



Government of Malawi
Ministry of Health

NUTRITION CARE, SUPPORT, AND TREATMENT (NCST) FOR ADOLESCENTS AND ADULTS

Training for Facility-Based
Service Providers

PARTICIPANT'S MANUAL **Module 6: Managing the Quality** **of NCST Services**



NOVEMBER 2017



Recommended Citation

Ministry of Health (MOH). 2017. *Nutrition Care, Support, and Treatment (NCST) for Adolescents and Adults: Training for Facility-Based Service Providers – Participant’s Manual: Module 6. Managing the Quality of NCST Services*. Lilongwe, Malawi: MOH.

Contact Information

Nutrition Unit of the Ministry of Health
P.O. Box 30377
Lilongwe 3
Malawi

Telephone: +265 (01) 789 400

Fax: +265 (01) 789 431

This training manual was made possible by the generous support of the American people through the support of the Office of Health, Infectious Diseases, and Nutrition, Bureau for Global Health, U.S. Agency for International Development (USAID), the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), and USAID/Malawi, under terms of Cooperative Agreement No. AID-OAA-A-12-00005, through the Food and Nutrition Technical Assistance III Project (FANTA), managed by FHI 360, and the USAID Applying Science to Strengthen and Improve Systems (ASSIST) project managed by University Research Co., LLC (URC) under the terms of Cooperative Agreement Number AID-OAA-A-12-00101.

The contents do not necessarily reflect the views of USAID or the United States Government.

Contents

ABBREVIATIONS AND ACRONYMS	1
CONTENTS AND DURATION	1
REFERENCE 6.0: NCST COMPETENCIES AND STANDARDS FOR MANAGING THE QUALITY OF NCST SERVICES	2
REFERENCE 6.1: QUALITY IMPROVEMENT TERMS	3
EXERCISE 6.1: QUALITY ASSURANCE VS. QUALITY IMPROVEMENT	4
REFERENCE 6.2: THE MODEL FOR IMPROVEMENT.....	5
EXERCISE 6.2: GALLERY WALK—APPLYING THE MODEL FOR IMPROVEMENT AT THE HEALTH FACILITY LEVEL	7
REFERENCE 6.3: DESCRIPTION OF NCST ACTIVITIES.....	8
REFERENCE 6.4: PROBLEM IDENTIFICATION CHECKLIST	9
REFERENCE 6.5: SCOPE OF WORK FOR THE QI TEAM	12
REFERENCE 6.6: GUIDE TO CREATING A HIGH-PERFORMANCE TEAM.....	13
EXERCISE 6.3: FORMING A HEALTH FACILITY QUALITY IMPROVEMENT TEAM.....	14
EXERCISE 6.4: DEVELOPING AN AIM STATEMENT	15
REFERENCE 6.7: CREATING A FLOW CHART TO UNDERSTAND A SYSTEM/PROCESS.....	16
REFERENCE 6.8: FISHBONE DIAGRAM	17
EXERCISE 6.5: DEVELOPING CHANGES.....	18
REFERENCE 6.9: EXAMPLES OF CHANGE IDEAS FOR IMPROVING NUTRITION ASSESSMENT AND CLASSIFICATION.....	19
REFERENCE 6.10: NCST INDICATORS	21
EXERCISE 6.6: DEVELOPING INDICATORS	22
REFERENCE 6.11: HEALTH FACILITY QI PLANNING GUIDE.....	23
REFERENCE 6.12: QUALITY IMPROVEMENT DOCUMENTATION JOURNAL	24
REFERENCE 6.13: QI TEAM MATURITY INDEX	30

ABBREVIATIONS AND ACRONYMS

>	greater than
≥	greater than or equal to
<	less than
AIDS	Acquired Immunodeficiency Syndrome
ANC	antenatal care
ART	antiretroviral therapy
ARV	antiretroviral drug
BMI	body mass index
BUN	blood urea nitrogen
cm	centimetre(s)
CMV	combined mineral and vitamin mix
CNA	Critical Nutrition Actions
CMAM	community-based management of acute malnutrition
CSB	corn-soya blend
dL	decilitre(s)
ES/L/FS	economic strengthening/livelihood/food security
FANTA	Food and Nutrition Technical Assistance III Project
FAO	Food and Agriculture Organization of the United Nations
g	gram(s)
Hb	haemoglobin
HIV	human immunodeficiency virus
HTS	HIV Testing Services
IU	international unit(s)
kcal	kilocalorie(s)
kg	kilogram(s)
L	litre(s)
µg	microgram(s)
mL	microlitre(s)
mg	milligram(s)
ml	millilitre(s)
mm	millimetre(s)
MOH	Ministry of Health
MUAC	mid-upper arm circumference
NCST	nutrition care, support, and treatment
OPD	outpatient department
PDSA	plan-do-study-act
PLHIV	person or people living with HIV
PMTCT	prevention of mother-to-child transmission of HIV
QA	quality assurance
QI	quality improvement
RDA	recommended daily allowance
RUTF	ready-to-use therapeutic food
TB	tuberculosis

MODULE 6

Contents and Duration



The **Managing the Quality of NCST Services** module takes about **16 hours** to complete.

#	Description	Duration
6.0	Module Objectives	5 minutes
6.1	Quality Improvement and Assurance Terms	30 minutes
6.2	Principles of Quality Improvement	1 hour
6.3	The Model for Improvement	2½ hours
6.4	Applying the Quality Improvement Model Identifying the Problem (2¼ hours) Analysing the Problem (2¾ hours) Developing Changes (3½ hours) Testing and Implementing Change Ideas (2 hours)	10½ hours
6.5	Monitoring Quality Improvement Activities	1 hour
6.6	Discussion and Module Evaluation	10 minutes

Learning objectives

By the end of this module, participants will be able to:

1. Give examples of quality assurance and quality improvement activities
2. Implement a systematic process to improve the quality of NCST services at a health care facility
3. Formulate an action plan for improving the quality of NCST in routine health care delivery
4. Monitor quality improvement activities

Reference 6.0: NCST Competencies and Standards for Managing the Quality of NCST Services

Competence can be defined as the ability to apply knowledge and skills to produce a required nutrition outcome.

Competency standards define the range of skills that are needed to achieve a desired nutrition outcome.

