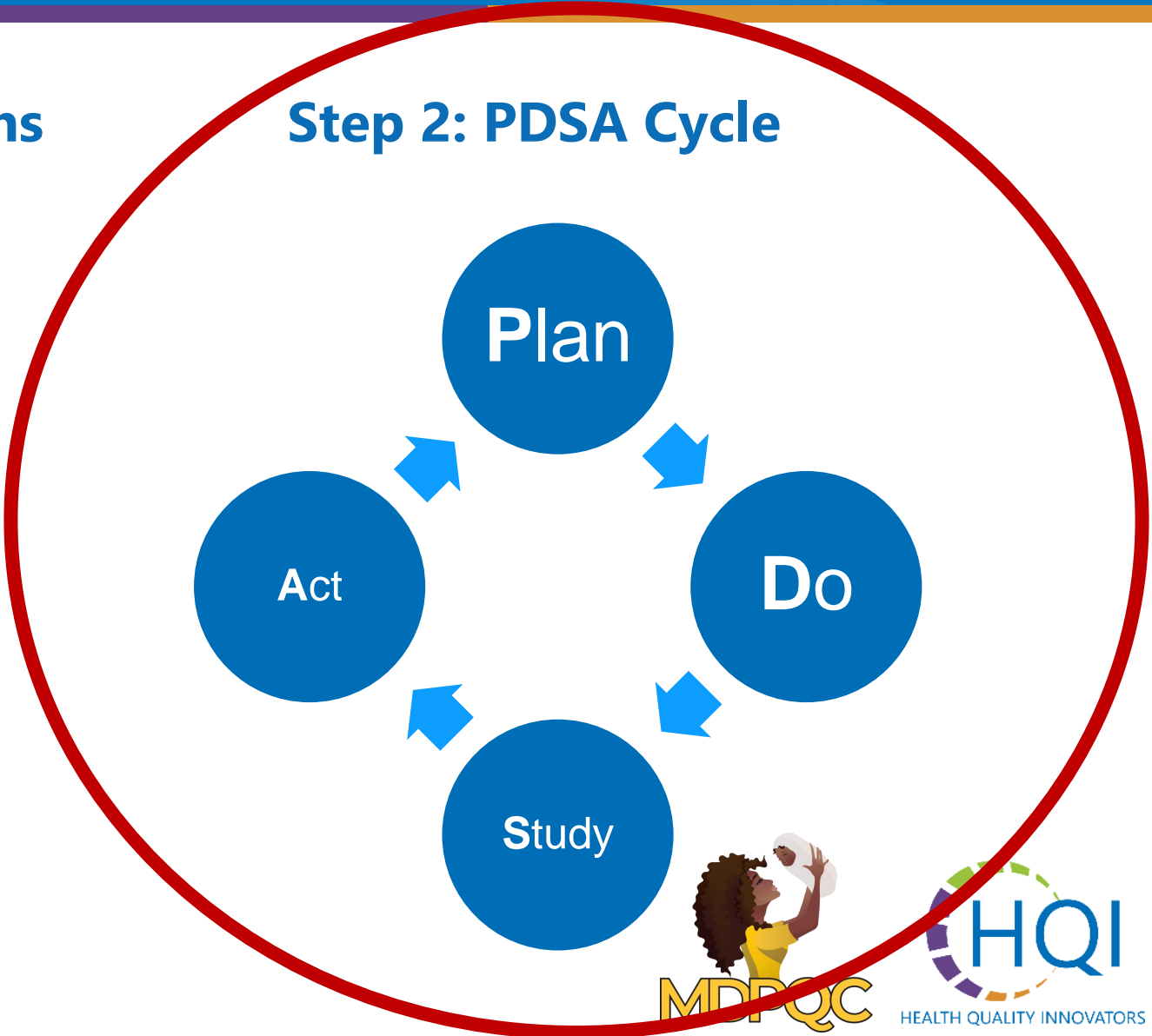
San Francisco: Jossey-Bass Publishers; 2009.

Model for Improvement

Step 1: Three fundamental questions

Aim	• What are we trying to accomplish?
Measure	• How will we know that we have made an improvement?
Change	• What change can we make that will result in improvement?

