

CLINICAL
PRACTICE
GUIDELINES
(CPG)
Process Manual

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American International Health Alliance

Clinical Practice
Guideline for
General Practitioners:
**A Process
Guide**



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This manual is the result of a one-year collaboration among members of AIHA's Clinical Practice Guidelines Region-Wide Advisory Committee, each of whom made significant contributions to the process and, indeed, to the final product. The manual is intended for healthcare professionals, including physicians, nurses, pharmacists, administrators, and others involved in the organization and delivery of patient care services to provide practical information about developing, implementing, and evaluating evidence-based clinical practice guidelines.

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Preface

The purpose of this manual is to provide practical information about developing, implementing, and evaluating evidence-based clinical practice guidelines (CPGs). Improving healthcare systems is not an easy task, but the potential benefits are great. AIHA strongly encourages the use of clinical practice guidelines as a means for reducing the burden of illness, injury, disability, and improving the health and functioning of all patients.

This manual is intended for healthcare professionals, including physicians, nurses, pharmacists, administrators, and others involved in the organization and delivery of patient care services. It describes specific methods used to improve health-care quality. These methods include continuous quality improvement (CQI), which is used to tailor clinical practice guidelines to the needs of local patient populations and polyclinic conditions. CQI methods—teams, tasks, and activities—are explained in detail throughout, using examples from AIHA partnerships and experience in the United States.

Therefore, this manual emphasizes the importance of implementing clinical practice guidelines in the broad context of regional and national priorities. Tremendous opportunities exist to improve health-care services through aligning polyclinic goals with relevant environmental factors.

Clinical practice guidelines are effective instruments for ongoing, measurable improvements in both day-to-day healthcare practice and long-term patient health status and outcomes. As the manual clearly illustrates, there is no explicit formula or recipe for success. Commitment to change, a lot of trial and error, multiple strategies and interventions, and dedicated leadership all contribute to fundamental, lasting improvements in patient care quality.

Chapter 1: Clinical Practice Guidelines— An Overview

An ongoing emphasis of AIHA's partnerships has been to improve clinical practice. This includes ensuring appropriate and effective care that uses interventions based on sound research to optimize the management of limited resources. On an international level, evolving trends in the development and use of CPGs are ideally suited to the accomplishment of the broader partnership goals of improving health care throughout the Central and Eastern Europe (CEE) and Eurasia. AIHA encourages the use of guidelines within partnership institutions to facilitate change, standardize recommendations, and reduce duplication of effort. AIHA also maintains a Web site that includes important information on clinical practice guidelines: www.eurasiahealth.org/english/index.cfm. EurasiaHealth guidelines are often available in Russian as well as English versions.

CLINICAL PRACTICE GUIDELINES DEFINED

Clinical practice guidelines are tools that help healthcare professionals and patients make informed decisions about preventing illness and managing disease. The US Institute of Medicine

Guideline development typically includes a verifiable, systematic literature search and a review of existing evidence published in peer-reviewed journals to identify proven therapies and define their appropriate use.

defines evidence-based clinical practice guidelines as “systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.”¹ Nearly all guidelines have been produced under the auspices of a professional organization (*e.g.*, medical specialty society, government agency, and/or healthcare organization). Guideline development typically includes a verifiable, systematic literature search and a review of existing evidence published in peer-reviewed journals to identify proven therapies and define their appropriate use. Guidelines are applied based on individual patient needs and use of professional judgment.²

“Serious and widespread quality problems found throughout the practice of medicine in the past decade” prompted tremendous growth in the number of guidelines written for all types of medical conditions.³ The quality problems most frequently identified in the medical literature include

- Unexplained variation in physician practice;
- Documentation of significant rates of inappropriate care;
- Unexplained variation in health outcomes;
- Inconsistent involvement of patients in decisionmaking;
- Increased costs.⁴⁻⁸

Guidelines can improve the quality of medical practice through the use of systematic, evidence-based science to foster optimal patient care.⁹

Key Attributes of Clinical Practice Guidelines

- The goal of CPGs is to improve healthcare quality.
- CPGs bring together the best external evidence and other knowledge necessary to make decisions about a specific health problem. They represent an attempt to distill a large body of medical knowledge into a convenient, useable format.¹⁰
- A CPG is a single statement or a set of statements. For example, a single-statement guideline might read: “All women aged 40 to 49 without a personal or family history of breast cancer should have a breast examination once a year.” However, CPGs are typically statements about a specific condition or patient problem. A set of clinical guidelines, for example, would cover many aspects of breast cancer diagnosis and treatment—not just who should have a breast examination. Guidelines cover both medical and nursing care.
- CPGs are valid and supported by strong scientific evidence—not tradition or intuition.
- CPGs must be reviewed, monitored, and updated on a regular basis.

- CPGs are developed, implemented, and evaluated by those responsible for the care of the patient.
-
- Collaboration with Ministry of Health officials, Oblast Health Officers, local and regional health organizations, and other external constituents helps shape, support, and endorse the guideline process.

GUIDELINE DEFINITIONS AND TERMS

The field of practice guidelines is still developing. Terms may be inconsistent, confusing, vague, and difficult to agree on. Also, different languages use very specific terms in relation to exactness, burden of responsibility, and economics. Terms with clear meaning in one language may suggest something very different in a neighboring country. Listed below, are the terms most commonly found in European and US practice guideline and healthcare quality improvement literature.¹¹

Algorithm: A step-by-step procedure (if/then statements) for solving a problem or making a decision. Clinical characteristics, test characteristics, or treatment options are simplified into a basic decision tree. Because of this abbreviated format, algorithms can be very useful clinical tools but are not as comprehensive as guidelines¹² (see Appendix A, item 1).

Available best evidence: Includes results of randomized clinical trials (RCTs), systematic literature reviews, and qualitative and quantitative studies.

Clinical practice guidelines (CPGs): An understanding of the process and outcome sufficient to allow meaningful discussion of proper use (of the intervention). Guidelines provide a framework for prevention and treatment. They should be flexible and tailored to fit individual patient's health problems. A guideline may, for example, recommend penicillin as the drug of choice for certain infections, but give an option of using other antibiotics for patients allergic to penicillin.

Continuous quality improvement (CQI): An approach to quality management that builds upon traditional quality assurance methods by emphasizing the organization and systems; focuses on “process” rather than the individual; recognizes both internal and external “customers;” and promotes the need for objective data to analyze and improve processes. Most problems are found in processes, not in people. CQI does not seek to blame, but rather to improve processes. Quality is defined as meeting and/or exceeding the expectations of customers (patients, health professionals, health ministries, city officials etc.).

Evidence-based medicine: “The conscientious, explicit, and judicious use of current best evidence about the care of the individual

patient.”¹³ The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. Evidence-based medicine is not “cookbook” medicine.

The Multi-method Assessment Process

(MAP): An approach to understanding a complex health system such as a primary care practice or polyclinic. MAP integrates quantitative and qualitative strategies to collect, analyze, and present results with recommendations for improving patient care.

Outcome: The results of interventions and patient care processes.

Outcome measures: The four standard outcome measures of quality health care are: clinical results (morbidity and mortality); functional health status (activities of daily living); satisfaction of clinicians, staff, and patients and their families; and cost. Together, these characterize the quality of a healthcare system.

Pathway: A “documented plan of expected clinical management where the critical treatments and interventions are identified and sequenced along a timeline.” The clinical pathway defines the expected flow of services for a group of patients with a particular diagnosis or undergoing a particular procedure. Pathways are used primarily for hospital care.¹⁴

PDSA improvement cycles: P=Plan, D=Do, S=Study, A=Act. Plan the improvement/change strategy including who will be involved, what data will be collected, how and when the data will be collected, and when the data will be considered adequate to study. Do the intervention. Study the results. Act on the knowledge you gain from the data (maintain the plan, modify the plan, add to the plan). Continue with ongoing PDSA cycles.

Process: The combination of people, resources, methods, and setting that produces an outcome.

Process measure: An example of a process measure is patient registration. How do patients schedule appointments? Is the system efficient? Who is involved? How is it done? Can it be improved?