NCST Competencies and Standards for Managing the Quality of NCST Services

Competency	Minimum Standards
Use the 'model for improvement' method to improve the quality of NCST service delivery	Identify a problem that needs to be addressed
	Analyse available information on how the problem occurs, its causes, and its effects
	Develop improvement ideas
	Test and implement change ideas using the plan-do-study-act (PDSA) cycle
	Monitor quality improvement activities

Reference 6.1: Quality Improvement Terms

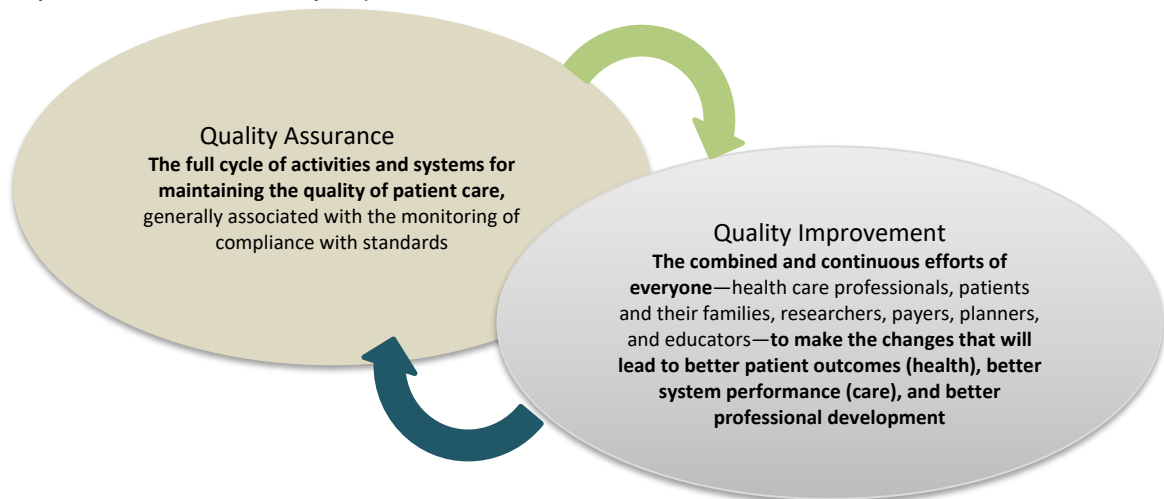
Quality means satisfying the stated or implied needs of a person/population, performing according to standards or expectations, conforming to requirements, being appropriate for purpose or use, meeting the client’s reasonable expectations, and doing the right things right.

Quality improvement (QI) refers to the combined and continuous efforts of everyone involved in family health—including health care professionals, patients and their families, researchers, payers, planners, and educators—to make changes that will lead to better patient outcomes (health), better system performance (care), and better professional development (Batalden and Davidoff 2007).

Quality assurance (QA) refers to the full cycle of activities and systems for maintaining the quality of patient care and is generally associated with the monitoring of compliance with standards.

QI and QA are distinct but intersecting components, both of which are critical for improving and sustaining the quality of services. They are not mutually exclusive terms, and neither can be successful without the other.

Quality Assurance and Quality Improvement



Source: Batalden, P.B. and Davidoff, F. 2007. "What Is 'Quality Improvement' and How Can It Transform Healthcare?" *Quality & Safety in Health Care*. 16.1: 2-3.

Exercise 6.1: Quality Assurance vs. Quality Improvement

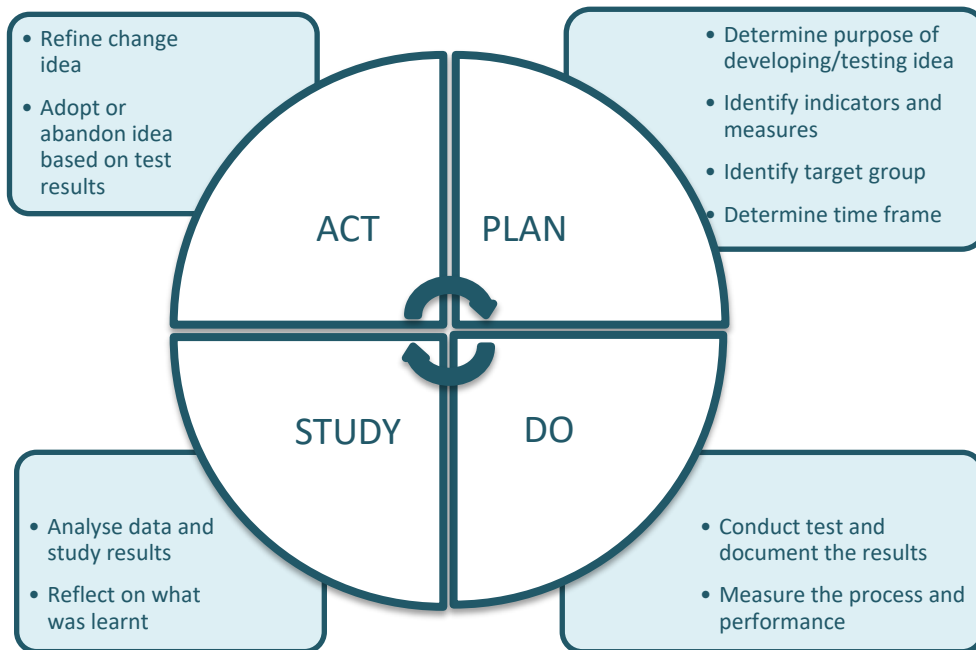
Indicate whether the activities listed below would be considered 'quality assurance' or 'quality improvement'.

Activity	Term
Using an observation checklist to ensure all steps of NCST were followed	
Opening the clinic on Saturdays to accommodate patients who are unavailable during the week	
Conducting periodic review of patient charts	
Conducting a patient satisfaction survey	
Introducing a new patient tracking system	
Measuring patient wait times after introducing task shifting	

