

INDIAN HEALTH DIABETES BEST PRACTICE

Pharmaceutical Care

Revised April 2011

Note! Please review the Best Practice Addendum, which provides the most current information on the Required Key Measures along with examples of ways to obtain the measures. The Best Practice Addendum can be found here: http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Tools/BestPractices/BP_2011_Table_RKM_508c.pdf

Indian Health Service
Division of Diabetes Treatment and Prevention
5300 Homestead Road NE
Albuquerque, New Mexico 87110
<http://www.ihs.gov/MedicalPrograms/Diabetes/>



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Instructions for Using This Best Practice

The Best Practices are organized into topics on how to plan for and successfully implement a Best Practice in your community.

- **Part 1** provides background information on planning for your program and evaluation, Key Recommendations, and Key Measures.
- **Part 2** provides details on implementation of the Key Recommendations.
- **Part 3** includes appendices, tools, and resources.
- **Part 4** provides a list of references.

As you prepare to select, implement, and evaluate a Best Practice, consider these planning guidelines:

- Meet with your diabetes team to discuss which Best Practice(s) is best suited for your situation and resources.
- Use data from your *Diabetes Care Outcomes and Audit* and/or from a community needs assessment to guide your selection of the Best Practice(s).
- Determine your program goal(s) as a team. For example, your team may decide to work toward increasing the number of people who receive eye exams.
- Print out at least Part 1 of the Best Practice(s) your team feels is most appropriate to implement.
- Work with your diabetes team to review and discuss the Best Practice(s). You may choose to read it together as a team.
- Choose at least one Best Practice after carefully considering your goals and resources (funding, staff, and time).
- **Review the entire Best Practice(s) you have selected with your diabetes team:**
 - Confirm that you have selected a Best Practice(s) appropriate for your community needs and resources and that you are confident that your team can successfully implement, evaluate (measure), and document progress and outcomes.
 - Target the population your team wants to improve outcomes for with the Best Practice(s). Remember, you probably do not have resources to do everything for everyone.
 - Carefully consider the Key Recommendations. The recommendations are based on evidence and have been proven to be effective. You may already be doing some of the recommendations and can easily fit these into your plan, or you may want to consider some new recommendations to enhance and strengthen your program. Identify those your team can implement.
 - Carefully review the Key Measures. Choose those that best fit with your goals and the Key Recommendations you have chosen to implement.
 - If one Best Practice does not fit, then review another Best Practice until you find one that fits.

Throughout the document you will find links that draw your attention to important items within the Best Practice pdf. Here is a list of the items:

- **Action!** Indicates a **link**. Please use the link to access more detailed descriptions.
- **Note!** Indicates an **important** item. Pay special attention to this **important** item.

Summary of Key Recommendations and Key Measures

Key Recommendations for Pharmaceutical Care Best Practice. These are evidence-based actions that will lead to improved outcomes in the community.

Action! See [Part 2](#) for details on the implementation of each key recommendation.

1. Engage patients in making informed health decisions through:
 - culturally appropriate patient education, goal setting, and medication counseling
 - review and evaluation of the patient's medication profile to assure appropriateness of medication therapy
2. Make a plan collaboratively with patients to achieve diabetes standards of care.
3. Address cultural aspects of patients' health care and use of alternative medicine.
4. Participate as a member of the diabetes quality performance team.
5. Provide expertise in medication procurement and formulary processes.

Key Measures for Pharmaceutical Care Best Practice. These are specific measures that can be used to document changes in outcomes related to implementing the Best Practice.

Note! All SDPI grant programs that choose this Best Practice must report **as required in the terms and conditions attached to the notice of award on the **indicated*** Measures. Programs may report on other measures as well.**

1. *Percent of diabetes patients with documented review of the medication profile by a pharmacist in the past twelve months.
2. *Percent of diabetes patients with documented medication education by a pharmacist in the past twelve months.
3. Percent of patients with documented diabetes self-management care services by a pharmacist in the past twelve months.
4. Percent of patients with documented intervention by a pharmacist who achieved target A1C in the past twelve months.

Part 1 Essential Elements of Implementing this Best Practice

Purpose and Target Population

This Best Practice provides guidance for programs that seek to improve an individual's health status and enhance the delivery of effective pharmaceutical care. It describes guidelines and clinical resources to optimize pharmaceutical care services for individuals with type 2 diabetes.

