Putting Clinical Practice Guidelines to Work in VHA

Introduction

Acknowledgments

This Web site is an electronic version of the manual, "Putting Clinical Practice Guidelines to Work in the Department of Veterans Affairs: A Guide for Action," adapted by the Department of Veterans Affairs Clinical Practice Guidelines Implementation and Education Task Force.

VHA Employee Education System staff involved in creating this web-based version are project managers Eunice Beckwith, MSEd and Ramona Wallace, RN, MSN; and New Media Producer, Kitty Nicolai.

The Purpose of This Guide

This guide describes a process that will help your VA medical center successfully achieve evidence-based practice, a major priority of the VHA. Suggestions found in this manual are based on expert consensus and are not in-and-of-themselves based on strong evidence. As such, the information presented must be used in congruence with sound judgment and not adhered to blindly. This guide is designed as a resource for the key staff members charged with guideline implementation efforts within a VA medical center.

Key staff members include:

- **Guideline opinion leader(s):** The clinical opinion leader is an influential professional widely respected by peers and colleagues who has expertise in the content of the guideline and who acts as the primary clinical consultant.
- **Clinical champion(s):** A primary care provider who actively promotes the implementation of the clinical practice guideline.
- **Implementation team facilitator:** The clinical or administrative manager who coordinates the activities of the guideline implementation team.

Although this guide is not designed for use by the medical center leadership, the ultimate success of the guideline implementation strategies it describes will depend in large part on the strength of leadership support for the implementation effort. It may require the allocation of time including resources and support.

The VA/DoD Guideline Adaptation Process

In early 1998, the VA and DoD began a collaborative project to establish a single standard of care in the military and VA health systems. This project is led by a Work Group consisting of representatives from each of three military services and from the VA.

The goals of this project are:

- Adaptation of existing clinical practice guidelines for selected conditions.
- Selection of two to four measures for each guideline to benchmark and monitor implementation.
- Integration of VA/DoD prevention, pharmaceutical and informatics efforts.

The VA/DoD Evidence-Based Practice Work Group designates an expert panel for each clinical practice guideline, consisting of representatives from three military services and the VA, with a mix of clinical backgrounds relevant to the health condition of interest. The expert panel is charged to review existing national guidelines for that condition, examine and update the scientific evidence supporting the guidelines, and adapt one or more of the guidelines to establish one for use in the military and veteran health systems. Each panel is also asked to develop recommendations to the VA/DoD Evidence-Based Practice Work Group for 2 to 4 measures to be used by the military services and VA to monitor progress in guideline implementation.

Additional Resources

Many of the tools and forms described in this guide, as well as other useful information on practice guidelines in the VHA, can be found at the Office of Quality & Performance Web site.

In addition, VERDICT in cooperation with VA R&D developed a Blueprint for Action.

Leadership
Responsibilities

Guideline Implementation Responsibilities for VA Medical Center Leadership

Clinical practice guidelines (CPGs) cannot be successfully implemented in health care organizations without strong support and active involvement of leadership. This document is designed to give you, as medical center director, practical guidance about how to promote successful guideline implementation at your facility. The strategies described here are drawn from research in health care management.

The successful implementation of new clinical practice guidelines requires staff time and other resources that typically are in short supply in health care facilities. As director, you will make the final judgments about what resources are to be applied to improve clinical practices at your facility. Resources should be dedicated to implementing guidelines where you find that your current practices should be improved.

The Action Plan for guideline implementation is one vehicle for making these resource decisions. By first identifying gaps in practice and then defining strategy and actions to close those gaps, your guideline implementation team can apply resources where they are most needed and can potentially generate the greatest payoff in quality and efficiency. You can ensure that your team is setting priorities appropriately by providing policy direction and feedback during the planning process.

STEP 1: Organize for Guideline Implementation

Secure buy-in from executive staff.

Secure buy-in from executive staff.

Clinical practice guidelines, despite their name, address the administrative as well as the clinical aspects of health care. It is thus important to foster ownership of the guideline implementation process from both the clinical and administrative aspects of your facility.

By including the executive teams of both the clinical and administrative staffs in initial meetings, you will ensure adequate commitment of time and resources to guideline implementation. Continued support from clinical and administrative leaders can be maintained by having the implementation team report periodically to the clinical and administrative leadership.

Make guideline implementation an organizational priority.

Make guideline implementation an organizational priority.

Assigning guideline implementation a high priority sends the message to your staff that medical center leadership believes in the value of practice guidelines and that guidelines represent "the way things should be done here." Approaches to prioritizing guideline implementation at your facility include the following:

• Issue a policy memorandum.
• Use a guideline implementation as a public relations tool.
• Make guideline implementation a regular agenda item at leadership team meetings.

Issue a policy memorandum: To express your support of practice guidelines, you should issue a memorandum conveying your belief in the importance of guidelines and requesting the staff's cooperation in all implementation efforts.

use a guideline implementation as a public relations tool: Your facility's implementation activities can demonstrate to the public your facility's commitment to providing high-quality, cost-effective health care.

Make guideline implementation a regualar agenda item at leadership team meetings: These meetings will provide an opportunity for updates on the status of the work and serve as a forum for discussing how the leadership team might eliminate barriers to implementation that may arise.

Create a standing committee for guideline implementation.

Because your facility will be involved in implementing several guidelines over the course of a given year, you should create an institutional body to support all guideline implementation activities. This body, which could be called the Standing Committee for Evidence-Based Practice, should be headed by the chief of staff or designee. Its members should include primary care providers, nurses, QM staff, administrative staff and ancillary support staff. The committee would coordinate and monitor implementation of all guidelines, and make recommendations to the facility leadership regarding staff and resource allocations and other specific guideline-related issues.

With your oversight, the Standing Committee should also appoint a champion for each guideline. This champion should lead a guideline-specific implementation team through the development and implementation of an action plan. The guideline champion should have the following qualifications:

- Respected clinician
- Personal commitment
- Delegated authority

The implementation team will also need a facilitator to coordinate and manage team operations. The implementation team facilitator should have the following qualifications:

- Training and experience in group planning
- Training and experience in collecting and using data

Create a standing committee for guideline implementation.

Respected Clinician: The champion should be a primary care clinician who commands particular respect for his/her knowledge and experience and strongly influences the opinions or other staff.

Personal commitment: The champion should believe in the value of clinical practice guidelines and have a particular interest in taking on this role.

Delegated authority: The champion should be allowed to facilitate authoritative actions on his/her part.

Training and experience in group planning: The facilitator should be experienced in working with group process tools and dynamics and should be able to provide the technical and administrative support necessary to move the team toward meeting its goals.

Training and experience in collecting and using data: The facilitator should have experience working with quantitative data and using data to measure progress toward objectives.

STEP 2: Support the Implementation Planning Process

For each clinical guideline adopted by your facility, the designated implementation team will participate in an organized planning process detailed in this guide. The final product of this process is the implementation action plan, which is the essential planning document that sets the stage for all guideline implementation activities at the medical center. Because this planning document is key to the implementation effort, it is vital that the medical center leadership support its development and provide policy guidance on the content.

A. Revise the implementation action plan as needed.

Revise the implementation action plan as needed.

The action plan proposes strategies for overcoming key barriers to guideline implementation identified during the planning process. The leadership team should review a draft of the action plan for consistency with medical center priorities and acceptability of proposed actions. Based on that review, revisions should be incorporated in the plan before you approve it..

B. Hold the implementation team accountable for the implementation action plan.

Hold the implementation team accountable for the implementation action plan.

The implementation team's accountability for carrying out the approved action plan can be established by creating expectations for the team's performance and for reporting its progress in implementing the planned actions.

C. Follow up on implementation actions requiring director-level support.

Follow up on implementation actions requiring director-level support.

Some of the planned actions may require specific decisions or actions by you, as director, or by other members of the leadership team. Timely action by you on those items will provide impetus for the implementation team to carry out the action plan effectively.

STEP 3: Facilitate Action

Getting any large organization to implement change is difficult. Although the implementation team is responsible for day-to-day management of the implementation effort, your active involvement is vital to its success. In particular, you can lead the effort to foster a favorable climate for implementation and motivate staff to change.
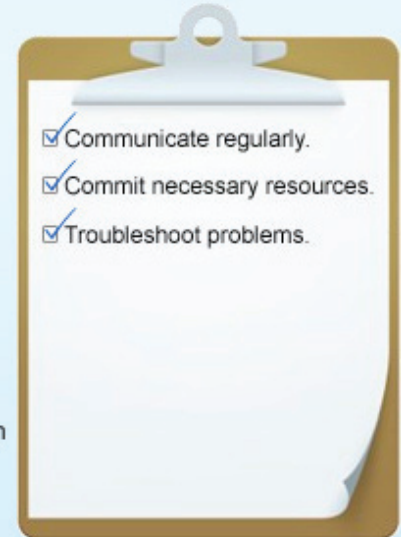
Foster a favorable implementation climate.