Reference 6.2: The Model for Improvement

Identify	<p>What are we trying to accomplish?</p> <ul style="list-style-type: none"> • What is the problem? • (Example: Not all malnourished clients in the HIV clinic are being identified.) • How do you know that it is a problem? • (Example: Very few clients have MUAC recorded.) • How frequently does the problem occur, or how long has it existed? • (Example: Every clinic day) • What are the effects of this problem? • (Example: Clients are becoming sicker due to poor nutrition.) <p><i>These questions encourage us think about the ‘aim,’ which should be specific, measurable, ambitious yet achievable, relevant, and time-bound.</i></p>
Analyse	<p>What do we need to understand to make an improvement?</p> <ul style="list-style-type: none"> • Who is involved in the care process? • Who is affected by the problem? • Why, when, and where does the problem occur? • (Example: Not enough staff on clinic days in the HIV clinic) • What happens when the problem occurs?
Develop	<p>What changes can we make that will result in an improvement?</p> <ul style="list-style-type: none"> • Changes are possible solutions to problems and are developed based on knowledge and beliefs about likely causes of and solutions to the problem. <i>(Example: One hypothesis is that assessment of clients will improve if expert clients are trained to measure clients’ MUAC at triage and record it in the register, leaving more time for staff to run the HIV clinic.)</i> <p>How will we know that a change is an improvement?</p> <ul style="list-style-type: none"> • Measurement is important for determining if the change led to an improvement. Teams have to find a way to measure whether they achieved their aim.
Test/ implement	<p>Test the change using plan-do-study-act (PDSA) cycles to see if it leads to improvement. Based on the results, decide whether to abandon, modify, or adopt the solution.</p>

The Plan-Do-Study-Act (PDSA) Cycle



<p>PLAN: <i>Develop a plan to address the problem</i></p>	<ul style="list-style-type: none"> • Determine: <ul style="list-style-type: none"> ○ What the change is ○ Who is responsible for making the change ○ Where and when will the change occur ○ For how long will we test the change • On what scale will we implement the change (small or large scale) • Collect baseline data to measure the effects of change. • Educate and communicate: Inform people about the change being tested and include people who are involved in the change.
<p>DO: <i>Test the change</i></p>	<ul style="list-style-type: none"> • Make sure that the change is being tested according to the plan. • Collect data about the process being changed. • Document any changes that were not in the original plan.
<p>STUDY: <i>Verify that the change tested was implemented</i></p>	<ul style="list-style-type: none"> • Stop and review what happened. • See if the data are complete and accurate; compare the data with the baseline information to see if an improvement has occurred. • Determine what we can be concluded from the data. • Summarise what was learnt.
<p>ACT: <i>Summarise and communicate what was learnt from the previous steps</i></p>	<ul style="list-style-type: none"> • If the change does not produce the desired results, then either modify the change and repeat the PDSA cycle or abandon the change. • If the change was successful, then implement it as a standard procedure.

Exercise 6.2: Gallery Walk—Applying the Model for Improvement at the Health Facility Level

Review the posters/flipcharts from health facilities applying the model for improvement to improve the quality of nutrition activities in HIV and TB care and treatment. Take note of the following:

1) The health facility's problem and 'aim statement' (or improvement objective)

2) Whether the changes tested led to an improvement

3) Improvement results

4) Challenges and successes

5) Lessons learned and recommendation(s)

Reference 6.3: Description of NCST Activities

Activity	Description of Activity
1. Assessment	<p>Clients receive nutrition assessment using:</p> <ul style="list-style-type: none"> • Anthropometry (weight, height, BMI, BMI-for-age and MUAC) • Biochemical lab tests • Clinical evaluation (medical conditions associated with malnutrition are assessed; tests for bilateral pitting oedema and appetite are conducted) • Dietary assessment (using 24-hour recall to assess food intake)
2. Classification	<p>Each client's nutritional status is classified and recorded on the register, treatment card, and/or health passport. Nutritional status is classified as:</p> <ul style="list-style-type: none"> • Severe undernutrition • Moderate undernutrition • Normal • Overweight • Obese
3. Counselling	<p>Clients receive nutrition counselling according to need and the identified nutrition problem.</p>
4. Education	<p>All clients receive nutrition education on the Critical Nutrition Actions.</p>
5. Care plans and support	<ul style="list-style-type: none"> • All clients are put on a care plan appropriate for their nutritional status. • Severely and moderately undernourished clients receive therapeutic and supplementary food support.
6. Referral	<ul style="list-style-type: none"> • Clients who need additional medical, health, or nutrition support are referred to other health facility contact points. • From the health facility, clients are linked and/or referred to economic strengthening, livelihoods, and food security support in the community.
7. Follow-up	<p>Clients who are severely undernourished, moderate undernourished, overweight, or obese are followed up.</p>

Reference 6.4: Problem Identification Checklist

Complete the checklist based on the current implementation of NCST activities at the health facility.

NCST Activity	Quality Improvement Principle	Principle Met? (Yes/No)
1. Assessment	Do all eligible patients receive nutrition assessment?	
	Is there a clearly documented flow chart of work that indicates who does what during nutrition assessment and when?	
	Is nutrition assessment implemented as part of routine HIV and TB care for every client?	
	Is there a team to oversee implementation of nutrition assessment?	
	Are nutrition assessment data routinely recorded according to the national guidelines?	
	Are results of nutrition assessment used for decision-making at the facility level?	
2. Classification	Do all patients who receive nutrition assessment have their nutritional status classified?	
	Is there a clearly documented flow chart of work that indicates who classifies nutritional status and when?	
	Is classification of nutritional status implemented as part of routine HIV and TB care for every client?	
	Is there a team to oversee classification of nutritional status?	
	Are data on nutrition classification routinely recorded according to the national guidelines?	
	Are results of nutrition classification used for decision-making at the facility level?	
3. Counselling	Do all eligible patients receive nutrition counselling?	
	Is there a clearly documented flow chart of work that indicates who does nutrition counselling and when?	
	Is nutrition counselling implemented as part of routine HIV and TB care for every client?	
	Is there a team to oversee implementation of nutrition counselling?	
	Are nutrition counselling data routinely recorded according to the national guidelines?	
	Is the client information from the nutrition counselling session used for decision-making at the facility level?	
4. Education	Do all eligible patients receive nutrition education?	
	Is there a clearly documented flow chart of work that indicates who does what during nutrition education and when?	
	Is nutrition education implemented as part of routine HIV and TB care for every client?	
	Is there a team to oversee implementation of nutrition education?	