Action! See [Part 3 – Appendix A](#). Supplemental Information for discussion of the Importance of Pharmaceutical Care.

Intended Users of this Best Practice

- Pharmacists,
- Primary health care teams, and
- Leaders of health care organizations.

Action! See [Part 3 – Appendix A](#). Supplemental Information for discussion of the benefits and risks of implementing this Best Practice.

Definition of Pharmaceutical Care

Pharmaceutical Care is a patient-centered, outcomes oriented pharmacy practice that requires the pharmacist to work in concert with the patient and the patient's other health care providers to promote health, to prevent disease, and to assess, monitor, initiate, and modify medication use to assure that drug therapy regimens are safe and effective. (APHA Definition)

Goal of This Best Practice

The overall goal of this Best Practice is to optimize pharmaceutical care services for patients with type 2 diabetes. The goal of Pharmaceutical Care is to optimize the patient's health-related quality of life, and achieve positive clinical outcomes, within realistic economic expenditures.

Action! See [Part 3 – Appendix A](#). Supplemental Information for more information on the Goal of Pharmaceutical Care.

Key Recommendations

These are evidence-based actions that can lead to improved outcomes for persons with type 1 or type 2 diabetes.

These are evidence-based actions that will lead to improved outcomes in the community.

1. Engage patients in making informed health decisions through:
 - culturally appropriate patient education, goal setting, and medication counseling
 - review and evaluation of the patient's medication profile to assure appropriateness of medication therapy
2. Make a plan collaboratively with patients to achieve diabetes standards of care.
3. Address cultural aspects of a patients' health care and the use of alternative medicine.
4. Participate as a member of the diabetes quality performance team.
5. Provide expertise in medication procurement and formulary processes.

Action! See [Part 2](#) for details on the implementation of each key recommendation.

Planning For Your Program and Evaluation

Key Action Steps include:

1. **Identify your program's goal(s).** There are many program goals consistent with the Key Recommendations of this practice. Examples of Program Goals include:

- Increase the number of people who receive medication education/counseling.
- Increase the number of people who have a review of their medication appropriateness.

2. **Define program objectives** that will be met to reach the program goal(s) in the **SMART format** (specific, measurable, action-oriented, realistic, and time-bound).

Examples of SMART objectives for this Best Practice:

- Increase the percent of people with documented medication education/counseling in the past twelve months from 30% to 35% by the end of the fiscal year.
- Increase the percent of people whose medical records were reviewed for medication appropriateness in the past twelve months from 85% to 90% by the end of the fiscal year.

3. **Use Key Measures.** The following Key Measures can be used to monitor progress and the effectiveness of implementing this Best Practice. Results of measures will indicate the degree of success in implementing the **Key Recommendations** and meeting program goals.

Measures of progress need to occur before the intervention (baseline) and at designated times thereafter. Measurement needs to be frequent enough to provide meaningful information for planning and evaluation.

Key Measures

These are specific measures that can be used to document changes in outcomes related to implementing the Best Practice.

Note! All SDPI grant programs that choose this Best Practice must report **as required in the terms and conditions attached to the notice of award on the indicated*** Measures. Programs can report on other measures as well.

1. *Percent of diabetes patients with documented review of the medication profile by a pharmacist in the past twelve months.
2. *Percent of diabetes patients with documented medication education by a pharmacist in the past twelve months.
3. Percent of patients with documented diabetes self-management care services by a pharmacist in the past twelve months.
4. Percent of patients with documented intervention by a pharmacist who achieved target A1C in the past twelve months.

4. Collect, record, and analyze data on an ongoing basis; share with the team and the organization leadership.

5. Use creative ways to display data and measure outcomes, such as graphs or charts. This helps the team understand the data and know whether there are improvements.

6. Think about what the data are telling you. What changes are you seeing? Are they improvements? Use data for planning next steps.

Action! See the following resources to help your program improve.

See **Part 3 – Appendix B. Key Measures Example** to assist you with identifying ways to choose Key Measures that incorporate your community data.