Protocol: Generally accepted procedure with explicit steps recommended by an authoritative group of experts. Protocols are rigid and tend to be used in research. Used in non-research daily practice, protocols are also referred to as care pathways, critical paths, care maps, and care tracks.¹⁵

Standard: A minimum or must-do level of care with rare circumstances justifying exceptions. Other terms for standards are rules and strict indications or contraindications. The rule to always cross-match blood type before transfusion is an example of a standard.

System: The combinations of people and resources that interact within a polyclinic, hospital, Emergency Medical Services, and larger community, city, region, and country.

Variation: The “behavior” of a process over time in the context of the organization. The goal in quality improvement work is to reduce variation and strive for consistency. For example, does the rate of cholesterol screening vary significantly among polyclinic physicians or is screening consistent among all physicians?

USING CPGs TO IMPROVE PRIMARY CARE

A guideline used to improve patient care in the primary care setting can consist of some or all of the following components

- Prevention
.....
- Early detection
.....
- Diagnosis
.....
- Treatment
.....
- Patient education
.....
- Follow-up and monitoring
.....
- Referrals to a specialist or to the hospital¹⁶⁻¹⁹
.....

Examples include:

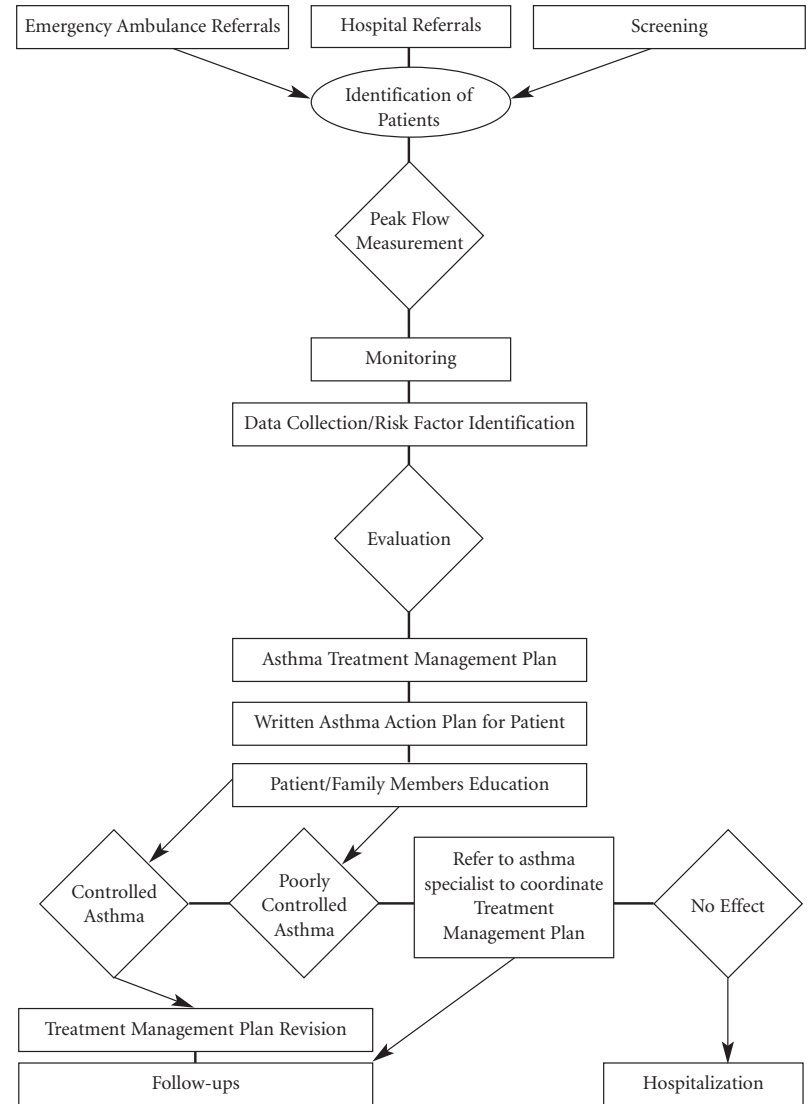
- Managing a progressive chronic illness in a single organ system that advances toward undesirable sequelae. The aim for such a guideline is generally to prevent the development of those sequelae. Guidelines for hypertension, congestive heart failure, and chronic obstructive lung disease fall within this category.²⁰ Hypertension and ischemic heart disease were among the clinical conditions targeted by the AIHA Dubna, Russia/LaCrosse, Wisconsin hospital partnership (Bolshaya Volga Hospital, Hospital No. 166, and Hospital No. 9 in Dubna and the Gundersen Lutheran Medical Center and the Franciscan Healthcare System in La Crosse).
-
- Managing an acute illness. Here the goal of therapy is rapid treatment of the acute illness without the development of undesirable sequelae. Treatment of community-acquired pneumonia is an example.
-
- Clinical preventive services guidelines. These frequently represent primary prevention or early detection activities. Here the definition of patients eligible for the interventions may be simple or complex, but the recommendations are always straightforward: apply the intervention or do not. For example, all patients should be screened for tobacco use and users should be advised to quit.^{21, 22} For example, a CPG Working Group from Georgia developed guidelines

to reduce the incidence, morbidity, and mortality from invasive cervical cancer. Aims of the cervical screening program are to

- Improve detection of the disease at an early, pre-cancerous stage of development
- Increase life expectancy
- Promote appropriate referral to secondary care for diagnosis and treatment

Managing a cyclic chronic illness that is characterized prominently by exacerbations and remissions. Here the goals of therapy include suppression of the chronic manifestations of the illness, less frequent exacerbations, and effective and rapid treatment of the acute exacerbations. Asthma is such an illness.²³ AIHA's Baku, Azerbaijan/Portland, Oregon partnership (Narimanov District Health Administration/Oregon Health Sciences University) developed an algorithm for the care of patients with bronchial asthma to improve and unify bronchial asthma diagnosis, treatment, and prophylaxis techniques in a primary healthcare setting. The guideline is based on the latest recommendations of the World Health Organization, the US National Institute of Heart, Lungs, and Blood, several Russian national programs, the Oregon Population-Based Guidelines on Asthma, and the Azerbaijan Society of Allergists and Immunologists.

AN ALGORITHM FOR PATIENTS WITH BRONCHIAL ASTHMA



Chapter 2: Methods for Developing Effective Guidelines

This section describes methods for developing an effective guideline. There is no single “recipe”—developing and implementing CPGs is an ongoing and never-ending process! However, four state-of-the-art organizational change strategies derived from current, peer-reviewed health services research are highly recommended.

- I Continuous quality improvement (CQI)
.....
- I Systems thinking
.....
- I The Multi-method Process Assessment (MAP)
.....
- I Ongoing use of data for decision-making

CONTINUOUS QUALITY IMPROVEMENT (CQI)

CQI is an approach to quality management that emphasizes organizational performance, patient care processes, and outcomes.²⁴⁻³⁰ CQI is used throughout this manual as a framework for developing, implementing, and evaluating guidelines because, when combined with other strategies, it can be a powerful means to achieve practice-wide

CQI strategies are used for organizing the project, deciding what data are needed to support change, and measuring whether the change is effective.

quality of care improvements. CQI strategies are used for organizing the project, deciding what data are needed to support change, and measuring whether the change is effective.

When combined with the other change strategies defined in this manual, CQI tools and methods can result in effective and sustained organizational and patient care improvements. The focus in quality improvement has shifted in the past ten years from trying to influence the behavior of individual clinicians by such methods as monitoring adherence to guidelines, to changing the system in which clinicians practice.

A “process” is the combination of people, resources, methods, and setting that produces outcomes. Processes such as patient flow systems, appointment scheduling, and use of patient care teams span departments and functions. Effective processes are managed and contribute to the organization’s total “performance.” Process management asks questions such as: how well is the polyclinic meeting its guideline objectives? What are the polyclinic’s indicators of quality of care? What systems are in place for ongoing evaluation of practice guidelines?