	Are nutrition education data routinely recorded according to the national guidelines?	
	Are results on nutrition education used for decision-making at the facility level?	
5. Care plans and support (including provision of therapeutic and supplementary foods)	Are all patients given a nutrition care plan?	
	Is there a clearly documented flow chart of work that indicates who does what during the care and support process and when?	
	Are nutrition care and support for severely/moderately undernourished, overweight, and obese clients implemented as part of routine HIV and TB care for every client?	
	Is there a team to oversee implementation of nutrition care and support?	
	Are data on nutrition care and support provided routinely recorded according to the national guidelines?	
	Are results on nutrition care and support used for decision-making at the facility level?	
6. Referrals	Do all eligible patients receive a referral or linkage to other services?	
	Is there a clearly documented flow chart of work that indicates who does what during the referral process and when?	
	Are referral and linkage activities implemented as part of routine HIV and TB care for every client?	
	Is there a team to oversee implementation of referrals and linkages to other health services or to economic strengthening, livelihoods, and food security (ES/L/FS) services?	
	Are data on referrals and linkages routinely recorded according to the national guidelines?	
	Are results on referrals and linkages used for decision-making at the facility level?	
7. Follow-up	Are all severely/moderately undernourished, overweight, and obese clients followed up?	
	Is there a clearly documented flow chart of work that indicates who does what during follow-up and when?	
	Are follow-ups conducted as part of routine HIV and TB care for every client?	
	Is there a team to oversee the follow-up of eligible clients?	
	Are data on follow-up routinely recorded according to the national guidelines?	
	Are results on follow-ups used for decision-making at the facility level?	

Problem Prioritization

Determine which problem needs the most immediate attention. Prioritization should be based on the following:

- **High risk:** Could have the most negative effect if the quality is poor
- **High volume:** Occurs often and affects a large number of people
- **Problem-prone:** An activity susceptible to errors
- **Early step in care process:** Problem occurs during the first steps in providing care

Write the prioritized problem and state how it diverges from the practice(s) outlined in the national NCST guidelines or fails to meet the client’s expectations.

Prioritized problem	Problem statement

Reference 6.5: Scope of Work for the QI Team

Quality improvement (QI) teams will be established at each health facility that is starting or strengthening the process of integrating nutrition into HIV and TB service delivery.

Purpose

Ensure that all HIV and TB patients are provided with adequate and continuous care and treatment, including nutrition services.

Composition

- The team should include people involved at different levels of service, e.g., clinicians, the facility in-charge, nurses, health surveillance assistants (HSAs), expert clients, and volunteers.
- Keep the team small (seven to nine members).

Responsibilities

- Regularly review the integration of nutrition services into HIV and TB service delivery at the health facility.
- Conduct regular meetings (every 1 to 2 weeks). Prepare a meeting schedule for at least 6 months and share with facility and district managers and/or coaches. Make sure the schedule is posted at the health centre.
- Lead continuous QI activities at the health centre:
 - Based on the team's review of how NCST services are provided and integrated, determine the areas in which patient care can be improved.
 - Identify and prioritize issues/problems with delivering/receiving NCST services.
 - Liaise with patients to understand their views about problems and potential solutions.
 - Develop and test solutions to the problems; create work plans for implementing specific solutions.
 - Collect data, and monitor and review/analyse whether the solutions have improved service delivery; based on review, determine next steps or new solutions.
 - Send representatives to trainings and learning sessions on how to improve the integration of nutrition into HIV and TB service delivery.
 - Share your facility's improvement work (especially results and data) and learning solutions with other health facilities.

Reference 6.6: Guide to Creating a High-Performance Team

Building a team that functions well requires hard work and commitment. Some of the most important practices in creating high-performance teams include:

- **Establish urgency and direction.** All members need to believe that the team has an urgent and worthwhile purpose.
- **Pay particular attention to first meetings and actions.** First impressions mean a lot. During a team's first meeting, participants will want to understand who will have the greatest influence on the team and whether they will play an important role. It is important that roles are shared among the team members at this time.
- **Spend a lot of time together.** Teams must spend time together, especially at the beginning. The time spent together should be planned and unplanned, formal and informal. Meetings should be held **every 1 to 2 weeks** to keep the initiative moving ahead.

Conducting an effective team meeting

One way to improve the productivity of teams is to run effective team meetings. Here are some tips for making a meeting more effective and efficient.

1. **Encourage attendance.** Teams should place a high priority on meetings and recognize that everyone must be there in order for the best work to emerge.
2. **Prepare a meeting agenda.** An agenda defines the purpose of the meeting. It should include who will attend the meeting, a list of items to be covered, meeting start and ending times, and the location.
3. **Make sure meetings begin and end on time.** Use good time management to keep meetings on schedule.
4. **Keep the discussion focused on relevant issues.** Meetings are **forums to analyse data, brainstorm on effective changes, and make decisions based on results.**
5. **Encourage and support participation of all members.** Ensure that everyone has the opportunity to contribute. Make sure tasks and responsibilities are distributed among all members to avoid overburdening anyone. Remind members to complete any assignments before the next meeting.
6. **Bring proper closure.** Close a meeting by summarising the group's decisions and accomplishments, ensuring that tasks that must be completed before the next meeting are assigned, scheduling the next meeting, and preparing its agenda.

Exercise 6.3: Forming a Health Facility Quality Improvement Team

- Think about the problem your health facility group identified in the previous exercise and determine who would be needed on the QI team to solve the problem.
- In the space below, write down the QI team members your group identified, noting the type of service provider they are and where they work in the facility (e.g., a nurse in the ART clinic, an HSA in the PMTCT clinic) or, for people outside the facility, what their roles are (e.g., a community leader).

Health Facility: _____

QI Team Members

Type of service provider or role (for people outside the facility)	Where they work (e.g., ART, PMTCT, lab, community)
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	

Exercise 6.4: Developing an Aim Statement

Develop an aim statement for the problem your health facility group identified.