Step 2: PDSA Cycle



Testing Change

PDSA Cycle

- **Plan:** Plan the test or observation, including a plan for data collection
- **Do:** Try the test out on a small scale
- **Study/Check:** Analyze the data and study how results compared to predictions
- **Act:** Make adjustments where necessary based on what was learned from the small-scale test

Conducting multiple PDSA cycles allows the team to test a change quickly on a small scale, see how it works, and refine the change as necessary before implementing it on a broader scale

Final Tips for QI Success

- If you can't measure it, you can't improve it
- Manage the processes, not the providers
- Engage the people who do and understand the work
- Start small
- QI is an iterative process

Quality Improvement Resources

1. [Institute for Healthcare Improvement Quality Improvement Essentials Toolkit](#)
2. [AHRQ Ways to Approach the Quality Improvement Process](#)
3. [NICHQ Quality Improvement 101](#)
4. [Basics of Quality Improvement in Healthcare](#)
5. [PDSA Worksheet Template](#)
6. [Building the Business Case for Quality Improvement](#)
7. [Five Whys Worksheet](#)
8. [Fishbone Diagram Template](#)
9. [ASQ Learn About Quality](#)
10. [Population Health Improvement Partners QI Videos & Tools](#)
11. [Promoting Success: Getting to Outcomes Guide to Implementing Continuous Quality Improvement for Community Service Organizations](#)
12. [ASTHO QI Plan Toolkit](#)

Measure

How will we know that a change is an improvement?

- What do you want to learn about and improve?
- What measures will be most helpful for this purpose?
- What is the operational definition for each measure?
- What is your goal?
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Aim	• What are we trying to accomplish?
Measure	• How will we know that a change is an improvement?
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The "HEART"

Hospital Engagement and Readiness Tool

- Baseline assessment of hospital needs
 - One response per hospital
- Track practice and policy changes
- Identify strengths and opportunities



MDPQC Hospital Engagement And Readiness Tool (HEART)

1. Hospital name

Select your answer

1. Facility Characteristics
2. Baseline Bundle Implementation
3. Facility Readiness for Bundle Implementation



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HEART: <https://forms.office.com/r/LiLav4DV7E>



MDPQC Data Submission Template

Instructions

Hospital Demographics

Aggregate Measures

Sampled Measures

Process Measures

Staff Education

Participating hospitals will be sent an excel workbook, which will be your template for monthly data submission

➤ **Note there are 5 tabs requiring data entry**

1. Hospital Demographics
2. Aggregate Measures
3. Sampled Measures
4. Process measures
5. Staff education



MDPQC Data Submission Template

General Instructions:

* Each hospital participating in the Maryland Perinatal-Neonatal Quality Collaborative (MDPQC) neonatal initiative should use this spreadsheet to submit monthly data for:

- hospital demographics (yellow tab)
- aggregate measures (purple tab)
- sampled measures (green tab)
- process measures (blue tab)
- staff education (orange tab)

* Separate workbooks should be submitted for each reporting month.

* Monthly data submissions should be uploaded to SharePoint by the end of the following month (i.e., May data is due by June 30th).

* Please upload completed form to SharePoint using your log-in credentials or fax to: 804-289-5324; Attn: Katie Richards. If you are uploading a completed form to SharePoint, please be sure to save it with file name: [Facility name_Reporting month], e.g. ABC Hospital_January_2024.

* Any questions can be directed to Katie Richards (krichards@hqi.solutions, 804-289-5355).

Instructions for Reporting:

Number of direct NICU/SCN admissions is any baby admitted directly to the NICU or Specialty Care Nursery from the delivery room without spending any time in the nursery.

Days of life is measured by birthday=day 0.

For each process measure, indicate whether you have this element in place as a regular part of your unit workflow.

For the staff education, indicate the total number by provider type that have received within the last two years a education program on hypoglycemia policies, procedures, and best practices. Measure this on a rolling basis based on the reporting month.



MDPQC Data Submission Template

	A	B	C	D	E
1	MDPQC NEONATAL HYPOGLYCEMIA DATA COLLECTION TEMPLATE				
2					
3	Please select your hospital from the dropdown list in cell B10 below. Your hospital CCN will automatically populate in cell B11 when you select				
4	your hospital's name. If you cannot find your hospital in the dropdown list, please contact Katie Richards for assistance.				
5					
6	Please select the month/year that your hospital is reporting data for in this submission in cell B13 below.				
7	<u>OPTIONAL</u> : Please provide a hospital contact name, email address and phone number for the facility you are reporting data for in cells B15 ,				
8	B16 and B17 below.				
9					
10	Select Hospital:	ADVENTIST HEALTHCARE SHADY GROVE MEDICAL CENTER			
11	Hospital CCN:	210057			
12					
13	Select Month/Year of Reporting:	Nov-2023			
14					
15	Hospital Contact Name				
16	Contact Email				
17	Contact Telephone Number				
18					
19					