CQI also focuses on “outcomes” of patient care. The four standard measures of quality health care consist of: clinical results (morbidity and mortality); functional health status (activities of daily living); satisfaction of clinicians, staff, and patients

and their families; and cost. Taken together, these four measures characterize the quality of a health care practice or system. Clinical and population-based measures are critical for assessing the impact and quality of the CPG. Section 8.1 of this manual, “Evaluating and Maintaining Guidelines,” provides specific examples of clinical documentation and population-based measures for assessing guideline effectiveness.

Communication and teamwork are critical to successful implementation. Involving the staff is critical to ensuring that preventive services are a routine part of office practice. Include everyone who will be impacted by the changes in the planning and implementation process. Clearly define the role of all staff members and include them in planning and problem-solving. You may discover untapped resources by encouraging staff members to creatively consider their roles in prevention delivery.

Other CQI strategies include:

- Establishing clear objectives for each meeting
- Utilizing Plan-Do-Study-Act (PDSA) cycles³¹ informed by the initial MAP assessment findings
- Prioritizing issues through brainstorming techniques

Clinical and population-based measures are critical for assessing the impact and quality of the CPG.

- Evaluating process changes through additional MAP assessment data collection
- Benchmarking for best practices
- Monitoring process changes through use of run charts and control charts to measure improvements over time³²

Each Plan-Do-Study-Act cycle addresses barriers and opportunities related to knowledge, attitudes, and behavior at the clinician, staff, and practice levels.

The team leader guides the team through the CQI Worksheet that includes these methods and provides a step-by-step approach for generating and setting clear goals, analyzing processes of care, identifying measures of change, and pilot-testing changes. The team leader insures that teams study/evaluate initial change efforts to learn from their experience for ongoing improvement. The CQI Worksheet and the Tips for Teams Worksheet in this manual (see page 30) help the team focus and use time efficiently to accomplish work.

SYSTEMS THINKING

Systems thinking emphasizes understanding the healthcare setting as a whole versus focusing on limited parts of that healthcare environment. Systems thinking states that one key, often small, change can have dramatic affects on all other parts of the process of care. For example, access to care can often be greatly improved by simply changing the

Systems thinking emphasizes understanding the healthcare setting as a whole versus focusing on limited parts of that healthcare environment.

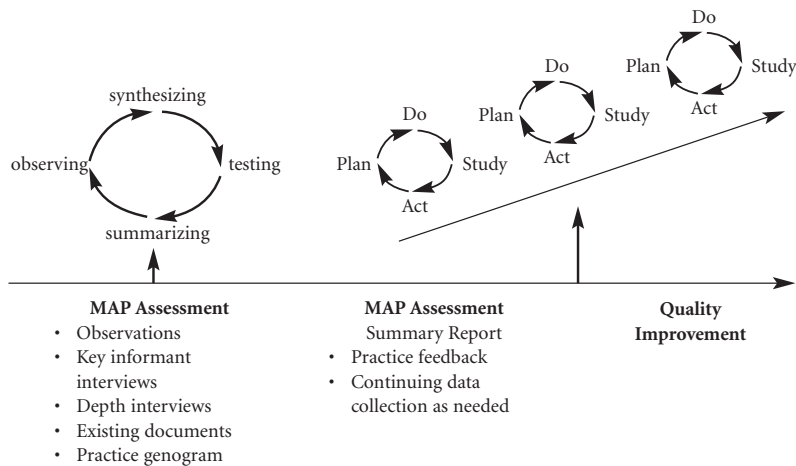
scheduling process and leaving everything else unaltered. Recent studies show that improving quality of individual patient care through guidelines, together with improving the healthcare practice environment in which clinical services are delivered, are more effective than either approach separately.³³⁻³⁵ Typically, CQI facilitates step-by-step changes focused on a specific improvement need. But, in an integrated CQI and systems thinking approach, a Guideline Implementation Team effort might concentrate on improving patient education about self-management of chronic illness. The Guideline Implementation Team uses systems thinking to look at a host of factors that limit or promote patient education. All of the polyclinic's routines, communication patterns, functions, attitudes, structures, and patient factors are explored in depth so that a guideline intervention can be tailored to those issues.

THE MULTI-METHOD ASSESSMENT PROCESS (MAP)

MAP is a method for gathering in-depth information about the healthcare setting so that quality improvement and guideline implementation efforts focus on the most important areas for change³⁶ (Appendix A, item 4). A physician and/or staff member gathers data about the clinic setting relevant to the specific quality improvement/guideline focus. Descriptions of the clinic location and environment, patient characteristics, nursing station, examination rooms, waiting area, physician offices, bulletin boards, posters, and patient education materials are obtained. Existing

MAP is a method for gathering in-depth information about the healthcare setting . . .

USING MAP TO GUIDE QUALITY IMPROVEMENT PDSA CYCLES



practice personnel, their roles and duties, and their relationships and interactions with other staff members are characterized in a practice genogram.³⁷ Physical office systems including charts, flow sheets, computer systems functional office routines, and procedures are described.

The MAP process has proven effective in characterizing healthcare setting features that foster and/or impede implementation of guidelines. For example, a 1- to 4-day MAP assessment was conducted in the recent control trial, “Study to Enhance Prevention by Understanding Practice.” A nurse observed practice operations and patient visits, as well as conducted interviews with key individuals (patients, clinicians, and staff), that

focused on the practice’s structures and processes in order to help understand different aspects of preventive services. Improvement teams in the study used the information to guide clinical and systems changes. A 12-month follow-up showed a 28% increase in global preventive service delivery rates, with the largest increases in health habit counseling and screening.³⁵

DATA FOR DECISION-MAKING

Much of the medical care physicians deliver is based upon tradition, their own training, and personal or anecdotal experience. As a result, patients with a common condition are often treated differently, resulting in unpredictable or inconsistent outcomes. This variation in care often obscures the effect of a particular intervention on that care. Physicians everywhere are data driven and more likely to change their practices when convinced by good data. CQI teams must constantly seek multiple sources of data to analyze variation and improve processes. Quantitative data describe the distribution, frequency, prevalence, incidence, and size of a given phenomenon control (e.g., the number of patients screened for hypertension in a given period of time at baseline and follow-up). Quantitative methods are most commonly used for explanation testing and control. Qualitative data are used for identification, description, and explanation generation (e.g., patterns of communication among staff, the experience of physicians in implementing guidelines, and the quality of interaction between patients and clinicians).³⁸ Both

Variation in care often obscures the effect of a particular intervention on that care.

The polyclinic's Learning Resource Center can be an essential component of data collection and management efforts.

types of data are essential for analyzing improvements in the patient care process and the impact of guidelines compared with baseline measures. The polyclinic's Learning Resource Center can be an essential component of data collection and management efforts. Use of databases to track volume of patients seen for a specific condition, preventive service, or patient education provides valuable evidence about the performance of the system in achieving improvement goals. The Learning Resource Center can also help develop systems to monitor adherence to guidelines by the polyclinic and individual clinicians through the use of simple process control charts that show variation in patient flow processes, use of patient self-management techniques, and use of patient checklists for preventive health services.

Chapter 3: Getting Started

Substantial improvement in patient care processes and outcomes requires commitment to evidence-based patient care. Well-designed and well-run systems of care are also required. Improvements tend to occur most rapidly in an environment in which both public policy and the individual practice setting are aligned and ongoing data collection and management support improvements.³⁹

PRACTICAL STEPS

The Clinical Improvement and Tips for Teams worksheet beginning on page 30 are helpful tools for working through each step in planning, implementing, and evaluating your CPGs work. The worksheets can be used during each team meeting to guide activities and continually check on progress. They are also good documentation of the team's efforts, especially if the group wishes to publish in a scientific journal. These types of case studies are effective ways to describe the team's methods and results, as well as to disseminate the team's experience to a broad audience.

Team Up: Establish a Guideline Implementation Team

Team members may change depending on the health problem(s) identified, but an initial team (generally 5 to 8 people) begins the guideline project. The Guideline Implementation Team is multi-disciplinary and includes representatives from all areas involved in patient care. Some key characteristics of effective teams include:

- Time to meet regularly (usually once a week for one hour). The frequency of meetings may taper off once clear goals have been established and the project work is well underway.
- Support from leadership.
- Shared mutual respect regardless of position.
- A strong and respected leader.