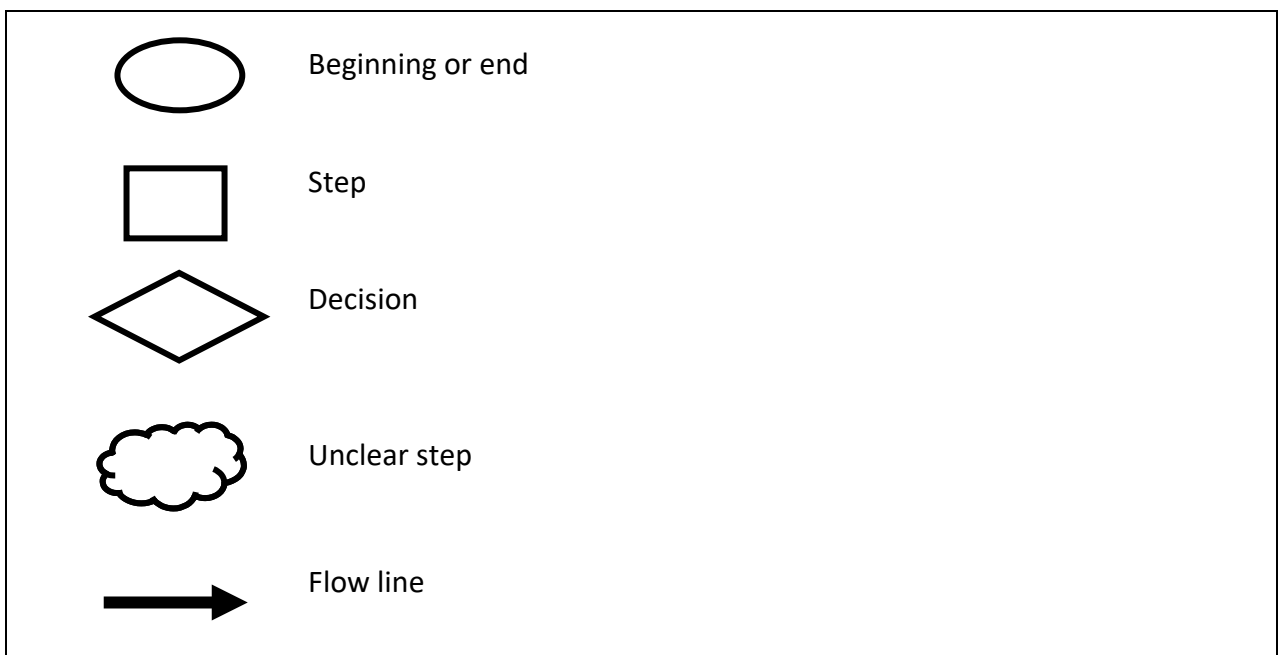
Health Facility: _____

Specific scope of goal (e.g., increasing percentage of clients who receive nutrition counselling from 25% to 90%)	
Numerical goal for outcome	
Timeframe	
How aim will be achieved	
Aim statement	

Reference 6.7: Creating a Flow Chart to Understand a System/Process

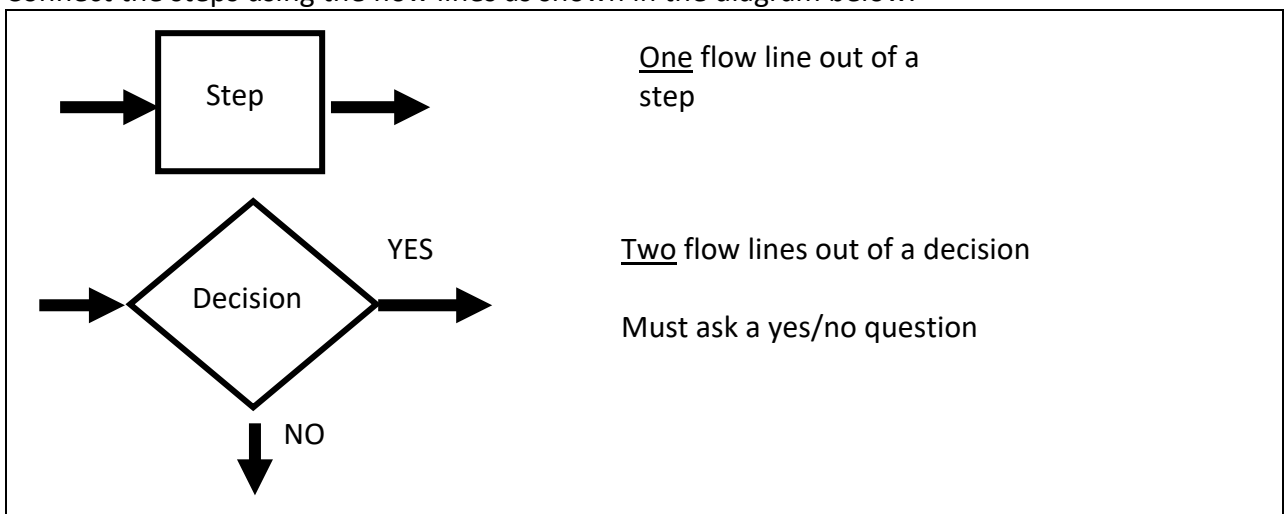
1. Decide on the beginning and end points of the process being mapped.
2. Identify the steps in the process and use the symbols below for each point in the process.
3. Using the flow lines in the diagram below, link the steps with arrows showing the direction of the steps.
4. Review the flow chart to see whether the steps are in their logical order.

Flow chart symbols



Flow lines of a flow chart

Connect the steps using the flow lines as shown in the diagram below.