See **Part 3 – Appendix C. Improving Pharmaceutical Care Programs Example** to assist you with applying Key Recommendations and Key Measures to a program plan.

Action! See **online training** and a **workbook** to get more ideas about setting goals and objectives and developing a program plan. Available from: (see pages 23-28.)
<http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Training/WebBased/Basics/Creating/Workbook.pdf>

Team Notes:

Part 2 Key Recommendations

Note! Part 2 provides **important** detail on the “why?” and “how?” of implementation of each Key Recommendation.

Key Recommendation 1.

Engage patients in making informed health decisions through:

- **culturally appropriate patient education, goal setting, and medication counseling**
- **review and evaluation of the patient's medication profile to assure appropriateness of medication therapy**

Why?

An engaged patient is more involved in their health care decisions, more likely to set and achieve health care related goals, participate in their treatment plan, and take medications more consistently. "The success of any chronic disease management plan relies on an informed and involved patient working with a well prepared, proactive team." (Journal of the American Pharmacist Association, 2009)

Why ensure culturally appropriate patient education?

Patients should receive intervention content that is appropriate to their health literacy level, as well as culturally relevant, and contains values pertinent to the individual and community.

Providing culturally appropriate materials resulted in participants positively responding to session design and high retention rates: 81% for group sessions and 91% for one-on-one sessions. (Griffin, 1998)

Providing culturally appropriate materials has the potential to substantially reduce microvascular complications, mortality, and health care utilization and costs if the change is sustained over time. (Gilliland, 2002)

Why have a pharmacist involved?

Patients who receive culturally relevant diabetes education, medication counseling, and instruction on diet, exercise, and home blood glucose monitoring by a pharmacist in an integrated primary care setting have demonstrated:

- improved blood glucose control (Irons, 2002; Coast-Senior, 1998; Jaber, 1996)
-
- reduction in A1C levels by an average of 1.9% over six months (Rothman, 2003)
-
- greater adherence to prescribed therapy (Baran, 1999; Gerber, 1998)

Patients who received diabetes self-management care services from community-based pharmacists via scheduled consultations:

- reduced average total health care costs per patient per year by \$1,079 (7.2%) compared with projected costs
- experienced statistically significant improvements for key clinical measures, including a mean A1C decrease from 7.5% to 7.1% (P = 0.002)

- between the initial visit and the end of the evaluation period, influenza vaccination rates increased from 32% to 65%, eye examination rates increased from 57% to 81%, and foot examination rates increased from 34% to 74% (Journal of the American Pharmacist Association, 2009)

Pharmacist interventions on patients with diabetes have consistently demonstrated improvements in A1C levels.

When a meta-analysis of 36 articles reviewed pharmacist involvement in patient care, A1C levels were reduced by an average of 0.62%. (Annals of Pharmacotherapy, 2007)

How to Implement the Key Recommendation

How do we engage the patient?

Establish an interaction template that involves both verbal and written information to ensure decision support.

How do we ensure culturally appropriate patient education?

- Ensure awareness of materials that are currently available
- Work with people at the local site to determine needs of community
- Identify what is most culturally appropriate for the target audience

How do we review and evaluate the patient's medication profile and provide medication counseling?

- Ensuring that patients' medication profiles are complete and accurate, and that patients are well informed of how to use their medications appropriately will help to ensure that the patients are engaged in their treatment plans.
- The pharmacist should perform a complete medication profile review for every patient.

Action! See [Part 3 – Appendix E](#) for elements of a complete medication profile review.

- Documentation of a medication profile review using medication reconciliation is an important part of engaging the patient while assuring patient care and safety. As defined by the Joint Commission, medication reconciliation is "the process of comparing a patient's medication orders to all of the medications that the patient has been taking. This reconciliation is done to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions. It should be done at every transition of care in which new medications are ordered or existing orders are rewritten. Transitions in care include changes in setting, service, practitioner or level of care.

D. The medication reconciliation process comprises five steps:

1. Develop a list of current medications.
2. Develop a list of medications to be prescribed.
3. Compare the medications on the two lists.
4. Make clinical decisions based on the comparison.
5. Communicate the new list to appropriate caregivers and to the patient.
6. There are two parts to addressing medication reconciliation:
 - Clinician/pharmacist reviews medication profile with the patient to assure it is correct and up-to-date.
 - Discontinue all non-active medications. Renew all expired medications.
 - o If the patient already has these medications, the pharmacist places them on hold.
 - Prescribe new medications not on the medication profile including over-the-counter (OTC), herbal, and traditional medications.
 - o All prescriptions will contain the indication for prescribing to address health literacy.