One of the key roles a member of the team assumes is team leader—the person who manages the team, schedules meetings, and coordinates team activities. Effective leaders leave rank and status outside the meetings. They are equal members of the team in decision-making and the team's work. Team leaders may be physicians, nurses, or managers. Essential characteristics of team leaders include commitment to the project and professional credibility to promote change. Leaders foster team collaboration and problem-solving, especially when setbacks and complica-

tions occur. Just as important are knowledge of the issues, ability to work well with all members of the team, and communicating the team's progress both internally and externally.

Criteria for selecting team members vary according to the project focus. In general, team members may include physicians, nurses, secretaries, pharmacists, business managers, and other staff who have first-hand knowledge of the problem or process to be studied. Mixing individuals from different levels within the polyclinic can be an effective way to improve communication and collaboration. Often, individuals who tend to be resistant to change may prove to be valuable team members when included in the change/improvement process.

Demonstrate Need

Collect data about the disease condition or preventive health practices that will be the focus of the guideline project. Sources of data might include the Ministry of Health or the World Health Organization. Data describing care in the polyclinic and variation in practice among different clinicians at the polyclinic can be obtained from chart audits, pharmacy records, hospital records, patient surveys, and provider surveys. Select a small sample of records from a specific patient population (*e.g.*, adults, children, males, females). This sample can also provide the baseline data used to measure changes brought about by a guideline.

Essential characteristics of team leaders include commitment to the project and professional credibility to promote change.

By focusing attention on a limited number of common conditions, it may be possible to make sizable improvements in the quality of care received by many individuals.

Decide on the Focus

A limited number of common conditions, about 15 to 25—account for the majority of healthcare services. Nearly all of these conditions are chronic. By focusing attention on a limited number of common conditions, it may be possible to make sizable improvements in the quality of care received by many individuals. Given the variation and the prevalence of chronic conditions, these conditions represent an excellent starting point for efforts to better define optimum care, and to design care processes to meet patient needs. According to the most recent survey by the Agency for Healthcare Research and Quality, the top 15 priority conditions are cancer, diabetes, emphysema, high cholesterol, HIV/AIDS, hypertension, ischemic heart disease, stroke, arthritis, asthma, gall bladder disease, stomach ulcers, back problems, dementia, depression, and anxiety disorders.⁴⁰ Primary care is an ideal environment for preventing, diagnosing, and managing these conditions. Prioritizing these conditions for a potential guideline project can be facilitated through use of continuous CQI and the Guideline Implementation Team.

This initial process may require 3 months or more. Ideally, the team should meet at least weekly for discussions about the focus and priority of the guideline project. Use of CQI methods fosters problem-solving if and when conflicts arise about the process of narrowing or focusing the guideline project. Often, teams are ambitious and create more guidelines or a broader scope than can be managed efficiently.

Assess Readiness to Change

Two commonly cited barriers to implementing change in clinical practice are clinicians' time and problems within office systems (e.g., lack of staff and resources). How do we reconcile the paradox of primary care as *the problem* (poor adherence to guidelines by physicians) and as *the solution* (similar or better health outcomes with greater efficiency and lower cost)? An early, ongoing task of the CQI Guideline Team is to understand quality-of-care issues as both challenge and opportunity. The following questions are helpful in assessing readiness make systems changes:

1. Is increasing the quality and consistency of care a priority?
.....
2. Are adequate resources available to improve the quality of services?
.....
3. Is change feasible (in terms of time, capacity, and cost)?
.....
4. Is the staff committed to changing the system?
.....
5. Will the administration and key stakeholders support change? This includes polyclinic leadership, and potentially Oblast and Ministry of Health leadership.

If the answer to the majority of the questions is "yes," the project can begin more easily than if the majority of answers is "no." If "no," attention

Two commonly cited barriers to implementing change in clinical practice are clinicians' time and problems within office systems . . .

Understanding the unique features of a primary care practice can enhance quality improvement efforts and guideline implementation . . .

should focus on resolving issues before attempting to start the guideline project.

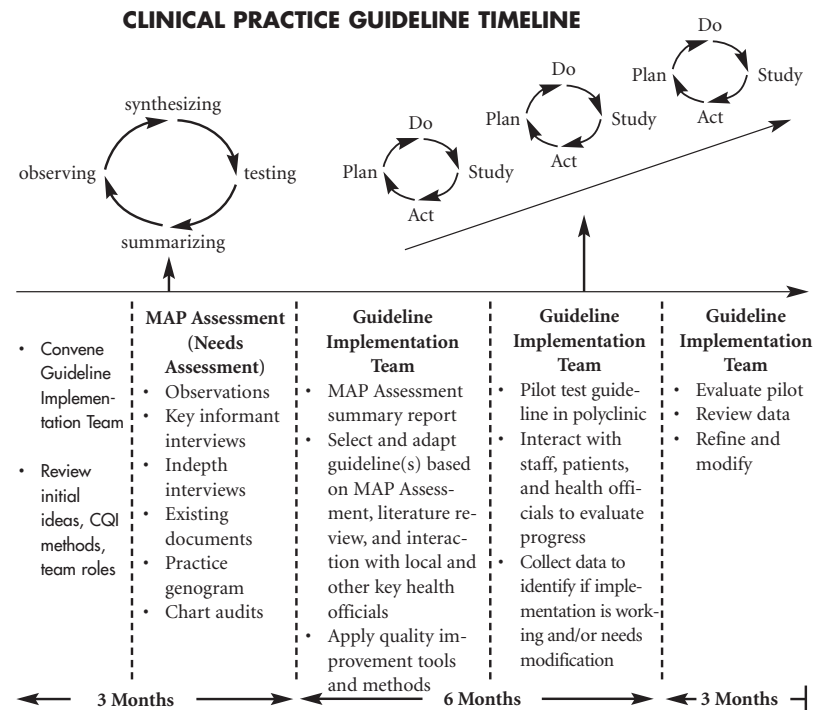
Assess the Practice Environment and Setting

All healthcare organizations are “complex systems”—a collection of individuals (e.g., clinicians, staff, managers, and patients) whose actions are interconnected.⁴¹ One person’s action changes the context for other individuals in that system. In complex adaptive systems, patterns of behavior, the individuals who work in the system, the patient population, and local, regional, and national factors influence how that system achieves its goals. Understanding the unique features of a primary care practice can enhance quality improvement efforts and guideline implementation by identifying each practice’s unique opportunities for change.⁴² In addition, the physical layout of a practice and the direction of patient flow can significantly influence the delivery of services.

Analyzing patient flow patterns can be as simple as mapping a patient’s path through the office on paper, thus identifying areas where health education messages can be provided or reinforced. The analysis should consider whom the patient encounters and what is done at each step. Such an analysis can provide a basis upon which efficiency and patient satisfaction can be improved.

Understanding the clinical practice setting/ environment prior to developing a new guideline or adopting an existing one helps determine the

best implementation strategies. Too often, guidelines are developed without a broad understanding of the traditional and customary process of care routines. *Why* does the chosen improvement/ guideline matter? Treatment, such as a guideline, must be preceded by an accurate diagnosis of the current patient or polyclinic problem(s) and change opportunities if the treatment is to be successful. The MAP assessment provides important feedback for decision-making. *Who* are the effec-



tive change agents in the system? *Where* should the new guideline intervention be initiated (*e.g.*, at the polyclinic and/or Oblast level)? *What* are the most important areas for change from the perspective of the polyclinic, patients, and city and national health officials?

Timeline for Change

Each guideline project involves a series of interconnected steps. However, this process is not always linear and may require repeating steps, learning from data, synthesizing and refining ideas for guideline implementation, and narrowing the focus of the project so that its results are measurable. Often, a Guideline Implementation Team must wait for data to be analyzed to move ahead. However, other activities may occur simultaneously to continue the process (*e.g.*, collecting more data, reviewing the literature, and interacting with local and MOH officials). The Learning Resource Center may focus on establishing a database to help evaluate the impact of the project and/or assist in creating systems that support guideline implementation (*e.g.*, patient flow sheets, checklists for preventive services, forms for chart audits, and survey questionnaires for clinicians, staff, and patients about satisfaction with the guideline improvement process). The diagram at left illustrates the types of activities that occur throughout the guideline project.