Foster a favorable implementation climate.

A favorable implementation climate contributes to successful guideline implementation by ensuring that:

- Medical center staff acquire the necessary skills.
- Supportive administrative and clinical processes are in place.
- Barriers to implementation are removed.

The medical center leadership has the primary responsibility for ensuring a favorable implementation climate. As the implementation team works to implement the action pan, there are three mechanisms you can use to support their work by addressing the implementation climate.

- ☑ Communicate regularly.
- ☑ Commit necessary resources.
- ☑ Troubleshoot problems.

Communicate regularly: By maintaining an active presence during the entire implementation process through direct communication with the staff (for example, using memoranda, meetings, newsletters, etc.), you will confirm for the staff your commitment to the guideline effort. Your sustained presence will strongly promote a favorable implementation climate.

Commit necessary resources: The implementation team will not be able to carry out their duties without the necessary resources, including allocation of their own time. While you are operating your facility with a limited set of resources, it is important that resources be allocated specifically to the guideline implementation effort.

Troubleshoot problems: Over the course of the implementation effort, conflicts inevitably will arise involving work responsibilities, the chain of leadership among implementation team members, and a number of unforeseen issues. You can lead resolution of the conflicts and ensure that implementation continues smoothly and steadily.

Leadership Responsibilities
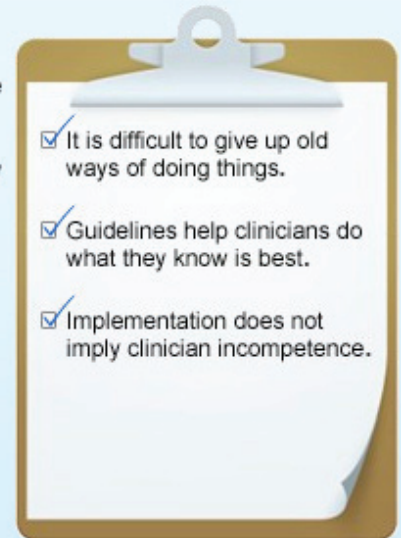
Motivate staff to change.

Despite well designed support strategies to facilitate guideline implementation, some facility staff will be ambivalent about or even resistant to implementation because it disrupts their normal way of doing things or conflicts with their values. This kind of staff resistance is common when organizations attempt to implement major changes.

Your leadership is probably the most powerful tool for motivating staff. You can facilitate change by conveying the messages on the clipboard.

☑ It is difficult to give up old ways of doing things.

☑ Guidelines help clinicians do what they know is best.

☑ Implementation does not imply clinician incompetence.

B.

Motivate staff to change.

It is difficult to give up old ways of doing things: Your staff will inevitably have mixed feelings about changing the way care is delivered at your facility. Changes in roles and responsibilities and new tasks can be difficult for anyone. Your acknowledging and validating any reluctance toward change among your staff will help them to overcome it.

Guidelines help clinicians do what they know is best: You can help clinicians realize that guidelines are about streamlining systems of care so that medicine can be practiced in the way they already know is best. Clinical guidelines can focus health care organization on putting the necessary elements—staff, information systems, and clinical and administrative processes—in place so that patients receive high quality, evidence-based care.

Implementaion does not imply clinician incompetence: When clinicians are told that they must follow guidelines, what they hear is "you are incompetent and you need to follow rules to correct your mistakes." This provider reaction to so-called "cook-book medicine" is widespread and must be acknowledged and addressed.

STEP 4: Monitor Progress

Although last in this list of steps, monitoring the progress of implementation must be planned from the beginning of the implementation process. It takes time to identify appropriate measures for monitoring progress and to put measurement systems in place. The only way for you to know how well implementation is working at your facility is to measure it.

Ensure that the VA/DoD guideline measures are in place.

Ensure that the VA/DoD guideline measures are in place.

For each VA/DoD guideline that is being implemented, a VA/DoD expert panel has been charged with developing a set of measures for monitoring guideline implementation. It is planned that these measures will be monitored by all services and the VA to provide system wide performance benchmarks. As director, you need to ensure that your facility has systems in place to collect and report data on the VA/DoD measures.

Provide oversight for development of additional guideline measures

Although the broad-based VA/DoD measures are useful for comparisons across VA medical centers, your facility will no doubt need to develop additional measures that are suited to your particular implementation plan. These measures will be the most tangible way you have for monitoring the progress of guideline implementation.

You will thus need to oversee the choice of additional measures and require the implementation team to submit the measures to you for approval. "Putting Practice Guidelines to Work in the VHA Medical System: A Guide for Action" provides details for the implementation team about how to choose measures and collect and analyze data.
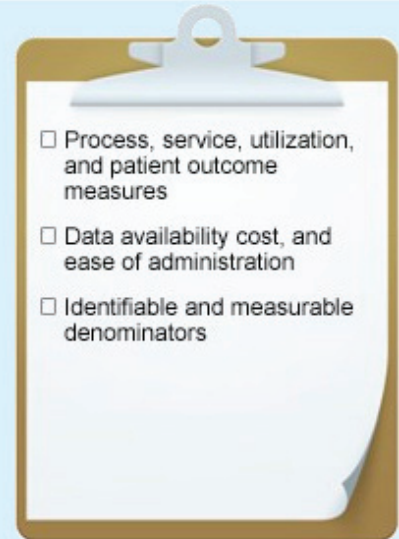
☐ Process, service, utilization, and patient outcome measures

☐ Data availability cost, and ease of administration

☐ Identifiable and measurable denominators

Provide oversight for development of additional guideline measures.

Process, service, utilization, and patient outcome measures: Process measures (e.g., document form in chart, new patient education encounters) are particularly useful in the early stages to assess whether the actions specified in the Action Plan are taking place. Utilization measures (e.g., referrals, diagnostics, procedures, etc.) are useful for charting changes in access to care and costs of care. Finally, changes in patient outcomes (e.g., readmission rates, blood pressure levels) are excellent measures of quality, but they take a long time to measure. Therefore, process and utilization measures are often good short-term proxy measures of quality.

Data availability cost, and ease of administration: Using data from existing automated information systems or adding new data elements to these systems are the easiest and least costly ways of collecting data. If needed data are not available from these sources, chart abstractions, surveys, new administrative forms or special outcomes studies can be used. However, they are more resource-intensive and are often more vulnerable to incomplete documentation.

Identifiable and measureable denominators: It is important to have complete counts of relevant patient populations (e.g., all adult type-2 diabetic patients) to produce accurate reports of chosen measures (e.g., percentage of type-2 diabetics with adequate glycemic control).

Establish accountability for the progress of implementation.

Establish accountability for the progress of implementation.

Just as the implementation team must be held accountable for their Action Plan and choice of measures, they should also report to the leadership team regularly about their progress on the measures, including any data collected and analyzed. As director, you should note important trends and oversee decisions about what changes need to be made, based on the findings. Both VA/DoD and locally developed measures should be reported quarterly to the leadership team.

Implementation Overview

The Stages of Guideline Use

Implementation

Putting a guideline into practice is hard work. Implementation is the process of ensuring that patient care follows evidence-based recommendations presented in the guideline. The complete guideline documents are quite lengthy and detailed, which makes it difficult to identify the most important clinical aspects of the guideline. To help focus your approach to implementation, a list of key elements have been developed for each guideline. In developing an Implementation Action Plan (see the section called, "Planning for Action") assess your VAMC's performance in relation to each of these key guideline elements.

Implementing guidelines requires planning, resources, and staff time commitment.

When a practice guideline is introduced, it is essential to:

- Assess how current clinical processes compare to what the guideline recommends.
- Prepare an implementation action plan to close gaps between the guideline and current practice.
- Dedicate the necessary resources and staff commitment to make those changes happen.

Acculturation

The ultimate goal of implementation is to fully incorporate the guideline recommendations into routine clinical practices. At this point, local ownership and appropriate changes in clinical and administrative systems should have been achieved, and one can begin a maintenance phase consisting of monitoring key guideline measures (see "Measuring Effects").

Successful implementation incorporates guidelines into routine clinical practice.

Adoption

The decision to adopt clinical practice guidelines was made by the leadership of VHA. The choice of guidelines established by the VA/DoD Working Group was based on careful consideration of the needs of the VA health care system as well as the high-volume, high-cost health conditions treated in the VHA. Therefore, for the VA/DoD guidelines, your efforts will focus on educating providers and clinic staff about each guideline and building local ownership of the guideline logic and standards.