MDPQC Data Submission Template

	Race *Based on mother's race							Ethnicity *Based on mother's ethnicity				
	White	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Other	Unknown	Total	Hispanic or Latino	Not Hispanic	Unknown	Total
# births												
# births determined at-risk for hypoglycemia												
Of infants at-risk for hypoglycemia (regardless of unit):												
# infants of diabetic mothers												
# Large for Gestational Age Infants												
# Small for Gestational Age Infants												
# Late pre-term infants												
# infants who develop hypoglycemia												
Number NICU admissions for hypoglycemia												
# internal transfers to higher level of care for hypoglycemia												
# external transfers to higher level of care for hypoglycemia												
# infants given glucose gel												
# infants receiving IV fluids for hypoglycemia concerns												
# infants with attempted breastfeed within first 60 minutes of life												
# infants who were exclusively breastfed during admission												
# infants who only received breastmilk for last 3 feeds prior to discharge												
# infants receiving skin-to-skin with first 4 hours of life												

MDPQC Data Submission Template

Please provide this information for a sample of babies who are at-risk for hypoglycemia, based on sampling instructions provided by the MDPQC team.

Baby ID	Race	Ethnicity	Gestational age at delivery	Birthweight (grams)	Diabetic mother 1-yes, 0-no	direct admit to NICU for hypoglycemia 1-yes, 0-no	Transfer to higher care internally for hypoglycemia 1-yes, 0-no	Transfer to higher care externally for hypoglycemia 1-yes, 0-no	Developed hypoglycemia 1-yes, 0-no	Received glucose gel 1-yes, 0-no	Received IV fluids for hypoglycemia concerns 1-yes, 0-no	Breastfed within first 60 minutes of life 1-yes, 0-no	Received skin-to-skin within first 4 hours of life 1-yes, 0-no	Only received breastmilk for last 3 feeds prior to discharge 1-yes, 0-no	Received donor breastmilk 1-yes, 0-no	Received formula 1-yes, 0-no

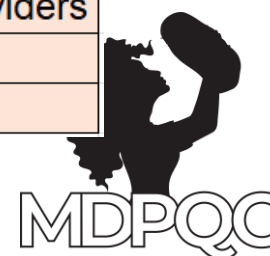
MDPQC Data Submission Template

For each process measure, indicate whether you have this element in place as a regular part of your unit workflow.

Does your hospital have a hypoglycemia protocol that has been updated in the past 2 years?	[Yes/No]
Does your hospital have a feeding policy that has been updated in the past 2 years?	[Yes/No]
Does your hospital use donor breastmilk in the NICU/Specialty Care Nursery?	[Yes/No/Not applicable]
Does your hospital use donor breastmilk in the well-baby nursery?	[Yes/No]
Does your hospital provide education to families regarding hypoglycemia <i>that is documented in the EHR?</i>	[Yes/No]
Do you currently track outcomes by race/ethnicity in your newborn population?	[Yes/No]
Do you currently track outcomes by race/ethnicity in your NICU population?	[Yes/No/Not applicable]
Do you use standard cut-offs for large and small for gestational age infants?	[Yes/No]
Does your hospital use glucose gel?	[Yes/No]

At the end of this reporting period, what number of providers and nurses received within the last two years education on hypoglycemia policies, procedures, and best practices?

	L&D		Well-Baby		Specialty Care (i.e., NICU)	
	# Trained	Total # Providers	# Trained	Total # Providers	# Trained	Total # Providers
Physicians, NPs, PAs, and CNMs						
Nurses						



Data Reporting



- Beginning: January 2024
- Monthly data is due by the end of the following month
 - January AND February data due by March 31st
 - March data due by April 30th
- Uploaded to HQI's Customer Portal
- Benchmarking



HQI's Customer Portal



Health Quality Innovators



MDPQC Project Announcements

These are announcements from HQI to all facilities, and designed to provide a simple communication to all participating facilities.

		+ Create
Message	Created On ↓	
There are no records to display.		



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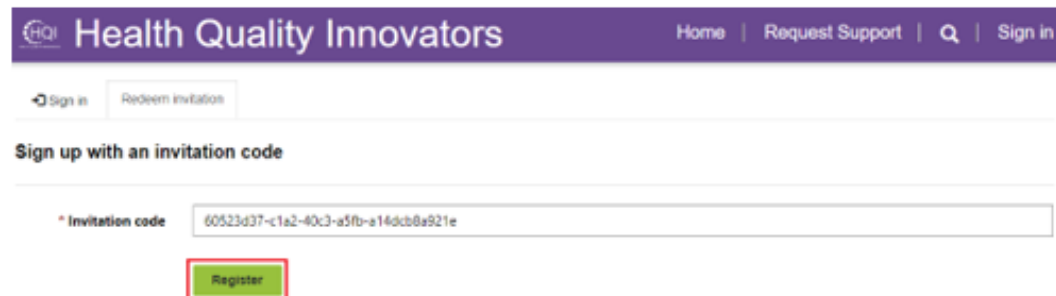