The length of time for each part of the timeline may vary, but implementing and pilot testing

takes about six to nine months. During the improvement process, several cycles of Plan-Do-Study-Act may be accomplished. One important instruction for the Guideline Implementation Team is to start with a small change to accomplish an early success. This builds credibility and support for the project and helps the team focus on incremental change versus large changes all at once. Teams often falter when the scope of the project is too large, too many guidelines are being reviewed, or too little assessment is being done to inform the team's direction. All of the guideline implementation strategies are used during the timeline of changes: CQI, systems thinking, MAP, and collection of data for decision-making.

One important instruction for the Guideline Implementation Team is to start with a small change to accomplish an early success.

CONTINUOUS QUALITY IMPROVEMENT (CQI) WORKSHEET — PART I

TEAM MEMBERS: Who should work on this improvement?

1. Leader _____ 5. _____

2. Facilitator _____ 6. _____

3. _____ 7. _____

4. _____ 8. _____

Community/Patient Representative(s) _____

Administrative Support _____

I. Getting Started

A. Aim: What are we trying to accomplish and why?

B. Select A Change: What ideas do we have for getting better results?

C. Describe Current Process: Where are the opportunities for improvement?

D. Select Measures: How will we know the change is an improvement?

CONTINUOUS QUALITY IMPROVEMENT (CQI) WORKSHEET — PART II

II. Pilot the Change

A. Plan: How shall we PLAN the pilot?

- Who? Does what? When? With what tools?

- Baseline data to be collected?

B. Do: What are we learning as we DO the pilot?

C. Check: As we STUDY and CHECK what happened, what have we learned?

- Did original outcomes improve?

D. Act: As we ACT to hold the gains, what needs to be done?

CONTINUOUS QUALITY IMPROVEMENT (CQI) TIPS FOR TEAMS

Getting Started

1. TEAM UP: Invite representatives from the polyclinic and those who have knowledge of the health condition (disease, process, procedure, etc.) selected for guideline development. Team size is generally no more than 8 members. A first step is identifying a leader for the team.

2. AIM: What is the overall goal of the project? Describe this in specific terms. For example, “To reduce morbidity from bronchial asthma among adults seen in the polyclinic.” AIM: _____

3. SELECT A CHANGE/IMPROVEMENT: The team brainstorms potential changes and assesses how the ideas will affect the polyclinic, patients, and the larger community.

4. DESCRIBE THE CURRENT PROCESS: Chart the current process. For example, how are patients with bronchial asthma currently seen in the polyclinic? for regular, preventive care? for emergencies? What are their educational needs? Is there good continuity of care? A flowchart or algorithm is helpful to visualize the steps in the process.

5. SELECT MEASURES: Decide the process and outcome measures for your first improvement cycle. A process measure might be the preventive services provided to adults with bronchial asthma. A chart review of 10–20 patients shows whether patients receive preventive care on a regular basis. An outcome measure might be the number of hospitalizations reduced as a result of your improvement.

Process Measure(s): _____

Outcome Measure(s): _____

Pilot the Change (Plan-Do-Study-Act) PDSA

6. PLAN AND DO: Plan the improvement. Collect baseline data.

7. **STUDY:** What is learned as you DO the improvement/change cycle? As the CQI team meets, review the overall experience and make adjustments as needed.

8. **ACT:** The work here involves holding gains made during the improvement PDSA cycle. Check progress against the original Aim statement. Collect additional data as needed. Determine if additional individuals need to be involved on the team. Keep minutes of meetings to distribute to the team. These serve as useful documents when you evaluate the overall project and its accomplishments.

Chapter 4: Selecting the Appropriate Guidelines

GUIDELINE SOURCES

The organization most responsible for creating guidelines in the United States is the Agency for Health Care Policy and Research (AHCPR), which was created in 1989. To organize hundreds of available CPGs and make them more accessible to the healthcare community, the federal government created the National Guideline Clearinghouse (NGC) at www.guideline.gov. The Web site is maintained by AHCPR and is cosponsored by the American Medical Association (AMA) and the American Association of Health Plans (AAHP). To date, the Agency for Healthcare Research and Quality (AHRQ) has published roughly 20 guidelines on various clinical topics including lower back problems, urinary incontinence, heart failure, unstable angina, acute pain, and pain in the cancer patient.

Many healthcare organizations have guidelines of their own—and they don't necessarily conform to one another. Guidelines may conflict, be inadequate for complex situations, or even be outdated.⁴³ Some of the key sources for primary care guidelines, evidence-based medicine, and

quality improvement are found at these Web sites:

- | *Eurasia Health-AIHA Knowledge Network*
www.aiha.com/english/programs/guidelines/

- | *National Guidelines Clearinghouse (NGC)*
www.guideline.gov

- | *Primary Care Clinical Practice Guidelines*
<http://medicine.ucsf.edu/resources/guidelines/guide.html>

- | *Guide to Clinical Preventive Services*
<http://cpmcnet.columbia.edu/texts/gcps/>

- | *Guide to Clinical Preventive Services, Second Edition*
<http://odphp.osophs.dhhs.gov/pubs/guidecps/>

- | *Family Practice Disease Treatment Guides*
www.familypractice.com/References/ReferencesFrame.htm

- | *Institute for Clinical Systems Improvement*
www.icsi.org

- | *Agency for Healthcare Research and Quality*
www.ahrq.gov

- | *AIHA Multilingual Library*
www.eurasiahealth.org/english/library/
www.eurasiahealth.org/russian/library/

- | *AHRQ: Put Prevention into Practice*
www.ahrq.gov/clinic/ppipix.htm

- | *The Cochrane Library*
www.update-software.com/cochrane/

- | *Canadian Medical Association: Guidelines for Canadian Clinical Practice Guidelines*
www.cma.ca/cpgs/gsspg-e.htm

- | *Bandolier: Evidence-Based Health Care*
www.jr2.ox.ac.uk/bandolier/index.html

AIHA's Web site and EurasiaHealth—AIHA's clearinghouse of medical information on health-related topics ranging from family medicine to medical informatics—offer both a repository of resources and an open forum for the discussion of protocols on topics such as infection control, women's health, emergency medical services, neonatal resuscitation, and primary care. The goal of this discussion is to facilitate dissemination, development, and adaptation of guidelines—including their translation into regional languages.

Chapter 5: Reviewing Individual Guidelines

The number of guidelines is increasing—and so is the likelihood that certain guidelines will contradict each other. Suppose, for example, your Ministry of Health recommends annual mammograms each year for women over 55, but the AHCPR guideline recommends annual screening for women beginning at age 40. How do you decide which guideline is more correct or relevant to your own practice?

Below are some key points for reviewing individual guidelines.

1. First, examine the criteria listed as supporting evidence. Are they clearly spelled out? Are the references current? Were the studies published in peer-reviewed journals? Is the guideline up-to-date?
2. The guidelines should be accompanied by clear descriptions of the quality of evidence for each recommendation, reflected by standard research criteria for sample size, design, and analysis. For example, if a guideline states that a woman with breast cancer may choose a

lumpectomy over a mastectomy without increasing her risk of death, the evidence must be based on large, multicenter intervention studies with appropriate experimental controls.

3. Consider the guideline's authors. Are they experts in the field? Do they come from the appropriate disciplines? Do they have a vested interest in having clinicians adopt the guidelines? Surgeons, for example, will be more inclined to recommend surgery.
4. Are outcomes of the guideline clearly specified? Are there conflicting guidelines for the same health problem? How do they compare?
5. Are the recommendations consistent with the values of your organization and technical resources for implementation? How do your proposals compare with other NIS-specific guidelines already developed, being created, and/or tested?