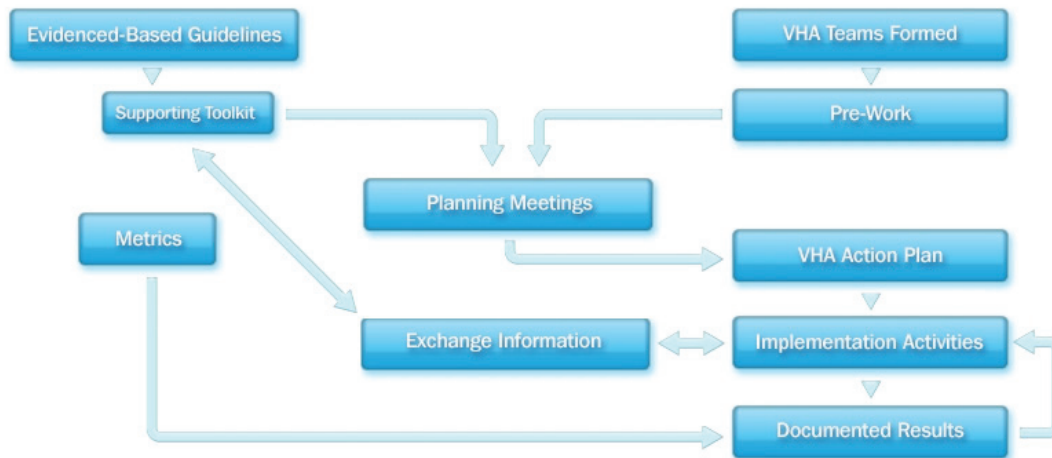The decision to adopt a guideline is the first step in implementation.

The Guideline Implementation Process

Guideline implementation is the second of three stages in guideline use, which begins with adoption and ends with acculturation. It is a multistage process.

Leadership support is essential to guideline implementation. This includes dedication of resources, support and staff time. More information on this important topic is presented in the section entitled, "Leadership Responsibilities," which is intended for facility leadership.

Forming the implementation action team is the next step in the implementation process. Key elements of an effective team include team leadership and membership, teamwork strategies, and communication skills. Each of these are discussed in the section entitled, "Effective Teamwork."

The development of the Implementation Action Plan takes place before and during an off-site planning conference.

This plan, which is based on the careful assessment of administrative and clinical processes, provides a blueprint for the implementation actions to follow. The necessary pre work and the steps involved in developing the action plan are discussed in the "Planning for Action" section.

Once the action plan is drawn up, the changes specified must be implemented. Although implementing change in a health care organization is a challenging task, it can be facilitated through the use of the Plan, Do, Study. Act (PDSA) methodology. Once small-scale changes have been tested, they can be extended and adapted for full-scale implementation. Implementing change is discussed in the "Making Change Happen" section.

The final stage in the implementation process is monitoring progress. In addition to the VA/DoD guideline measures, your VAMC may decide to use measures that are unique to your implementation effort. The section called, "Measuring Effects" provides guidance on choosing measures, collecting and analyzing data, and using data as feedback for change.

Keys to Success

To ensure successful guideline implementation at your facility, you should address two main issues: (1) building local ownership or "buy-in" from the staff responsible for implementing the guideline, and (2) ensuring that clinical and administrative systems are in place to facilitate staff adherence to the guideline.

Successful implementation requires both staff buy-in and system changes. The figure to the right shows how staff buy-in and system changes interact to produce different implementation outcomes. Having both local ownership and systems support produces the optimal result, leading to likely implementation success. System support without local ownership produces providers who are resistant to implementation, despite having clinic procedures and systems equipped to support the process. Provider ownership without systems support produces willing providers who are frustrated at their inability to overcome barriers in the facility systems that hamper their ability to change practices. Finally, with neither local ownership nor systems support, implementation will fail.

	Local Ownership	No Local Ownership
Systems DO support recommended practices	Optimal Result ✔	Provider Resistance
Systems DO NOT support recommended practices	Frustrated Providers	Poor Result ✘

Build Local Ownership/Buy-In.

Build Local Ownership/Buy-In.

Staff affected by guideline implementation must be committed to its success. This is especially important when a guideline is received from an external source. Ways to foster commitment include:

Use opinion leader.

Communicates the evidence on which the recommendations are based and serves as a resource or content-related issues.

Use clinical champion.

Communication with staff regarding the importance of guideline implementation should be spear headed by a respected opinion leader.

Educate staff.

The first step toward accepting a guideline is to become familiar with it. Educational seminars or small group discussions among providers and staff can make them comfortable with the guideline.

Focus on local implications.

Show the implementing staff how the guideline fits into the clinical context of your clinical site. Work with providers and clinic staff to identify what areas of clinical care will be most positively or negatively affected by the guideline.

Include all levels of staff.

Education and training should include all levels of staff involved in implementation, including primary care providers, nurses, specialists, nurse practitioners, pharmacists, physical therapists, occupational therapists, nutritionists, support staff, etc.

Focus on improving patient outcomes.

Emphasize improving the quality of patient care and how the guideline will help you achieve that goal.

Use data when possible. You can build a better case for the local relevance of the guideline when you have local data to support your claims.

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Change Clinical and Administrative Systems.

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Implementing clinical guidelines requires more than the enthusiasm and commitment of individual VAMC staff members. To achieve lasting improvements in clinical practices and patient outcomes, a wide array of staff resources and administrative and clinical systems need to be coordinated. For guideline implementation to be successful, existing systems must be modified and/or new systems must be put into place to facilitate desired practice changes. This can be accomplished in several ways:

Implementing guidelines requires appropriate systems changes achieved through careful planning.

Emphasize systems over individual behavior.

When communicating with providers and clinic staff, stress that guideline implementation is more about modifying and/or creating systems to support clinical behaviors than about policing the actions of individual clinicians.

Understand current processes.

Communication with staff regarding the importance of guideline implementation should be spear headed by a respected opinion leader.

Identify needed changes.

Use your understanding of the current practices in the facility clinics to identify the system changes that need to be made to accommodate the guidelines. Where you do not yet have enough information to identify needed changes, work with the clinic staff to gather that information (which also helps build staff buy-in).

Involve a variety of staff members.

Clinical systems often involve multiple levels of staff. Involve representatives from each of these levels (e.g. providers, nurses, ancillary and support staff) in designing and carrying out changes. You will get better results while also building staff support.

Use process data to measure change.

Measure changes in the care processes targeted by your new or modified systems so you can track your progress and respond quickly to unexpected results.

Use outcomes data to encourage continued refinement and implementation efforts.

Outcomes measures are a better reflection of the true improvements of the quality of care and enhance acculturation of guidelines into clinical care.

As you develop and carry out the action plan (Planning for Action and Making Change Happen), one should focus on developing or modifying systems to support guideline implementation.

Effective Teamwork

Choose the Team Leader

The implementation team is led by the guideline champion, aided by the opinion leader, and coordinated by an experienced team facilitator.

Granting dedicated time to champions is vital to the success of guideline implementation. In pilot studies where the guideline champion was not granted dedicated time to his/her responsibilities as champion the resulting lack in leadership slowed the pace of implementation considerably.

Planning ahead for potential reassignment of implementation leadership is essential to successful guideline implementation. In pilot studies, reassignment of guideline champions and implementation team facilitators often left a vacuum that put guideline implementation on extended hold.

The guideline champion acts as the clinical leader of the implementation team. This person should be a respected clinician with expertise in the content of the guideline and have a strong commitment to its successful implementation. This person reports to the medical center leadership on team progress and has overall responsibility for implementation activities. The guideline champion participates in all team meetings and provides technical assistance to the team during the development and execution of the Guideline Implementation Action Plan (see "Planning for Action").

Special care should be taken when choosing the guideline champion. In some pilot studies specialists were chosen as the implementation champions when the guidelines were designed to target primary care practice. This disconnect between leadership and front-line implementers sometimes led to a lack of sensitivity to clinical realities of guideline implementation.

The opinion leader will serve as the content expert for the guideline. His or her role will be to validate the content of the guideline and serve as a resource for answering questions regarding content of the guideline.

The implementation team facilitator coordinates and manages team operations. This person should have experience using group process techniques and managing group dynamics. The facilitator should also have experience working with quantitative data and be able to provide the technical and administrative support necessary to help the team meet its goals.

Choose the Team Members

Implementing clinical guidelines requires the cooperation of a variety of clinical and support staff. A multi-disciplinary team should lead the implementation effort to help ensure that representatives from different aspects of the patient care process will develop commitment to the implementation effort and contribute their respective content areas of expertise to that process. Team membership should reflect the variety of clinical and support staff involved in implementation.

Determine who should be on the team by asking:

- Who will have the most important roles in making needed changes for implementing the guideline?
- Who else is affected by implementing this guideline?
- Who can influence the success or failure of implementation?
- Who has special skills that the implementation team may require, such as an intimate knowledge of a part of the process of care affected by the guideline, or the ability to help with measurement?

An optimal team will consist of six to ten members representing the actual mix of clinical and support staff who will be involved in implementing the guideline. This team size provides enough members for diversity of opinion without having too many to achieve consensus.

Use Effective Teamwork Strategies

The team needs appropriate training and effective management tools.