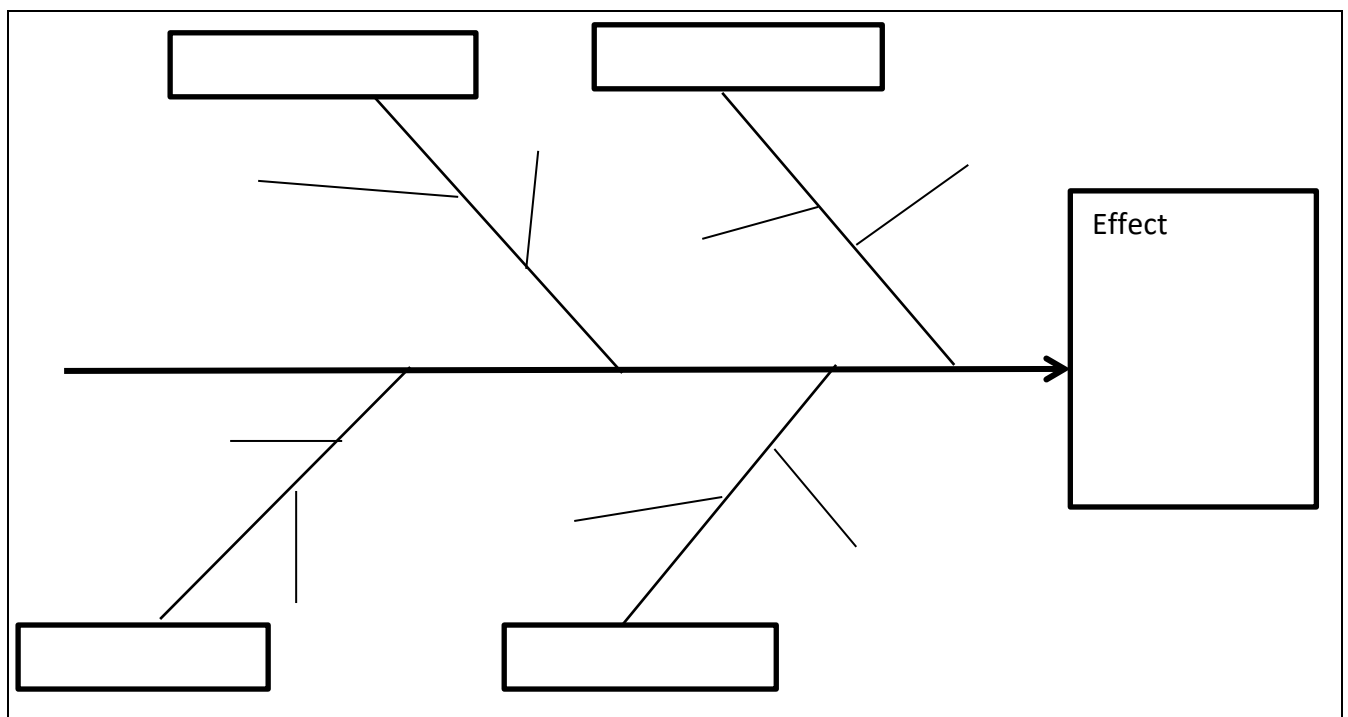


Reference 6.8: Fishbone Diagram

1. Brainstorm and list all the possible causes of the problem.
2. Write the problem (the effect) in the box at the far right of the diagram.
3. To the left of that box, draw a central line (the spine), and from this central line, draw diagonal lines (fishbones) to represent different categories for the causes of the problem (see diagram below).
4. Group the possible causes according to the relevant categories listed below and write the categories in the boxes.

Categories:

- Providers/staff
 - Policies/guidelines/protocols
 - Patients
 - Resources/equipment
 - Procedures/processes/methods
- Starting from the diagonal line under each category, draw a smaller diagonal line for each cause in the corresponding category and write the cause next to the smaller line.



Exercise 6.5: Developing Changes

With your health facility group, brainstorm on possible solutions to the problem. In the space below, list all the changes your group wants to try to solve the problem.

Change ideas (possible solutions)	How the change idea would be implemented

Reference 6.9: Examples of Change Ideas for Improving Nutrition Assessment and Classification

Change Idea (Solution)	Implementation	Change Idea Improved Nutrition Assessment by:
Giving number tags to patients on arrival at the facility	Patients received the tags on arrival and left the tags at the last step of care. At the end of the day, health workers counted the tags.	<ul style="list-style-type: none"> Tracking the number of patients who receive nutrition assessment on a particular clinic day Ensuring that all patients who attend a clinic do not miss the nutrition assessment step
Using an electronic system to register ART patients	All patients who visited the ART clinic were registered in the computer. At the end of the clinic day, health workers could determine how many patients they had seen.	<ul style="list-style-type: none"> Tracking ART patients who receive nutrition assessment
Counting all clients who visited the clinic during the month as shown in the TB, ART, and ANC/PMTCT registers	All patients who visited the clinics were documented in the register.	<ul style="list-style-type: none"> Reporting of patients who receive nutrition assessment at ART, TB, and ANC/PMTCT clinics
Counting the patient registration cards used in ART clinics at the end of each clinic day	All patients received their treatment cards at the start of the clinic day and left them with the nurse who dispensed drugs. Service providers could count the cards to determine how many patients they had seen.	<ul style="list-style-type: none"> Tracking the number of patients who receive nutrition assessment on a particular clinic day
Improvising a register to record all clients assessed	A hardcover notebook was improvised as a register to record details of all patients assessed.	<ul style="list-style-type: none"> Tracking the number of patients who receive nutrition assessment on a particular day Reporting patient outcomes at the end of each clinic day and month
Tallying all clients that were assessed in a notebook	A notebook was used to tally patients assessed at every clinic.	<ul style="list-style-type: none"> Reporting patient outcomes at the end of the clinic day and month
Developing forms to record the information of all clients assessed	Paper forms were used to record patient information.	<ul style="list-style-type: none"> Reporting patient outcomes at the end of the clinic day and month
Using health surveillance assistants (HSAs) to assess clients	HSAs were trained on how to assess nutritional status. The trained HSAs measured MUAC, height, and weight and classified nutritional status using MUAC and BMI of clients attending the clinic.	<ul style="list-style-type: none"> Facilitating nutrition assessment of every patient attending ART, TB, and ANC/PMTCT clinics Reducing patient waiting time Reducing staff workload in facilities with a limited number of staff
Using expert clients to assess nutritional status of clients	Expert clients were provided an orientation on how to assess nutritional status using MUAC, weight, and height. The oriented expert clients measured MUAC, height, and weight of clients attending the clinic.	<ul style="list-style-type: none"> Facilitating nutrition assessment of every patient attending ART, TB, and ANC/PMTCT clinic Reducing patient waiting time Reducing staff workload in facilities with a limited number of staff

Using nurses to assess nutritional status of clients	Nurses were trained on how to assess nutritional status. The trained nurses measured MUAC, height, and weight and classified nutritional status using MUAC and BMI of clients attending the clinic.	<ul style="list-style-type: none"> • Facilitating nutrition assessment of every patient attending ART, TB, and ANC/PMTCT clinic • Reducing patient waiting time • Reducing staff workload in facilities with a limited number of staff
Using support staff such as security guards, hospital cleaning or maintenance staff, clerks, and ground labourers to assess nutritional status of clients	Support staff were provided an orientation on how to assess nutritional status using MUAC, weight, and height. The oriented support staff measured MUAC, height, and weight of clients attending the clinic.	<ul style="list-style-type: none"> • Facilitating nutrition assessment of every patient attending ART, TB, and ANC/PMTCT clinic • Reducing patient waiting time • Reducing staff workload in facilities with a limited number of staff
Shifting point of assessment from the nutrition focal persons' desk to the ART, TB, or ANC/PMTCT registration point	An individual would conduct assessments at registration, and a tool for recording nutrition information was placed at registration.	<ul style="list-style-type: none"> • Reducing patient waiting time • Ensuring that every patient who attends ART, TB, or ANC/PMTCT clinic does not miss the nutrition assessment step
Developing a roster for facility staff to take turns conducting assessments	A roster for conducting assessments was placed in the clinic.	<ul style="list-style-type: none"> • Ensuring that there is always a person available to conduct nutrition assessment for clients on the ART, TB, or ANC/PMTCT clinic day