Chapter 6: Adapting Guidelines to Your Local Conditions

Once a potential guideline—or a set of guidelines—is selected (*e.g.*, hypertension screening and/or lowering HbA1c levels), a major responsibility of the Guideline Implementation Team is to adapt selected parts of the guideline(s) to meet the needs of the local environment and patient population. Important reasons to adapt guidelines to local conditions include:

- Limited resources (*e.g.*, scarcity of certain laboratory tests, lack of diagnostic equipment, and lack of specific pharmaceutical agents)
- Existing Ministry of Health requirements regarding standards of care and/or health priorities
- Patient barriers (*e.g.*, inability to return to the polyclinic on a regular basis for ongoing disease management and/or primary prevention)
- Cultural resistance to following certain aspects of treatment recommendations, such as dietary restrictions

Chapter 7: Translating Guidelines into Action

This section highlights factors that influence translating guidelines into action. When planning a guideline project, it is helpful to understand what has and hasn't worked in primary care organizations that implement guidelines. Abundant guideline intervention literature finds that efforts can fail or fizzle due to several key factors, namely when:⁴⁴

- The focus is almost entirely on *behavior change by individual clinicians*
- There is no specific plan or focus for *systems change* in the organization
- There is no attention to the *change process* needed for implementation
- There is too little emphasis on evaluating the influence of the *context of the practice setting and environment* on the effects of the guideline intervention
- The influence of *patients' needs and preferences* is often overlooked

Because of their importance, each of these factors is examined below in more detail. The challenge is how to translate guidelines into effective action that is sustained and continually improved. How this process is managed over time is as important as the content of the actual guideline.⁴⁵

BEHAVIOR CHANGE BY INDIVIDUAL CLINICIANS

Despite their increasing importance, CPGs are not used to their fullest potential. Between 1985 and 1997, 279 guidelines on a variety of topics were published in peer-reviewed literature, but the mean adherence was found to be only 43.1%.

The translation of clinical guidelines into practice has been disappointing. The literature suggests that clinicians regularly fail to treat hypertension,^{46, 47} asthma,^{48, 49} and diabetes^{33, 50–52} according to guidelines. Screening for smoking status⁵³ and cholesterol^{33, 54, 55} have also lagged behind recommended guidelines. Over the past decade numerous clinical trials have attempted to change this situation, generally with disappointing results.⁵⁶

Strategies to enhance the adherence of clinicians to evidence-based guidelines have resulted in inconsistent results and usually modest or no improvement of a limited range of services. These strategies have included continuing medical education;^{57, 58} practice guideline protocols;^{42, 59} combined population and clinical approaches;^{60–62} enhanced financial incentives;^{63–66} performance

review and feedback alone^{67, 68} and linked to financial reward;⁶⁹ office system approaches such as flow sheets,^{70, 71} chart stickers,⁷² or computerized systems;^{73, 74} multi-faceted interventions,^{54, 75–77} outside facilitation;^{78–81} involvement of local opinion leaders;⁸² and CQI approaches.

SYSTEMS CHANGE IN THE ORGANIZATION

Healthcare systems are organized to ensure that a clinical action will occur more consistently than if it depended on the attitudes, memory, and clinical realities of the physician and/or staff. For example, a guideline was developed by Institute for Clinical Systems Improvement (ISCI) to simplify care for women with urinary tract infections. Some medical groups disseminated the guideline to physicians, while others set up a protocol for nurse phone care of these patients. The result was a dramatic improvement in adherence to the guideline, but only in clinics using the nurse-management system. All improved outcomes of care were due to the nurse-managed, consistent practice system of patient care.

Each polyclinic is unique because of its history and initial conditions, the particular people who work and see patients there, the interactions among them, and local and regional influences. Assessing and understanding these aspects of a practice can provide a key for unlocking the door to change.⁸³ This implies a need to assess and understand diverse aspects of practices in order to

guide interventions that are tailored to the unique change opportunities at each practice.

CHANGE PROCESS FOR IMPLEMENTATION

One of the most important aspects of translating guidelines into action is having a planned process for change. Primary care practices are complex systems. Multiple demands and clinical realities compete for time and resources. Tailoring interventions to the local practice context enhances motivation and readiness for change. “One size fits all” guidelines are not realistic for the diversity of practice settings.

Systematic development and implementation promotes long-term adoption of guidelines into medical practice. CQI methods encourage a systematic analysis of current processes of care and a redesign of processes, reducing or eliminating factors that contribute to excess cost, delays, errors, and undesired variation in care. A review of three quality improvement and evidence-based medical practice guidelines initiatives in Russia demonstrates the positive impact CQI has had in promoting change. One of the most important benefits was use of quality measures to identify quality of care indicators and to assess results.⁸⁴

CONTEXT OF THE PRACTICE SETTING OR ENVIRONMENT

Practice setting, or context, involves the factors or variables that can have a major effect on how

changes are made, and whether they are made successfully. In a major recent study in the United States, the authors found that of 44 factors rated as essential or key in their ability to implement guidelines, the top nine contextual factors were:

1. Organized systems in the clinic
2. Commitment to change by leadership
3. Clinician champions for the guideline
4. Priorities for quality of care
5. CQI skills in the organization
6. A collaborative working environment
7. A shared mission among clinicians
8. Advantage of the new guideline/care process
9. Importance of the guideline topic to clinicians⁸⁵

An example of a highly successful guideline implementation project involves AIHA La Crosse/Dubna Health System partnership. The La Crosse/Dubna team fostered behavior change by physicians, restructured practice systems, set up an organized change process for accomplishing goals, and used strategies that fit the organizational context in which the change process would occur. Teams of professionals worked closely with

One of the most important aspects of translating guidelines into action is having a planned process for change.

Oblast and City Health Department officials to develop CPGs for five illnesses. This comprehensive effort involved the polyclinic, local hospitals, insurance companies, health professionals, and patients. Understanding the multiple and simultaneous concerns of all constituents helped improve not only the quality of patient care, but also dramatically changed the financial reimbursement systems (Appendix A, item 6).

PATIENTS' NEEDS AND PREFERENCES

Patients exert a large impact on the practice of medicine and the clinical encounter as evidenced by their influence in the use of antibiotics for respiratory infections,⁸⁶ the response of physicians to emotional issues,⁸⁷ approaches for tailoring tobacco messages in clinical encounters,⁸⁸ and handling of pharmaceutical representatives and samples.⁸⁹ In each case, physicians have been very responsive to patients and adjusted their practice accordingly. CPGs should enhance patient-physician communication. Patients and families benefit from the patient education information that accompanies clinical guidelines. This information not only allows patients to become informed consumers, but it also helps them to participate more fully in the decisions related to their care and encourages families to get involved with these decisions.

Chapter 8: Criteria for Guideline Success

Numerous studies demonstrate that single interventions or strategies to implement successful guidelines fall short of accomplishing the full potential for improving patient care. The known impact of efforts to increase adherence to guidelines generally falls in the following categories:

- **Weak:** Didactic lecture-based Continuous Medical Education (CME) to increase knowledge and skills and/or enhance awareness (*e.g.*, conferences, seminars, self-directed learning). Studies demonstrate that CME fails to change physician adoption or adherence to guidelines.⁹⁰
- **Moderately effective:** Understanding of local barriers and audit and feedback directed at specific providers.
- **Relatively strong:** Multiple interventions appear to have a greater impact than single interventions on creating a more conducive practice environment, affecting physician behavior, and improving healthcare outcomes. Multiple strategies involve greater individualization of change strategies (*e.g.*, instrumental changes

such as reminders^{91–94} and motivational changes of clinicians and office staff).^{95, 96} Multiple methods do work when coupled with reinforcing strategies such as manual or computerized reminder systems, audit and feedback methods, or practice-enabling strategies such as easy-to-follow patient flow sheets or forms to document preventive services delivery. Single interventions to increase adherence to guidelines are generally ineffective. Multiple interventions are the key to sustained practice improvement.⁹⁷

EVALUATING AND MAINTAINING GUIDELINES

Not all guidelines are valid or even useful. Using bad guidelines may do more harm than good. Guideline implementation studies show positive effects in several studies, but the size of the effect varies and is often modest. When applying guidelines in new situations and environments, there may be unforeseen factors that promote or prevent guideline use. A process evaluation for all new guideline implementation projects is essential.