Strategies for effective teamwork can be grouped into four appropriate categories:

Train Your Team
The implementation team facilitator is responsible to ensure that all team members receive basic training in the planning and process improvement strategies presented in "Planning for Action" and "Making Change Happen." Providing this training before the team begins its work gives members a better understanding of the methods they will be using and increases their sense of involvement in the team process. It will also give them some of the skills necessary for working effectively in groups.

Use Management Tools
Effective teams will use the following management tools:

- Timelines: Timelines (e.g., Gantt chart) should be used to mark progress through time-limited stages in the implementation process.
- Structured meetings: Team meetings should follow an agreed upon format and written agenda and have specific objectives. Someone should be assigned to take minutes and keep time. Action items assigned to particular team members should be noted and tracked.
- Storyboards/flowcharts: These tools help the team to focus on the systems approach to guideline implementation and the process approach to improvement strategies (see "Making Change Happen" for a description of the PDSA process).
- Baseline data: Baseline data on the patient population and on current practices will assist the team in its planning efforts.

Build Team Consensus
Team members may have a variety of ideas about how to implement guidelines. However, it is vital that members reach consensus about goals and objectives. In developing the Implementation Action Plan, allow sufficient time for discussion to ensure that all team members can contribute their ideas and stand behind the final plan. Also, make sure that the team maintains consensus as issues arise during implementation that require troubleshooting or revising plan.

The team must agree about its goals and objectives.

Promote Participation
Staff who participate in the team process are more likely to support it.

Effective teams foster participation of all members. Some ways to promote participation include:

- Involve team in developing management tools. Including all team members in decision making and managing the team's work will encourage commitment to team processes.
- Involve team in the delegation of tasks. If the members are involved in the process of assigning tasks they will be more likely to volunteer their services and will be more committed to the tasks they take on.
- Solicit the input of the most reticent team member. Make an extra effort to include team members who do not speak up frequently at team meetings. These people will be vital to your implementation efforts, and their input should be valued and encouraged.

Communicate Effectively

The team fosters staff buy-in by communicating key messages to clinicians.

The leaders and members of the implementation team act as the spokespersons for implementation at your facility. They are responsible for communicating the value of the guideline and the implementation effort to the rest of the medical center staff (see "Leadership Responsibilities" for the role of medical center leadership). The team can help local ownership/buy-in by communicating the following messages:

Guidelines help clinicians do what they know is best
Guidelines are about streamlining systems of care so that medicine can be practiced in the way that clinicians know is best. Clinical guidelines can help focus your medical center on putting the necessary elements "staff, information systems, and clinical and administrative processes" in place so that patients receive high-quality, evidence based care.

Implementing guidelines does not imply clinician incompetence
When clinicians are told that they must follow guidelines, what they often hear is, "you are incompetent and you need to follow rules to correct your mistakes." This provider reaction to so-called "cookbook medicine" is widespread and must be acknowledged. A good way to respond to this sentiment is by emphasizing the message that guidelines help clinicians do what they know is best.

Recognize Team Dynamics

The facilitator needs special knowledge about effective team functioning. However, all team members should know something about team dynamics. Most teams go through four typical stages of development, which have been characterized as forming, storming, norming, and performing. In each stage, members are apt to have certain feelings and exhibit certain behaviors. In reality, teams cycle back and forth through various stages. Adding new members, failing to meet for several weeks, or running up against a seemingly insurmountable barrier can set teams back.

Forming Stage: Initially, team members often feel excitement, anticipation, optimism, and pride in being chosen for the project. They have an initial, tentative attachment to the team. Team members are also likely to be suspicious, fearful, and anxious about the job ahead, but they may be reluctant to express these feelings. Teams in the forming stage are often characterized by politeness and lack of overt disagreement.

Storming Stage: In this stage, team members begin to challenge each other more openly. They may resist the task and be uncomfortable with any new approach. They are likely to experience "mood swings" about the team's ability and chance for success. Members may feel uncertain about their own role and their ability to contribute to or control the team's work. They may suspect that others have ulterior motives or hidden agendas.

Norming Stage: This is when things start to come together. In this stage, the team develops norms for resolving conflicts, managing work assignments, and running meetings. Members will be more comfortable about being on the team and be more able to take constructive criticism and have positions questioned. They will also begin to believe that the team can succeed.

Performing Stage: Effective teams are those that reach this stage. Members will feel satisfied about their personal contributions, growth, and learning. They will understand the strengths and weaknesses of other team members, as well as their own, and be more comfortable with the team's methods. The team will feel pride in its progress.

Planning for Action

Overview

The implementation team's first task is to prepare a plan for turning a practice guideline into actual clinical practice. To identify gaps in desired practice, compare your current practices to what the guideline recommends. Prepare an Action Plan that sets priorities and defines actions for closing these gaps. An Action Plan will serve as a blueprint for all the implementation activities. It is recommended that you schedule at least a full day of planning time at an off-site location for your team to develop its action plan. Taking the team off-site communicates the importance of the task at hand and gives the team a safe environment for reflecting objectively on patient care processes at your facility.

An assessment of current clinical practices provides the foundation for the implementation action plan. This section describes processes and methods you can use for this purpose including:

- Preparation and data collection for planning (on-site)
- Developing an implementation action plan (off-site)

Familiarity with the guideline and the current state of patient care at your facility prepares your team to develop an effective implementation plan. In effect, in developing the action plan, the team adapts the VA/DoD guideline to the clinical circumstances of your facility.

Preparation and Data Collection for Planning

Become Familiar with the Key Guideline Elements and Algorithm

All team members need to know the key guideline elements. They represent the "essence" of the practice guideline recommendations that, if successfully implemented, would put the facility in compliance with the guideline.

A useful exercise for familiarizing the team with the guideline is to run hypothetical cases through it. The team works together to determine how to manage the patient based on the guideline.

Describe the Patient Population and Current Practices

The first step toward understanding current practices is for the implementation team facilitator to collect baseline data. This will help define priorities for action. Use existing clinical and administrative databases such as EPRP and clinical reminders, to collect this data.

A description of current practices helps focus implementation efforts.

Patient characteristics and care processes that were measured at baseline may also serve as the measure used to monitor the progress of implementation. Choosing measures for monitoring is part of developing the Action Plan. A more detailed discussion of measures can be found in the section entitled, "Measuring Effects."

Assess Current Practices in Relation to the Key Guideline Elements

Explicitly compare the practices at your facility with the recommendations of the key guideline elements.

Summarize current clinical practices for each key element. Begin to assess the key elements (1) for which you already are practicing according to the guideline standards, and (2) where current practices differ from the guideline standards.

This information will become part of your strategy and action plan, which will set priorities and define actions for changing practices.

Prepare an Action Plan for Guideline Implementation

An action plan should contain both an overall strategy and specific actions for changing practice.

- Evaluate the current status of practice at your facility.
- Set priorities for actions to change practices to become more consistent with guideline standards.
- Document your overall implementation strategy and related actions in a written guideline implementation plan.

What follows is a format and process for developing a Guideline Implementation Action Plan. The action plan should be unique to your facility and to the particular guideline being implemented. As the team works through this planning process, be guided by the principles on the clipboard.

VHA has developed a number of tools to help you carry out your implementation action plans. Implementation tool kits are currently available for a variety of guidelines at the Office of Quality & Performance Web site.

Develop an overall strategy that focuses on areas where practice changes are needed most.

Keep your action plan realistic, recognizing competing demands for finite resources.

Be proactive in two important areas:

1. Educate both clinical and support staff and build ownership in the guideline standards.

2. Modify the facility's structures and processes to achieve new practices as "an easier way" to care for patients effectively.

Monitor progress in carrying out the implementation plan, and document how the guideline affects facility practices and outcomes.

Follow Planning Steps

The plannning process consists of four basic steps: Analyze gaps, identify barriers, develop an overall strategy, and guideline measures and monitoring.

Perform each step, in turn, as presented throughout this section. Worksheets for each step can be found in the appendix.

Planning Step 1: Analyze Gaps Between the Guideline and Current Practice

What This Task Does
Analyzing the gaps between the guideline and current clinical practice helps the guideline team identify the components of the guideline on which they should focus their efforts. For each of the key guideline elements, the team compared what they know about their facility's existing clinical practices to the standards specified in the guideline.

Products Generated
A set of statements for each key guideline element identifying areas where changes are needed and what types of changes are needed to bring clinical practices closer to guideline standards. Priorities for implementing process changes and a description of whatever other information is needed to guide changes.

The facilitator leads the implementation team through the gap analysis, either in an informal discussion or in a more structured nominal group process. The process presented on the clipboard is a less structured process. The facilitator should use the process most likely to encourage participation so that the team will benefit from the diversity of clinical and administrative perspectives.

Gap Analysis Process

Guideline elements
The facilitator first reviews the standards and recommended practices contained in each of the key guideline elements (e.g., items to check in a history and physical examination, patient education on self-care, medications).

The facilitator solicits reactions and discussion of issues from the team members. Guideline issues should be recorded to report out at the general meeting session.