HQI's Customer Portal

HQI Customer Portal – Automated Login Process

External User

1. You will receive an email from <CRM.Admin@hqi.solutions>
2. The Subject will Say: "Redeem your Invitation to the HQI Customer Portal"
3. The Body of the message will contain important information please take note of:
 - a. Redeem Access Button – This will provide you with a link directly to the HQI Portal with the invitation code embedded
 - b. Username: Your Username will be your email address (the one that received this email)
 - c. Password: We created your account with a unique password. You will need to reset it upon first login
4. When you click the "Redeem Access" button,
 - a. You will have a browser window open to the HQI Portal
 - b. The "Sign up with an invitation code" will display and a unique INVITATION CODE we be entered into the Invitation Code box. DO NOT EDIT THIS CODE
 - c. This code is unique to you and can not be shared with anyone
 - d. Click "Register"



Health Quality Innovators Home | Request Support | Search | Sign in

Sign in Redeem invitation

Sign up with an invitation code

* Invitation code 60523d37-c1a2-40c3-a5fb-a14dcb8a921e

Register



HQI's Customer Portal



Health Quality Innovators



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		+ Create
Message	Created On ↓	
There are no records to display.		




HEALTH QUALITY INNOVATORS



HQI's Customer Portal

Project Items

This is where facility-specific data is uploaded. Documents uploaded here are only accessible to HQI and your facility.

<input type="text" value="Search"/>				+ Create
<u>Account</u>	<u>Name</u>	<u>Created On</u> ↓		
There are no records to display.				



HQI's Customer Portal

Project Items

This is where facility-specific data is uploaded. Documents uploaded here are only accessible to HQI and your facility.

<input type="text" value="Search"/>			<input type="button" value="Q"/>	<input type="button" value="+ Create"/>
<u>Account</u>	<u>Name</u>	<u>Created On</u> ↓		
There are no records to display.				



HQI's Customer Portal

Step 1 - Create an item (i.e. a folder) for files to be uploaded, and click Next

Step 2 - Upload the file(s) to the item, and click Submit

NOTE: Name should be in the format: Hospital_MMYYYY | Ex: MercyMedicalCenter_012024.

Step 1 - Create Item

Step 2 - Add Docs

Name *

MercyMedicalCenter_012024

Account

Mercy Medical Center



Next



HQI's Customer Portal

Step 1 - Create an item (i.e. a folder) for files to be uploaded, and click Next

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NOTE: Name should be in the format: Hospital_MMYYYY | Ex: MercyMedicalCenter_012024.

Step 1 - Create Item ✓

Step 2 - Add Docs

Name *

MercyMedicalCenter_012024

Associated Documents

+ Add files

📁 New folder

There are no folders or files to display.

Send Notification

No Yes

Previous

Submit



HEALTH QUALITY INNOVA



HQI's Customer Portal

Step 1 - Create an item (i.e. a folder) for files to be uploaded, and click Next

Step 2 - Upload the file(s) to the item, and click Submit

NOTE: Name should be in the format: Hospital_MMYYYY | Ex: MercyMedicalCenter_012024.

Step 1 - Create Item ✓

Step 2 - Add Docs

Name *

MercyMedicalCenter_012024

Associated Documents

+ Add files

New folder

There are no folders or files to display.

Send Notification

No Yes

Previous

Submit



HEALTH QUALITY INNOVA



HQI's Customer Portal

Project Documents

This is where project-wide documents are uploaded by HQI staff, available to all participating facilities.

	+ Create
<u>Name</u>	
<u>MDPQC Hypoglycemia Data Submission Template</u>	v



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Hospital Engagement

30 (94%) Hospitals participating in the Newborn Hypoglycemia initiative so far.

It's not too late to sign up!



Participation Agreement:

<https://forms.office.com/r/CcHWsr5529>



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Next Steps

- ✓ Complete a Participation Agreement (PA)
- ✓ *Complete The HEART*
- ✓ Form your QI Team
- ✓ Initiate monthly team meetings
- ✓ Review kick-off and quick start materials
- ✓ Join monthly Office Hour Calls
- ✓ Join Learning Events
- ✓ Participate in Listserv discussions
- ✓ Develop data collection strategies
- ✓ Implement interventions/tools/resources, as needed
- ✓ Ask for help



THANK YOU!

QUESTIONS?



HEALTH QUALITY INNOVATORS



Next Events

Monthly Office Hours Calls

- 2nd Tuesdays, 12pm-1pm
- Next Call: March 12th



Contact Us



For more information

Website: www.mdpqc.org

Listserv: md-pqc@listserv.mdpqc.org

The MDPQC Team:

- Katie Richards – krichards@hqi.solutions
- Yasmine Jackson – yjackson@hqi.solutions
- Alynna Nguyen – anguyen@hqi.solutions