It is much easier to evaluate the success of the implementation of the guideline for process factors than it is to show actual benefits for clinical outcomes. Even intermediate health outcomes (*e.g.*, measurement of blood glucose levels in diabetes) may be difficult to collect in a systematic, comparable way. True health outcomes take a long time to become obvious. Measuring the effect of the

implementation of a diabetes guideline by showing a decrease in diabetes-related deaths would require following thousands of patients over several years, including a control group in which the guidelines are not being used. The evaluation is complicated, as the control group is likely to benefit from the information in the guideline over time.

Nevertheless, the Guideline Implementation Team can assess the short-term and intermediate effectiveness of guidelines through use of clinical and population-based measures. Examples applied to asthma guidelines are illustrated below.

Clinical Practice Guidelines for Asthma: A Partnership Example

Table of General Measures

Clinical Measure

I Documentation in the patient's medical record

Population-based Measure

- I How do we know that a program is successful?
 - Measures based on the entire population of patients with condition such as asthma or diabetes
 - Uses proportions, or rates
 - Requires a database, preferably electronic

Asthma Periodic Assessment and Monitoring*Clinical Measure*

- ▮ Documentation in a medical chart of an asthma visit

- ▮ Clinic database reflects an asthma visit
- ▮ If surveyed, patients report an asthma visit
- ▮ Documentation in chart of severity classification

Population-based Measures

- ▮ Increase in the percentage of people with persistent asthma who have been seen by a physician in the last 12 months
- ▮ Increase in the percentage of patients with asthma who have had severity documented

Spirometry/Peak Flow Measurement*Clinical Measure*

- ▮ Provision of spirometry/peak flow measurement is documented in the patient's medical chart

Population-based Measure

- ▮ Increase in the percentage of people with asthma who have had a spirometry/peak flow measurement

Coordination of Care*Clinical Measures*

- ▮ Documentation in the medical chart of referral to an asthma specialist if indicated
- ▮ Documentation in the chart that a specialist did see the patient

*Criteria for Guideline Success**Population-based Measures*

- ▮ Increase in the percentage of people who have been seen by a specialist within one month of discharge from the hospital
- ▮ Increase in the percentage of people who have seen a physician within one month of an ER visit
- ▮ Increase in the percentage of people with two ER visits for asthma in one year who are seen by a specialist within one month of most recent ER visit

Written Asthma Action Plan*Clinical Measures*

- ▮ Existence of a written asthma action plan should be documented in the patient's medical chart
- ▮ If asked, a patient (or parent) will state that they have a written asthma action plan
- ▮ If asked, a patient (or parent) will know how to use medication and what to do in case of an exacerbation

Population-based Measures

- ▮ Increase in the percentage of people with asthma who have a written asthma action plan
- ▮ Survey results should show that patients (or their parents) state they have a written asthma action plan
- ▮ Increase in the percent of patients with knowledge of asthma medication use and what to do in case of an exacerbation

Asthma Education*Clinical Measure*

- ▮ Provision of asthma education is documented in the chart, including:
 - ▮ Basic facts
 - ▮ Medication
 - ▮ Skills
 - ▮ Environmental control measures
 - ▮ Rescue action

Population-based Measures

- ▮ Increase in the percentage of patients with asthma on survey who:
 - ▮ Affirm receipt of asthma information
 - ▮ Report high levels of confidence in understanding and using the information
 - ▮ Report behavior consistent with having received and understood the information
- ▮ Increase in the percentage of people with asthma who have documentation of asthma education

Pharmacology*Clinical Measure*

- ▮ Documentation in the medical chart of:
 - ▮ Prescription of a short-acting inhaled bronchodilator for all patients with asthma
 - ▮ Prescription of a daily inhaled anti-inflammatory medication for all patients with persistent asthma

Population-based Measures

- ▮ Percentage of all patients who have a short-acting inhaled bronchodilator

- ▮ Increase in the percentage of patients with persistent asthma who have at least one filled prescription for a daily inhaled anti-inflammatory medication
- ▮ Decrease in the percentage of patients with persistent asthma who use more than one canister of a short-acting inhaled bronchodilator every two months for one year

Assessment, Education, Management, and Treatment of Risk Factors*Clinical Measure*

- ▮ Documentation in the patient's chart of assessment, provision of information, and treatment-prophylaxis of risk factors including:
 - ▮ Mites/cockroaches
 - ▮ Animal allergens
 - ▮ Tobacco smoke/other sources of indoor smoke
 - ▮ Mold, spores, pollen
 - ▮ Medications (ASA, beta-blockers, etc.)
 - ▮ Physical activity

Population-based Measures

- ▮ Increase in the percentage of people with persistent asthma with documentation they have been asked about risk factors
- ▮ Increase in the percentage of people with persistent asthma who have received information about their triggers and how to reduce exposure

- Increase in the percentage of patients who do not smoke
 - Reduction in the of patients not exposed to tobacco smoke in the home

Thus, a major task of guideline implementation is ongoing monitoring, measuring results on a regular basis, and achieving consistent and accurate guideline use by clinicians and staff.⁹⁸

Some important issues follow

- The start-up Guideline Implementation Team may disband after the guideline is developed, but there needs to be an organization home for monitoring. This could be the team leader, but usually this is performed by a quality improvement professional who tracks adherence to the guideline. Responsibility could be assigned to the Learning Resource Center.
- Measurements can be derived from chart reviews, special forms, or flow charts developed to monitor data about the effects of the guidelines.
- Use qualitative and quantitative data. Quantitative data measures effects or impact of the guidelines. Qualitative data measures how the clinicians, nurses, staff, and patients experience the use of the guideline. MAP assessments may be used throughout the guideline implementation project to describe the qualitative experience.

- Keep measurement simple; think big, but start small.
- Write down the operational definition of the measures. For example, to measure resolution of symptoms for urinary tract infection, nurses telephone patients seven days after their index date and ask, “Are you still bothered by your symptoms? Please answer yes or no.” An operational definition provides a clear method for scoring or measuring a variable in a reproducible manner. The better the operational definition, the better the data elements, the more reliable and valid the aggregate measures.
- Measure small, representative samples. It is generally practical to use a sampling strategy that avoids the costs and trouble of collecting data on everyone. A sample of 30 patients, or chart reviews, is often sufficient to detect whether the guideline is being followed and/or is effective.
- Build measurement into daily work.
- Use a balanced set of process, cost, and outcome measures. Balanced measures help analyze a correlation between causes and effects by looking systematically at the impact of the guideline.
- Make these data available in graphic form to the providers and throughout the polyclinic.

- Use poster boards or newsletters to market the results.
.....
- Have team reunions a few times a year to review problems and successes and consider any changes that might be necessary.
.....
- Survey patients for their satisfaction and understanding.
.....
- Share results regularly with city and Oblast leaders.

Chapter 9: Updating and Changing Guidelines

The guideline should be reviewed in light of any new evidence in the literature that would warrant a change in part or all of the guideline. This review should be a regular process, and should take into account new guidelines that might have appeared, as well as significant scientific breakthroughs and an evidence-based review of new literature (*e.g.*, concerning the availability of new drugs, new tests, new approaches to education, and new concepts about screening and prevention).

Updating a guideline is easiest when the original production process has been systematic. Guideline reviews should be as clear and as well-planned as the original production process. The same elements are needed, including systematic search and appraisal of new studies. These activities require the Guideline Implementation Team to:

- Clarify roles and responsibilities of physicians, nurses, and staff in evaluating and maintaining the guideline(s).
.....

- Establish an ongoing process (after the initial implementation) to look at best evidence and outcomes.

.....
- Support regular review and identification of obsolete evidence.

.....
- State the frequency of updating in the CPG.

.....
- Create flexible implementation strategies that can be adjusted with new evidence.

.....
- Choose a team leader who is passionate about the work and its potentials.

.....
- Avoid being discouraged by failures. Learn from them and make changes based on the lessons learned.

Chapter 10: Disseminating and Adopting Guidelines

In most guideline implementation and dissemination projects, different strategies need to be combined for optimal effectiveness. The most effective strategies vary according to the health problem, the practice setting, the patient population, and the clinicians, staff, and others involved in the change process.

The qualities of the guidelines are as important as the process for improvement. The critical qualities described in the literature are:⁹⁹

- *Relative advantage:* Is the new practice demonstrably better than the old one, or one adapted from an external source?