Current practices
For each guideline element, the team members list the current practices at their facility. Take care to consider any differences in practices among your facility clinics or departments.

Continue discussion of the guideline element until the team reaches agreement on what your current practices are, any limitations to your knowledge of current practices, and additional information you need to gather to resolve questions.

Gaps identified
Working with Worksheet 1A. "Implementation Strategy," the team uses the worksheet to record its conclusions regarding gaps between practice and the guideline standards.

Note your assessments of the adequacy of the information that guided these conclusions.

Planning Step 2: Identify Barriers to Successful Implementation

What This Task Does
The guideline team identifies those aspects of the facility's organizational structures, process of care, or administrative policies and procedures that need to be changed to bring current practice closer to the guideline standards.

Products Generated
- A list of barriers or challenges that need to be managed in the facility can successfully implement each key guideline element.
- List of broader system issues or barriers that cut across key guideline elements.

Once the guideline team has determined where gaps exist between guideline standards and actual practices, the team identifies barriers that may prevent or hinder changes designed to close the gaps. This analysis is not necessary for guideline elements where the team has identified no gaps in practice. However, it should be done for guideline elements where there is not enough information to assess gaps: inadequate information may result from barriers that can be reduced or removed. Like the gap analysis, these discussions may be facilitated informally or formally.

Identifying barriers
Repeat the following process for each key guideline element:
1. The facilitator asks each team member to identify barriers that will prevent them from implementing clinical changes for the guideline element. The facilitator lists the barriers on a flip chart or other presentation medium until no more suggestions are raised.
2. The team members discuss the barriers, removing duplicates or consolidating barriers until they agree on the barriers that need to be addressed. Identify all barriers relevant to each guideline element, even if some of them are also identified for other guideline elements.
3. After barriers for each guideline element have been identified, the team groups the barriers into categories of cross-cutting issues.

Planning Step 3: Develop an Overall Strategy and Specific Actions

What This Task Does
In this planning step, the team identifies the basic elements of the facility's guideline implementation plan. Using information developed in the previous planning steps, the team defines an overall implementation strategy as well as a strategy for each guideline element. Within each strategy, the team defines specific actions to close gaps in practice.

Products Generated
- An overall implementation approach plus action strategies for each guideline element
- For each guideline element, a list of actions to be undertaken, tools to be used, and a timeline for completion
- In this planning step, the guideline team draws upon the information it has developed in the gap and barrier analysis to construct its implementation plan. The plan consists of:
- A cohesive and feasible strategy that focuses on the most important changes needed
- A set of specific actions and time lines to carry out this strategy

Overall Strategy
Action priorities for the guideline elements. The implementation team defines action priorities for each key guideline element, taking into consideration the gaps in current practice and the adequacy of information available to identify gaps. Decide by consensus which key guideline elements the team will work on first and achieve early successes.

On Worksheet 1C _ (Implementation Strategy Worksheet), briefly describe how the team plans to approach each guideline element. Choose from the following priorities or use others that the team decides are important:

- Assign high priority to significant gaps in current practice.
- No action should be taken if there are few or no gaps in current practice.
- No action for change yet - gather more information to assess gaps in current practice.
- Low priority, but quick success ("low hanging fruit"). These will enhance group performance and confidence.

Overall implementation strategy. An overall strategy is the "centerpiece" of any action plan because the strategy should drive all the actions designed to incorporate practice guidelines into a facility's health care processes. A well defined strategy will reflect the population served by the facility as well as the sizes and configurations of its clinics, and will focus efforts on the areas in which change is most needed. Working as a group, review the issues already identified in the gap and barrier analyses for each guideline element, as recorded on Worksheets 1A and 1B. Brainstorm ideas for an overall strategy that encompasses these elements. The facilitator guides the team discussion to reach consensus on a strategy. Consider using ranking methods when necessary to help the team consolidate views. Record the overall strategy that team develops in the space provided at the top of Worksheet 1C.

The guideline team develops plans for two categories of actions, both of which are necessary for effective guideline implementation. These are:

Guideline introduction and education
An important first step in making guideline standards a part of a facility's routine practices is building knowledge about the guideline and commitment by providers and other clinic staff to achieving the guideline standards.

This step requires not only a scientifically credible guideline, but also substantial efforts by the guideline champion, opinion leader, the implementation team, and medical center leadership.

Changing clinical care processes
As the guideline is introduced and facility staff are being educated, the guideline team will begin the process of changing existing practices to close gaps from the guideline standards. Therefore, define actions only for those key guideline elements that the team has identified as priorities.

Using the tool kit. While the team is considering possible actions, review the contents of the guideline implementation tool kit. Identify the tools you will use to introduce the guideline and establish new clinical and administrative practices. Record these tools, along with other resources to be used, on Worksheet 2A or 2B, depending on the strategy, in the column "Identify the tools and resources for the action."

Developing the action plan. Using Worksheets 2 and 3, record actions in each category of guideline introduction and changes to clinical practices. (Worksheet 2A is for introducing guidelines and Worksheet 2B is for changing clinical practices.) In Worksheet 2, summarize each action to be taken, tools, and resources ("what"); the staff responsible ("who"); and the action schedule and completion target ("when"). In Worksheet 3, display the action schedules graphically in a Gantt chart format. Timelines for all actions (introduction/education and clinical practice changes) should be displayed together on the Gantt chart to test feasibility and timing of the actions as a group.

Depending on the size of the guideline team and the number of actions to be developed, the team may decide to break into smaller working groups. Each working group is asked to develop actions and complete worksheets for one or more of the action plan components. For example, one group might plan the actions for guideline introduction and staff education and complete Worksheets 2A and 3, while other groups would have responsibility for actions to change practices under one or more of the guideline elements. Refer to "Group Process Methods" in the Appendix for instructions about using workgroups and complete Worksheet 2B.

Planning Step 4: Guideline Measures and Monitoring

What This Task Does
The feedback loop developed in this planning step is a crucial element of any clinical improvement cycle. The monitoring process established by the team will inform the team which of the actions in their plan are working well and which are not. The team will use this information over time to correct, revise, add, or delete implementation actions.

Products Generated
- Monitoring measures and a reporting schedule
- Identification of issues related to data availability or collection that affect monitoring

A commitment to regular monitoring is essential to achieving desired changes in practices under a practice guideline. The facility staff need to be able to observe the impacts of the actions they are taking. They can use this information to determine where to modify actions or initiate new action strategies. In this step, the guideline team selects measures to monitor, and it begins to design a data collection and reporting process to generate regular data on those measures.

Identification and Selection of Measures
During the initial phase of implementation, the team will want to focus on monitoring process-of-care measures to check whether planned changes actually are occurring. At the same time, identify short-term and long-term outcome measures to measure, starting as soon in the process as possible. Establish at least one measure for each guideline element that has been identified as a priority. This may include, but is not limited to those measurements identified through the EPRP. Select measurements judiciously but avoid burdensome data collection. Record each measure identified on Worksheet 4, along with identification of its data sources and monitoring schedule.

In addition to the measures monitored nationally by the VA, the team may choose to select some measures that address unique aspects of care for the team's facility. All measures should be quantifiable and focus on the desired changes identified in the plan.

Identification of Data Collection Issues
During discussion of the proposed measures, the team will raise a number of issues and questions that have implications for successful data collection and measurement.

Prepare a list of these issues and identify which of them relate to the facility's data capabilities or other factors, and which of them need to be addressed by leadership. Where possible, offer suggestions for how some of the issues may be resolved

Making Change Happen

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

Once your team has developed a Guideline Implementation Action Plan, the next step is to implement the plan in the clinical environment. This section presents an effective method for implementing change that is based on the Plan Do Study Act (PDSA) process improvement cycle.

The plan, do, study, act cycle is an effective way to implement change. The PDSA cycle is a process model for quality improvement that has been used extensively in the health care field, especially for working with clinical practice guidelines. The animation shows the four stages of the PDSA cycle. As you carry out your action plan, treat each action item as material for a PDSA cycle.

PDSA cycles consist of small-scale tests of planned actions, followed by assessment and improvement of the initial plan.

The PDSA cycle was initially developed by Tom Nolan and colleagues at Associates in Process Improvement as a framework for accelerating improvement in a variety of business contexts. See:

C. Langley, K. Nolan, T. Nolan, C. Norman, and L. Provost. The Improvement Guide: A Practical Approach to Improving Organizational Performance. San Francisco: Jossey-Bass Publishers. 1996.