Reference 6.10: NCST Indicators

	Assessment	Classification	Counselling	Nutrition care plans and support	Follow-up	Referral for community-based ES/L/FS support	Nutrition education
Aim	All clients attending HIV, TB, and ANC/PMTCT clinics receive nutrition assessment at each visit	All clients who receive nutrition assessment have their nutritional status classified	All clients whose nutritional status is assessed and classified receive nutrition counselling	All severely and moderately undernourished clients receive supplementary or therapeutic food	All clients who miss one appointment are followed up	Eligible clients are referred from the facility to community-based ES/L/FS support services	All clients attending HIV, TB, and ANC/PMTCT clinics receive nutrition education
Indicators	% of HIV, TB, ANC/PMTCT patients who received nutrition assessment each month	% whose nutritional status was classified	% who received nutrition counselling	% of severely and moderately undernourished clients who received supplementary or therapeutic food	% of clients who missed an appointment who returned for scheduled follow-up visits % of clients who defaulted on treatment	% of clients referred from the facility for ES/L/FS support	% of clients who attended HIV, TB, ANC/PMTCT clinics and received nutrition education
Numerator	# of HIV, TB, ANC/PMTCT patients who received nutrition assessment each month	# of clients whose nutritional status was classified	# who were counselled	# who received therapeutic or supplementary food	# of clients who missed an appointment who returned for scheduled follow-up visits # of clients who defaulted on treatment	# who were referred for ES/L/FS support	# who attended HIV, TB, and ANC/PMTCT clinics and received nutrition education
Denominator	# who attended HIV, TB, ANC/PMTCT clinics each month	# whose nutritional status was assessed	# whose nutritional status was assessed and classified	# who are severely/moderately undernourished	# of clients who missed one scheduled appointment	# who are eligible for referral for ES/L/FS support	# who attended HIV, TB, ANC/PMTCT clinics

Exercise 6.6: Developing Indicators

Develop indicators for the QI team to track to measure change. See **Reference 6.10: NCST Indicators** for examples. Complete the table below to guide development of the indicator.

Indicator	
Numerator	
Denominator	
Source of information	
Person responsible	
Frequency	

Reference 6.11: Health Facility QI Planning Guide

Make a plan for testing the first set of change ideas. Use information from previous exercises to complete the sections below.

Health Facility Name: _____

Date: _____

Improvement aim	Change ideas (solutions)	How the change idea will be implemented	Who will be responsible for implementing the change idea	Where the change idea will be implemented	When the change idea will be implemented
Indicator: Numerator: Denominator:	1.				
	2.				
	3.				
	4.				
	5.				

Reference 6.12: Quality Improvement Documentation Journal

Name of the Site: _____ Team Leader: _____

Team Members: _____

Journal Start Date: _____ End Date: _____

Part 1. Objective, Indicator, and Problem Description

Improvement Objective: 1. _____	Indicator for the Objective:
Problem Description: Briefly describe the problem being addressed and state how the current situation diverges from the national NCST guidelines or fails to meet clients' expectations or needs. Also describe some of the challenges with the current situation.	

Part 2. Changes Worksheet

List the changes that the team has tested to achieve the improvement objective. Write all changes, whether effective or not. Also note when the change was started and ended (where applicable) so the results can be annotated.

Tested Changes: Use 1–2 sentences to briefly describe each tested change.	Start Date DD/MM/YY	End Date (if applicable) DD/MM/YY	Effective? (Yes/No) Was there any improvement?	Comments Note here any potential reasons why the change was or was not effective; also indicate any change in indicator data related to the tested change.

Part 3. PLAN-DO-STUDY-ACT Cycles for Change Ideas

Document the PDSA cycle for each change tested; use separate forms for each round of testing.

Plan-Do-Study-Act Cycle Form

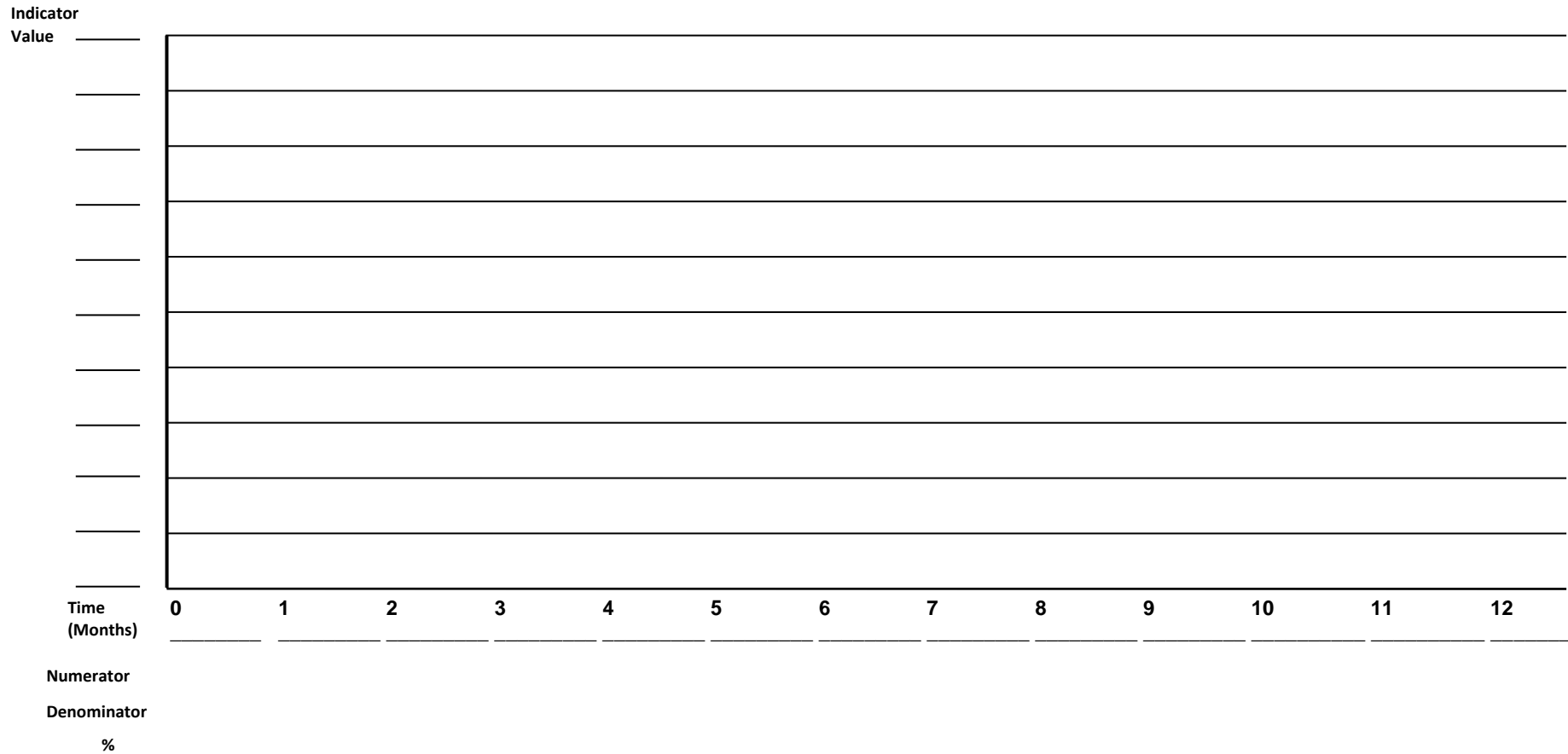
Aim:	Change idea 1:	Change idea 2:	Change idea 3:
<p>PLAN</p> <ul style="list-style-type: none"> • Determine: <ul style="list-style-type: none"> ○ What the change is ○ Who is responsible for making the change ○ Where and when will the change occur ○ For how long will we test the change ○ On what scale will we implement the change (small or large scale) • Collect baseline data to measure the effects of change. • Educate and communicate: Inform people about the change being tested and include people who are involved in the change. 			
<p>DO</p> <ul style="list-style-type: none"> • Make sure that the change is being tested according to the plan. • Collect data about the process being changed. • Document any changes that were not in the original plan. 			
<p>STUDY</p> <ul style="list-style-type: none"> • Stop and review what happened. • See if the data are complete and accurate; compare the data with the baseline information to see if an improvement has occurred. • Determine what can be concluded from the data. • Summarise what was learnt. 			
<p>ACT</p> <ul style="list-style-type: none"> • If the change does not produce the desired results, then either modify the change and repeat the PDSA cycle or abandon the change. • If the change was successful, then implement it as a standard procedure. 			