.....
- *Compatibility:* Does the CPG represent existing values of the polyclinic?

.....
- *Complexity:* How difficult is the CPG to follow and incorporate into current and/or new practice?

.....
- *“Try-ability:”* Can the clinician “try or experiment” with the CPG to learn what works or doesn’t?

.....

- “*Observability:*” Can the clinician observe how others implement the guideline (*e.g.*, by comparing results and sharing data)?

Guidelines that are relatively uncomplicated and can be observed or tried by the clinician are more readily and effectively adopted. There are different strategies for dissemination and adoption.

- Health professionals use different information sources during their daily work. Some prefer printed text or short reminder cards. The Learning Resource Center can be a valuable asset for distributing and accessing the polyclinic’s guideline(s).
- Every database monitoring a guideline could be publishable in a peer-reviewed journal.
- It is critical that the results of the guidelines are shared with other polyclinics and with governmental officials.
- Working in collaboration with other polyclinics that are also developing guidelines for the same disease allows each clinic to learn from the other’s successes and failures on an ongoing basis and to compare similar data measures.
- In the world of quality improvement, new programs, new tools, and new educational materials are not proprietary. They should be open to anyone wishing to learn and adapt the programs to his/her own polyclinic.

Chapter 11: Developing Parallel Guidelines for Patients

At some point in the development of the clinical guideline, consider developing the same guideline using non-medical technology that can be understood by a patient. Patient compliance increases when the patient understands what changes are being implemented and why the protocols have changed.

The patient version of the guideline can be presented in pamphlet form to be taken home by the patient and used to plan for next steps.

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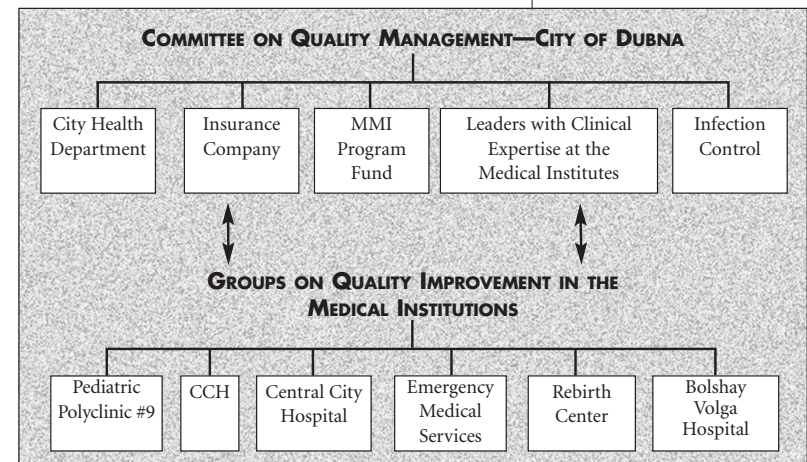
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Appendix A A Case Study: The Dubna, Russia/La Crosse, Wisconsin AIHA Partnership Experience

To achieve the goal of improving care, the Dubna/La Crosse partnership followed the 12 basic steps outlined below. Their work illustrates the processes described in this manual. For example, the partnership used CQI methods (Section 2.1) and Systems Thinking (Section 2.2), to look at the whole system of care, not just its individual parts. By collecting relevant baseline and follow-up data, the partnership applied MAP strategies (2.3 and 2.4).



1. Create a Project Steering Committee

- I The goals of the committee
 - To improve quality of medical care for the population
 - To increase satisfaction among patients and medical workers
- I Key tasks of the committee
 - Internal and external controls
 - Analysis of patient care data in the medical institutions (polyclinic and hospital)
 - Analysis of patient satisfaction data
 - Preparation and acceptance of management decisions based on the data
 - Responsibility and accountability for management decisions
- I Organization of the committee's work on the quality management of medical care
 - Meetings of the committee were conducted quarterly.
 - The committee examined the analysis of the data with the help of a computer program or other methods.
 - Questions were raised concerning examination and acceptance of management decisions.
 - The committee controlled the adequacy and timing of these decisions, prepared suggestions for the city administration and health department about necessary structural changes, prepared a report for the administration or other organizations, and organized education of specialists regarding questions of quality management.

2. Establish the Project Leadership Team

- I Medical Director: To lead guideline/care path development
- I Quality Coordinator: To gather the survey and outcome data, and use these data in education and CQI
- I Financial Coordinator: To assess the financial implications of the guideline/care path

3. Select the Diagnosis to be Studied

- I Common clinical outpatient and hospital diagnoses
- I Prevalence of the illness in the city
- I Scope of the illness in the population
- I Interest in the illness by a maximum number of groups, including specialists, Ministry of Health officials, primary care workers, and patients
- I Illness management: inefficiencies of care in the current structure
- I Ability to receive and evaluate results of the new guidelines/pathway within the timeframe of the project

4. Organize Each Guideline Development Team

- I Medical and surgical specialists
- I Primary care physicians
- I Nurses and/or feldshers
- I Patients with the selected disease

5. Collect Baseline Data

- *Patient Satisfaction:* A questionnaire distributed to the city population found that patients were satisfied only with the proximity of their health-care institutions to their homes. They were dissatisfied with:
 - Access to specialists
 - Waiting times in the polyclinic
 - Access to urgent care when
 - Accessibility of diagnostic procedures ordered by a doctor
 - Explanation of medical procedures and why they were ordered
 - Patient information about the illness
 - Attention and politeness of the staff and attending physician
 - Interest by the doctor in the patient's problems
 - Compassion and support rendered by the doctor and medical personnel
 - Low volume of preventive measures
 - *Professional Satisfaction:* A questionnaire distributed to the medical workers found that they had general dissatisfaction with the existing health care system. They also responded that they would react positively to change.

- *Practice Patterns:* A variety of information sources were used for data collection: the ambulatory card, patient records, and the ambulance call log. The partners decided to look at hospital results by taking every tenth ambulatory card. Key practice patterns identified:

- Volume of pre-hospital care (polyclinic, ambulance), including volume of visits, referrals, and treatment variations
- Indicators for hospitalization
- Volume of hospital care, including volume of visits, referrals, and treatment variations
- Length of hospital stay (bed days)
- Discharge criteria
- Total length of polyclinic care

These data were evaluated using the following criteria:

- Percentage indicators of hospitalization
- Results of treatment as a percentage
- Percentage duplication of exams and tests in the polyclinic and the hospital
- Percentage of patients not examined in the polyclinic before being sent to the hospital
- Percentage of disagreement between hospital and polyclinic diagnoses for a given patient
- Percentage of repeat hospitalizations
- Volume of treatment, diagnostic activities, and consultations for each diagnosis

6. Development of the Guideline/ Pathway

- ▮ Need to understand the patient flow from the moment of illness to the moment of recovery.
- ▮ Need to find out where the breakdown in the optimal working processes takes place (zone of inefficiency), to determine potential sources of ineffectiveness. For example, acute patients lay in the hospital until full recovery. Was this necessary? To determine this, need to understand exact criteria for discharging patients from the hospital. The work group brought its suggestions to the table. Its task was to analyze evidence-based medicine, with the goal of building up the new guideline, so patients would receive optimal care in the most efficient manner. Evidence-based medicine, local experience, and local expertise were used to agree on the guideline.

7. Obtain Approval of the Guideline/ Pathway

- ▮ City Health Department
- ▮ Oblast Health Department

8. Develop and Implement a Guideline/ Pathway Education Process

- ▮ *Professional Staff:* Parallel to the implementation of the program, an educational program for doctors and medical workers (hospital, polyclinic, and ambulance) began. Twenty lectures were given about etiology, new approaches to diagnosis and treatment, and quality management.

- ▮ *Patients:* A brochure was developed for patients.
- ▮ *Public:* Articles were written for the media.

9. Implement the Guideline/Pathway

10. Use Outcome and Survey Data to Continuously Improve the Guidelines/ Pathway PDSA Cycles

11. Collect Process and Outcome Data for the Guidelines

12. Study the Financial Implications of Guideline Implementation and Work Toward Financial Changes that Support the Clinical Changes



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