> **Plan:** The PLAN stage occurs at your off-site planning meeting described in "Planning for Action."
>
> **Do:** During the DO stage, carry out a small-scale test of the planned action. Almost any type of action, ranging from small (such as a training class) to large (such as redesign of patient flow procedures) can be tested.
>
> During this test, observe and document any problems or unexpected events and collect data that will help determine the impact of your test.
>
> **Study:** During the STUDY stage, analyze the data collected and the observations made. Compare what is found to what you expected to happen and summarize what was learned from testing the action item.
>
> **Act:** During the ACT stage, use what has been learned to improve the planned action. At this point decide either to test the change again with the modifications, or to proceed to full scale implementation

Strengths of PDSA Approach to Guideline Implementation

Testing Changes on a Small Scale

To see if the change strategies in the Action Plan will achieve their specified objectives, it is important to test them on a small scale-in effect, implementing a change on a temporary basis. What is most important is that the team move quickly through each stage of the cycle to apply what has been learned with little delay.

Testing changes on a small scale improves staff buy-in and focuses attention on changing clinical processes. Testing on a small scale has several advantages:

Learning payoff
Testing changes on a small scale can be accomplished quickly. At the same time, small scale tests provide a good indication of problems and/or successes to expect from full-scale implementation.

Allows for early and effective changes to the action plan
The experience and feedback gained from small scale tests can be used to modify and improve the original Implementation Action Plan.

Improves staff buy-in
Your facility staff is more likely to buy in to guideline implementation if change strategies are tested on a small scale. Staff members resistant to large-scale changes will be more receptive if they can provide input during a small trial run of the change strategy. Tailoring the strategy to the needs and concerns of the implementing staff will increase staff acceptance of guideline implementation.

Focuses on changing clinical processes
Since the PDSA cycle is specifically designed as a tool for improving organizational processes, using this approach encourages your team to conceptualize the action items in the implementation plan as changes in clinical processes. This orientation will increase the likelihood of effective process change.

Testing Multiple Changes Through Multiple Cycles

Another advantage of the PDSA cycle is that it allows multiple change strategies through multiple improvement cycles, as illustrated in the animation below. Actions 1, 2, and 3 are items from your Action Plan. Each item is tested on a small scale and incorporates successive cycles until the desired change is achieved.

It is advisable to test every item with at least one PDSA cycle; some actions may require more than one.

Extending and Adapting Changes

With evidence from the small-scale tests that planned actions have the potential to create desired changes in clinical processes, it is time to move forward with broader implementation of those actions. Responsibilities and accountability for implementing the actions should be clearly defined and compatible with each individual's skills and functions in the clinic or facility. Similar to the approach for the small-scale tests, work incrementally in cooperation with staff and patients who are involved or affected by the changes. Be alert to both positive and negative feedback, both of which can improve your strategies. To extend and adapt small-scale changes, consider the following actions:

- Extend the change to other areas in your facility.
- Adapt the change to each area.
- Make the change routine in each area.
- Share the adaptations among all areas.

A process for monitoring progress in achieving the goals should also should be initiated. The "Measuring Effects" section discusses monitoring approaches, measures, and issues. Monitoring serves the important functions of providing feedback for the implementation cycle, creating accountability for guideline implementation, and assessing the effects of the guideline on quality of care.

Measuring Effects

Overview

Assessing your implementation efforts requires appropriate data and careful interpretation.

To monitor and assess the effect of guideline implementation efforts:

- Choose appropriate measures.
- Collect data.
- Interpret your results.

Choose Appropriate Measures

The VA/DoD Guideline Measures
The VA and DoD already have a process in place for developing guideline measures. The VA/DoD measures are selected by an expert panel of clinicians using a Delphi consensus development process. High-priority measures have been selected to be monitored on a service wide basis. When selecting measures, consider the type and importance of the outcome, and the feasibility and interpretability of the measure.

Identifiable and Measurable Denominators
It is important to have complete counts of relevant patient populations (e.g., all adult type-2 diabetic patients) in order to produce accurate reports of chosen measures (e.g., % type-2 diabetics with adequate glycemic control).

Selection Criteria

Process, utilization, and outcomes
Process measures (e.g., document form in chart, new patient education encounters) are particularly useful in the early stages of implementation to assess whether the actions specified in the Action Plan are actually taking place. Utilization measures (e.g., referrals, diagnostics, procedures, etc.) are useful for charting changes in access to care and costs of care. Finally, changes in patient outcomes (e.g., blood pressure levels) are excellent measures of the impact of guidelines on quality of care.

Importance of factor being measured
The measures chosen must capture the key elements of the guideline, particularly those for which specific actions have been defined in the implementation plan.

Ability to interpret and act on findings
It is often difficult to determine if an increase or decrease in a certain indicator (e.g., trend in referrals, imaging studies, or drug use) is a result of successful guideline implementation or an undesired outcome. This ambiguity often results from insufficient information about whether such changes are "appropriate" from a clinical perspective.

Feasibility of measurement
The easiest and least costly ways of collecting data are to use data from existing automated information systems or to add new data elements to these systems. If needed data are not available from these sources, then chart abstractions, surveys, new administrative forms, or special outcomes studies can be used. However, such studies are more resource intensive and are often more vulnerable to incomplete documentation.

Collect Data

Methods for monitoring implementation

Methods for monitoring implementation.

Monitoring relies on the results of special studies and data from automated systems. Once measurements have been chosen, the next task is to put implementation monitoring systems into place. There are two basic methods for collecting data to monitor chosen measures.

- Routine monitoring of administrative data
- Special studies of clinical data

Given their respective strengths and weaknesses, these two monitoring techniques complement each other well, and should be used in combination. It is important to note that despite the more labor-intensive nature of special studies, these studies will vary in scope and complexity depending on the objective at hand.

The buy in of clinical staff requires the collection of simple data on their performance in relation to the guideline measures. Without hard data to the contrary, clinicians will often assume that the guideline represents their current practice.

Routine monitoring of administrative data comes from automated information systems, including outpatient visits, inpatient stays, prescription drugs, and use of ancillary services (e.g., DSS and VISTA). However, these data are less useful for measuring outcomes of care because they do not contain information about a patient's clinical status. Moreover, measures of the quantity and timing of services based on these data may be interpreted incorrectly if not used in conjunction with data on patient status or clinical judgments made when care is delivered

Special studies of clinical data which collects information using CPRS, clinical reminders, and VISTA data produces rich details about the patients' clinical status and clinicians' implementation of required interventions. However, they are not very useful for timely monitoring of compliance with the guideline and its effects on service delivery profiles
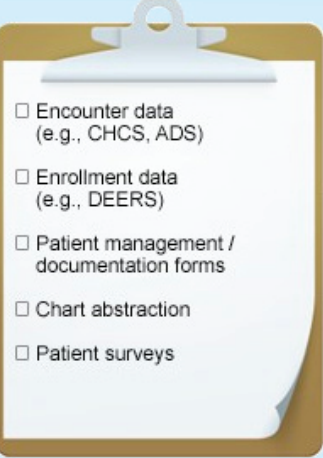
Measuring Effects

Data Sources

Data Sources

A number of data sources are available for both special studies and routine monitoring. Each source has strengths and weaknesses, which is summarized in the "Advantages and Disadvantages of Data Collection Methods" table and presented below.

Useful data sources include: patient charts and documentation forms, surveys, and administrative and enrollment information.

Data is available from many different sources for routine as well as specific studies. This data can be obtained form the VISTA database through reports from the Ambulatory Care Reporting Program(ACRP), Clinical Reminders, the Decision Support System, and directly from the database utilizing File Manager Reports.

☐ Encounter data
  (e.g., CHCS, ADS)

☐ Enrollment data
  (e.g., DEERS)

☐ Patient management /
  documentation forms

☐ Chart abstraction

☐ Patient surveys

Patient care data for individual patients is easily retrievable directly from CPRS through displays on the various tabs (Labs, Meds, Reports). The fastest and easiest way to get information about a specific patient is to display the information through CPRS. The Cover Sheet alone carries a wealth of information. Each tab in CPRS allows for a drill down of specific information about items found on the tab (Meds, Labs, Orders, Vital Signs, Allergies, Postings on the Cover Sheet)

ACRP Reports

Any activity entered through patient care encounters, including diagnostic codes, procedure codes, patient visits, clinic utilization, can be monitored through the ACRP Reports option. This option provides a mechanism for producing a report on encounter, visit and unique patient statistics by clinic, provider or stop code. There are 17 different pre-formatted reports available through this option.

Clinical Reminders Report

The Clinical Reminders Report option allows for a listing of any reminders which are due by: Individual Patient, Hospital Location, OE/RR Team, PCMM Provider, or PCMM Team. A summary report displays totals of how many patients of those selected have reminders due. A detailed report displays patients with reminders due in alphabetical order as well as the date the reminder is due, the date the reminder was last done and the next appointment date.

Decision Support System

The Decision Support System (DSS) can extract data from as many as 79 different administrative and clinical data sets. To learn more about what is available through the DSS contact the DSS administrator at your site.

VistA

Data can be compiled through reports directly from the VISTA database utilizing File Manager. This method can be used when extracting large amounts of data from various different files. File Manager can pull out any bit of information that has been entered into the computer system in many different formats. You just need to define what data (what) is needed for what purpose (why), and the format in which you would like to see the output (how). To retrieve this data requires specialized access to the files. The Clinical Informatics staff can assist with the data mining process.