Plan-Do-Study Act Cycle Form

Aim:	Change idea 1:	Change idea 2:	Change idea 3:
<p>PLAN</p> <ul style="list-style-type: none"> • Determine: <ul style="list-style-type: none"> ○ What the change is ○ Who is responsible for making the change ○ Where and when will the change occur ○ For how long will we test the change ○ On what scale will we implement the change (small or large scale) • Collect baseline data to measure the effects of change. • Educate and communicate: Inform people about the change being tested and include people who are involved in the change. 			
<p>DO</p> <ul style="list-style-type: none"> • Make sure that the change is being tested according to the plan. • Collect data about the process being changed. • Document any changes that were not in the original plan. 			
<p>STUDY</p> <ul style="list-style-type: none"> • Stop and review what happened. • See if the data are complete and accurate; compare the data with the baseline information to see if an improvement has occurred. • Determine what can be concluded from the data. • Summarise what was learnt. 			
<p>ACT</p> <ul style="list-style-type: none"> • If the change does not produce the desired results, then either modify the change and repeat the PDSA cycle or abandon the change. • If the change was successful, then implement it as a standard procedure. 			

Part 4. Time Series Chart Template—Annotated Results

Use the graph below to create a time series chart to document progress. Indicate the value of the numerator and denominator, and note on the graph the time the change was introduced.



Briefly explain any notable trends in the graph(s):

Notes on the indicator: Write any additional comments on the performance of indicators, if needed. Note anything derived from the changes worksheet and the graph template that might explain the performance trends of the improvement objective.

Notes on other observed effects: Write any *currently* observed effects (positive or negative) resulting from the quality improvement effort, such as comments from patients, changes in providers' performance or motivation, improved efficiency, or the survival story of a sick patient.

Reference 6.13: QI Team Maturity Index

Purpose: To monitor progress in team maturity as the team works through different stages of improvement and the NCST activities

Expectations: The team will progress through the stages of maturity during its improvement work.

Assessment/Description	Definition
1.0 Forming team	<ul style="list-style-type: none"> Team has been formed and oriented on aims, target population Team has held discussions on its improvement aim
1.5 Planning for the improvement has begun, but no changes tested	<ul style="list-style-type: none"> Team is actively meeting and holding discussions Plans for testing changes have been made No testing of changes has begun Some baseline data may be collected
2.0 Changes tested, but no improvement seen yet	<ul style="list-style-type: none"> Some changes are being tested to improve 1 or more of the 7 NCST activities Data on key measures is being collected, analysed, and reported No improvement seen yet
2.5 Changes tested, some initial improvement	<ul style="list-style-type: none"> Some changes are being tested in 1 or more of the 7 NCST activities Data on key measures are being collected, analysed, and reported Some evidence of initial improvement from sites based on simple indicators Able to describe what changes are being made and whether the changes work
3.0 Modest improvement	<ul style="list-style-type: none"> Change ideas tested; successful change ideas implemented for at least 1 of the 7 NCST activities Testing changes for at least 2 of the 7 NCST activities Data on key measures are being collected, analysed, and reported Evidence of moderate improvement in process measures supported by quantitative data Able to describe what changes are being made and whether the changes work
3.5 Improvement	<ul style="list-style-type: none"> Change ideas tested; successful changes implemented for at least 3 activities Testing changes and measuring quantitative data for at least 2 of the 7 activities Data on key measures are being collected, analysed, and reported Team shows ability to prioritize and analyse further details of the service delivery activities that are not showing improvement Evidence of significant improvement in at least 3 of the 7 activities
4.0 Significant improvement	<ul style="list-style-type: none"> Indicators in the documentation journal show that service delivery steps the team has worked on have improved Indicators in the documentation journal show that the successful changes are now a priority and have been adopted

	<ul style="list-style-type: none"> • The team has started to make changes in another NCST activity • Evidence of increased numbers of people recovering from malnutrition each month
4.5 Sustainable improvement	<ul style="list-style-type: none"> • Indicators in the documentation journal show that the steps the team has worked on are showing sustained improvement at least 6 months after the team implemented the change • Teams are working on improvement aims beyond the 7 NCST activities
5.0 Outstanding sustainable results	<ul style="list-style-type: none"> • All 7 NCST activities are substantially better than at the beginning of the QI work • Improvement work is continuing, and no step has worse results compared to 12 months earlier • All measures of improvement, including the recovery rate for malnourished clients, are consistently over 95% • Teams are working on improvement aims beyond the 7 NCST activities