Encounter data (e.g., CHCS, ADS)

These computerized data are easy and inexpensive to obtain. Administrativeinformation data on service utilization usually contain diagnosis and procedure codes. However, different codes can be used to describe the same event and the accuracy and completeness of coding are not always consistent. Using administrative data also limits you to the information that the computerized systems already collect, unless you can add desired data elements to the systems.

Enrollment data (e.g., DEERS)

Enrollment data have the advantage of providing information about the entire population of patients served by your facility. These data can be particularly useful for determining the incidence or prevalence of health conditions and service use rates in the patient population at a whole, or in subgroups. However, enrollment data may be missing information on particular factors of interest (e.g. health status, chronic health conditions), and these data may not be routinely updated.

Patient management / documentation forms

These forms provide patient-level data specific to the guideline(s) being implemented. In addition to being a good source of data on implementation, they also act as a reminder for clinicians. However, unless clinic staff believe that the benefits of documentation forms outweigh the added time burden of filling them out, staff will resist using them.

Chart abstraction

Because the patient chart contains detailed diagnostic information, it can be used to determine the appropriateness of care, the quality of care, clinical outcomes, and the access of certain groups to specific types of care. Abstracting data from medical charts is time consuming and costly. Missing charts can make results inaccurate because available charts may not be representative of the total patient population. Because chart data lacks a standard format, some information may be missing. In addition, the way data are recorded may vary (e.g., no mention of smoking may mean that the patient does not smoke or that the provider did not ask whether the patient smokes). You should consider these limitations when interpreting the data

Patient surveys

Patient surveys can be used to collect data on patient satisfaction with care, functional and health status, quality of life and health habits. Patient surveys can also capture patients' perceptions of guideline implementation. If you cannot survey all of the patients you are interested in, you can use random samples of those patients to obtain information that is representative of the population. Low response rates or poor recall by respondents can make data difficult to interpret. Also, surveys only capture one point in time, and they must be repeated periodically to provide trend data.
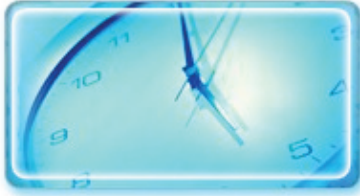
Frequency of Data Collection

Frequency of Data Collection

Deciding how frequently to collect data is an important component of monitoring strategy. Your action team should consider three aspects of the monitoring process:

• Early monitoring of changes to clinical practices
• Monitoring administrative data
• Conducting special studies

Collect process data early and frequently; monitor administrative data monthly; conduct special studies strategically.

During the early weeks of implementation, it will be useful to collect data on a small scale for measures that show whether the changes in practice that you intend to make are actually occurring.

Because administrative data are usually readily accessible, your action team should monitor these measures on a monthly basis, checking the data for desired or undesired changes in utilization. This schedule will allow the team to respond quickly to refine your implementation strategy as needed. Quarterly reports can be made to leadership on implementation progress, impacts on service use, and resulting changes made to your implementation strategy.

Special studies, by their very nature, provide retrospective data, rather than "real time" data on measures of interest. Because of the cost of special studies, they are performed infrequently, so you will be able to observe trends only after several years of data collection. For these reasons, special studies must be carefully designed so that each will yield as much data as possible on multiple measures. For example, a patient survey will provide data on many aspects of care. However, you might conduct the survey only once every year or two.

Interpret Your Results

Data Analysis
When analyzing data keep in mind:

- **Causal direction:** Guideline implementation can lead to either increases or decreases in rates of referrals, prescription, etc. For example, an expected decline in referral rates due to better primary care management of a disease may actually increase referrals because of better diagnostics. An increase or a decrease in a measure should not be considered either good or bad until you have thoroughly considered alternative interpretations.
- **Subjectivity:** Raw numbers of procedures, prescriptions, referrals, etc. will not determine whether these were "appropriate" courses of action. Such determinations will require the judgment of experienced clinicians.
- **Missing data:** Data collection should be complete and accurate. Missing data can lead to erroneous conclusions.

Data Reporting
Three principles apply to all methods of data display: To report findings, use simple graphics, brief summaries, and specific recommendations.

Display only the most important information.
- Keep each table or graphic simple.
- Report formats should reflect users' needs.

Reports for Leadership
Monitoring reports prepared for the facility leadership should follow the same principles used for other management reports—a succinct presentation that summarizes the key findings, highlights the implications of those findings, and discusses recommendations for action. Additional detail can be provided upon request. Data display issues (discussed above) are especially pertinent for management reports. Use of graphics can present comparative information on indicator performance quite effectively, either across Facilities or over time.

Reporting to providers
Reports to providers should emphasize collaboration and educational feedback, and where appropriate, should encourage providers to change practices. In addition, written documents need to protect the confidentiality of individual providers. One approach is to prepare a separate, confidential report for each provider comparing his/her performance to that of all other providers in the clinic or facility. The data should be presented at a level of detail that shows the provider clearly which practices should be changed to improve performance on the monitoring measures.

Appendix

Data Collection Method	Advantages	Disadvantages
Administrative Data		
Encounter data	Low cost; readily available	Inconsistent coding, data not available for many measures
Enrollment data	Provide data on entire patient population	Data not available for many measures of interest; data may not be regularly updated
Special study data:		
Patient management sheet (documentation form)	Guideline-specific data; provider reminder	Incomplete data if forms not completed for all patients
Chart abstraction	Detailed clinical data on appropriateness and outcomes of care	Costly; time intensive
Patient surveys	Capture patient perceptions of guideline implementation and health status	Costly; time intensive; one point in time; uncertainty about patient perceptions

NOMINAL GROUP PROCESS
A Technique to Ensure Full Involvement in Identification of Issues or Options

The purpose of the Nominal Group Process is to provide structure for a group discussion when the group is facing the challenge of reaching agreement on complex topics. In the absence of some form of structure and formal process, the decision-making process is at risk of "spinning wheels" or being dominated by a few individuals who are more vocal than the rest of the group members. The facilitator has an active role in taking the group through the steps in this process, but the facilitator does not participate in the substantive debate on the topics being considered. The group is asked to agree to follow the step-by-step "rules of the road" for the Nominal Group Process, so that all group members will have an opportunity to contribute ideas and agreement can be reached efficiently on the issues at hand. These steps are as follows:

1. Each team member, in turn, makes a suggestion for one of the items of interest (e.g., a barrier to implementation or a possible measure to monitor). The facilitator gives all members a chance to offer suggestions before discussion on any of the proposed items.

2. Then rank the items in order of priority. To do this, the facilitator asks each team member to identify the 3 to 5 items that he/she thinks are most important. Tally the counts of votes as each member reports their candidates.

3. After the ranking is completed, the team members identify items where they disagree and discuss the merits of each item.

4. The team reviews the priority list to assess how acceptable it is to the group and to identify any break-off points where a "cluster" of items clearly is rated more highly than the remaining items. If these results are not acceptable to the team, repeat the ranking process (steps 2 and 3).

 NOTE: An alternative approach is to reverse the order of steps 2 and 3, so that the group discusses the items briefly before ranking them, discarding any that the team agrees are not appropriate. This discussion should be limited in length, serving to identify issues that team members should consider as they do their rankings.

Actions	Month of Work											
	1	2	3	4	5	6	7	8	9	10	11	12
Introduction & Education #IN._____ #IN._____ #IN._____ #IN._____												
Practice Changes #_____ #_____ #_____ #_____ #_____ #_____ #_____ #_____ #_____ #_____												

Key Guideline Element	Metric	Data Source	Monitoring Schedule
Identify serious problems			
Conservative treatment of acute LBP patients			
Evaluate patients who get worse			
Evaluation patients who do not get better			
Manage chronic LBP or sciatica			

Key Guideline Element	Metric	Data Source	Monitoring Schedule

Identify actions for guideline introduction and education.(IN)		Designate someone to serve as lead for the action and other staff to be involved.		Identify the tools and resources for the action.	Specify the action timeline.	
#IN	Action	Lead	Other Staff	Tools and Resources	Start	Complete

Guideline Element	Indicator	Monitoring Method	Average Score
PROCESS OF CARE			
All	Percentage of clinicians who received the low back pain guideline	Routine	6.8
Conservative Treatment	Percentage of LBP patient charts that document patient education	Special Study	6.6
All	Percentage of LBP patient charts that contain a documentation form	Special Study	6.2
Conservative treatment; Patients who do not improve	Average time between first low back pain visit to first record of plain x-rays obtained	Routine	6.1
Conservative treatment; Patients who do not improve	Average time between first low back pain visit to first record of CT scan or MRI obtained	Routine	6.1
CLINICAL OUTCOMES			
Conservative treatment; Patients who do not improve	Percentage of acute low back pain/sciatica patients who progress to chronic, as measured by outpatient visits >6 weeks following initial visit for LBP	Routine	7.8
Conservative treatment; Patients who do not improve	Average number of days to full return to duty status for military personnel with low back pain/sciatica that results in restricted duty status	Special Study	7.5
Conservative treatment; Patients who do not improve	Percentage of military personnel with low back pain/sciatica who return to full duty work within 6 weeks	Special Study	7.2
Conservative treatment; Patients who do not improve	Average improvement in Fear Avoidance Behavior Questionnaire (FABQ) score for acute low back pain/sciatica patients	Special Study	6.8
Treatment of Chronic Low Back Pain or Sciatica	Percentage of lost acute LBP patients with continuing disability >6 weeks after first visit, based on Oswestry score	Special Study	6.7
PATIENT SATISFACTION			
Conservative Treatment	General satisfaction with treatment for acute low back pain/ sciatica	Patient Survey	8.0
Conservative Treatment	Satisfaction with extent of pain alleviation for acute low back pain/sciatica	Patient Survey	7.8

PLANNING WORKSHEET FOR
PRACTICE CHANGE IMPLEMENTATION
Guideline:
Key Guideline Element:

Putting Clinical Practice Guidelines to Work
in VHA

Identify actions for guideline introduction and education.(IN)		Designate someone to serve as lead for the action and other staff to be involved.		Identify the tools and resources for the action.	Specify the action timeline.	
#IN	Action	Lead	Other Staff	Tools and Resources	Start	Complete

Worksheet 2B.PLANNING WORKSHEET FOR PRACTICE CHANGE IMPLEMENTATION
Guideline:

Key Guideline Element:

Putting Clinical Practice Guidelines to Work
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	Identify actions in the strategy for this guideline element.	Designate someone to serve as lead for the action and other staff to be involved.		Identify the tools and resources for the action.	Specify the action timeline.	
#	Action	Lead	Other Staff	Tools and Resources	Start	Complete

Overall Implementation Strategy/Focus: Will focus on ensuring that primary care clinics are using appropriate conservative treatment for acute low back pain patients, and that changes in patients ' functional and pain status are monitored and the results are used to guide care processes. Special attention will be given to the two TMCs that are farthest from the guideline standards.

Key Guideline Element	Gaps in Current Practices (Planning Step 1)	Action Strategy (Planning Step 3)

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Key Guideline Element	Gaps in Current Practices
Identify serious problems	
Conservative treatment of acute LBP patients	
Evaluate patients who get worse	
Evaluation patients who do not get better	
Manage chronic LBP or sciatica	
Other leverage point	

Key Guideline Element	Gaps in Current Practices (Planning Step 1)	Barriers

Highest Priority Indicators Recommended for Special Study Monitoring

Guideline Element	Indicator	Indicator Type	Monitoring Method	Average Score
Identify red flag conditions	***Percentage of new LBP patients who are evaluated appropriately for red flag conditions in the initial visit, including history and focused physical examination***	Process of Care	Special Study	8.5*
Conservative treatment; Patients who do not improve	Average improvement in disability for acute low back pain/sciatica patients, as measured by Oswestry LBP instrument	Clinical Outcome	Special Study	8.3
Conservative Treatment	Level of patient satisfaction with amount of education and instruction provided for LBP care	Patient Satisfaction	Patient Survey	8.2
Treatment of Chronic Sciatica	***Percentage of LBP patients with radicular pain at 6 weeks duration, and a positive imaging study, who are referred to a surgical specialist***	Process of Care	Special Study	Not scored

NOTE: indicators established by the DoD/VA Working Group are highlighted.

*   This score was given to an indicator for performance of a neurological examination at the initial visit for low back pain patients, which was replaced with the more comprehensive metric presented here.

Other Priority Indicators Recommended for Routine Monitoring

Guideline Element	Indicator	Indicator Type	Monitoring Method	Average Score
Conservative Treatment; Patients who do not improve	Percentage of acute LBP patients who are referred for physical therapy or manipulation	Process of Care	Routine	7.1
Conservative Treatment; Patients who do not improve	Average time from initial LBP visit until referral for physical therapy or manipulation for those who are referred	Process of Care	Routine	7.1
Conservative Treatment; Patients who get worse	Percentage of acute LBP patients for whom plain x-rays are obtained	Process of Care	Routine	7.0
Conservative Treatment; Patients who get worse	Percentage of acute LBP patients for whom CT scan or MRI are obtained	Process of Care	Routine	6.8

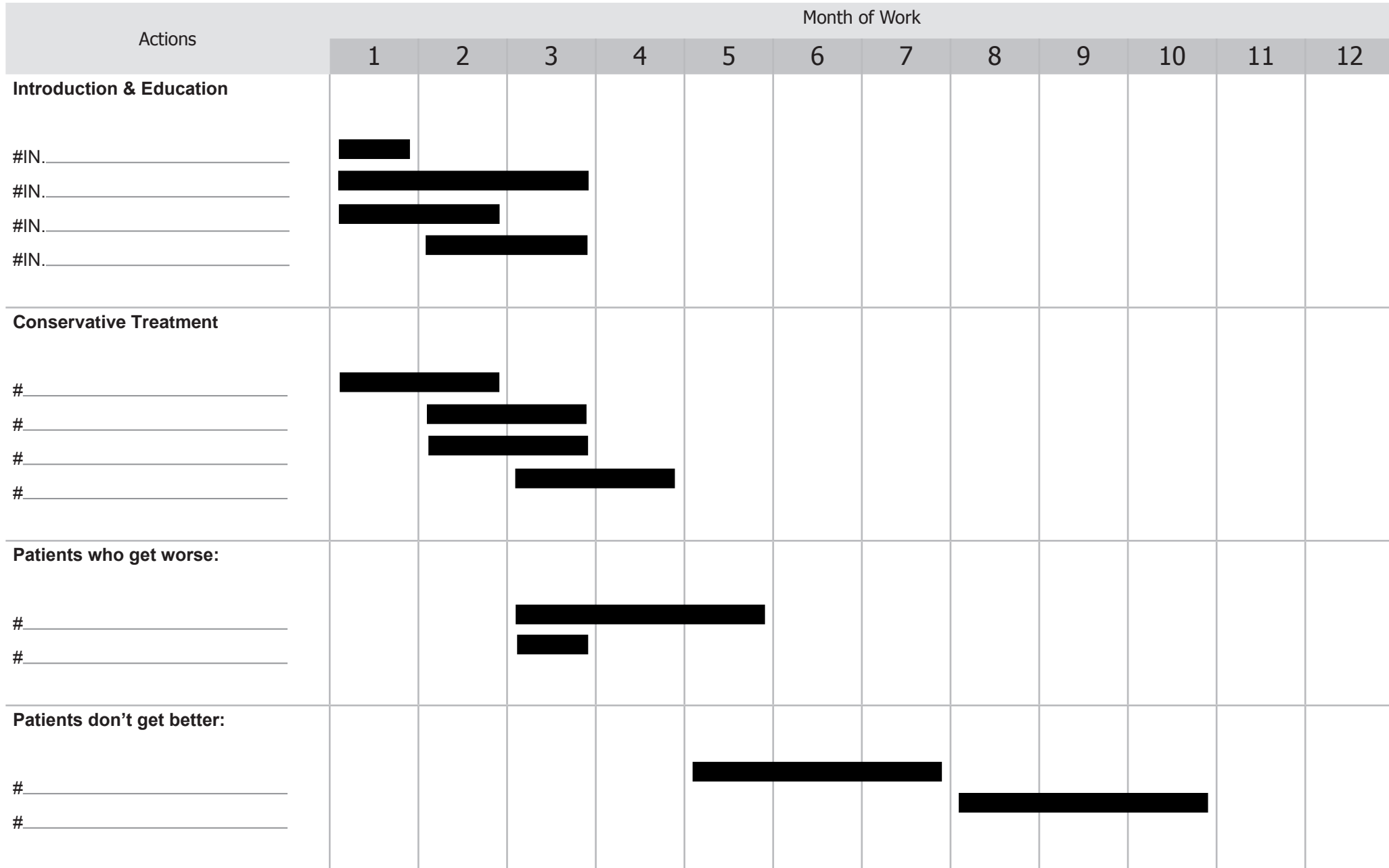| Key Guideline Element	Gaps in Current Practices (Planning Step 1)	Barriers to Implementation	Action Strategy (Planning Step 3)

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GANTT CHART OF TIMELINE FOR GUIDELINE IMPLEMENTATION
Guideline:

Actions	Month of Work											
	1	2	3	4	5	6	7	8	9	10	11	12

Introduction & Education

#IN._____

#IN._____

#IN._____

#IN._____

Conservative Treatment

#_____

#_____

#_____

#_____

Patients who get worse:

#_____

#_____

Patients don't get better:

#_____

#_____

Worksheet 2B. PLANNING WORKSHEET FOR
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Guideline:

Key Guideline Element:

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#IN	Action	Lead	Other Staff	Tools and Resources	Start	Complete