2. Patients will receive a copy of their medication profile using the Patient Wellness Handout or other printed report.

- The medication profile will contain medications with the status of active, hold, or returned to stock.
 - o Medications that are expired and not current therapy and discontinued should not appear on the profile.
 - o Consider printing a copy of the Patient Wellness Handout for the patient containing their medication profile.
- The medication profile is to be reviewed with the patient.
- Document the medication reconciliation process using the patient education code: M-MR.

F. Establish a counseling protocol that allows pharmacists to provide patients with information both in verbal and written form. The information provided should focus on effective medication use and home self-management problem solving. This is accomplished through the following actions:

- Implement the IHS model of patient counseling. Use open-ended questions to assess patient knowledge. Provide information on deficient areas and review important points. (McDonough, 2006)
- Education and training should include assessment, goal setting, planning, implementation, and evaluation.
- All patients with diabetes should have access to diabetes self-management education and training.
- Document education using IHS Standards of Practice and document patient goal setting at each patient encounter.

G. Provide opportunities for active patient participation in health care decisions such as type of treatment, medication, exercise, and dietary considerations and document self-management and goal-setting activities in the patient's medical record.

Team Notes:

Key Recommendation 2. Make a plan collaboratively with patients to achieve diabetes standards of care.

Why?

Attainment of the diabetes standards of care significantly improves when clinicians interact collaboratively with patients in developing a plan of care that considers the clinician's expertise, and the concerns and priorities of the patient. The collaborative role operates to support patients in understanding what to expect from their health care and what is expected of them. Through this understanding, patients gain the skills and knowledge to manage their health condition, reduce risks, and achieve the diabetes standards of care.

Evidence of improvements in outcomes gained by aggressive treatment of diabetic patients and comorbidities has encouraged goal setting and targets for risk factor control. The recommendations included in the diabetes standards of care include screening, diagnostic, and therapeutic actions that are known to favorably affect health outcomes of patients with diabetes. Patients with a better understanding of their therapy including medications are more likely to actively participate in the treatment plan, be able to identify problem areas in their diabetes management, and manage these areas to achieve therapeutic goals.

How to Implement the Key Recommendation

A. Establish a system that allows pharmacists to be aware of applicable diabetes standards of care for patients. Pharmacists can provide patients with information both in verbal and written form about the diabetes standards of care focusing on supporting behaviors that promote effective self-management to achieve optimal management of their diabetes. This is accomplished through the following actions:

- Implement the IHS model of patient counseling. Use open-ended questions to assess patient knowledge. Provide information on the diabetes standards of care and review important points. (McDonough, 2006)
- Provide medication lists such as the Patient Wellness Handout at every pharmacy visit. (Good, 2002; Austin, 2006)

Team Notes:

Key Recommendation 3. Address cultural aspects of patients' health care and the use of alternative medicine.

Ask patients about the use of complementary and alternative medicine. Complementary and alternative medicine (CAM) is a very expansive term, describing everything from herbal supplements to acupuncture to spiritual healing. For the purposes of this Pharmaceutical Care Best Practice, herbal, and dietary supplements are of interest.

Why?

People with diabetes have been shown to be 1.6 times more likely than people without diabetes to use complementary and alternative medicine. Less than 40% of patients inform their providers they are using alternative therapy (Shane-McWhorter, 2007).

There are two major concerns regarding the use of herbal and dietary supplements:

- drug-to-drug, drug-to-food, and drug-to-disease interactions and adverse side effects, and
- variability, contamination, and misidentification of supplements.

How to Implement the Key Recommendation

A. Ask all patients if they are using any herbal or dietary supplements.

B. If a patient is having unexplained side effects, pay particular attention to the possibility that CAM may play a role.

C. If a patient is using complimentary or alternative medicine (CAM) investigate the scientific data behind its use and the potential harm and benefits. Helpful resources include:

- ADA-published book by Shane-McWhorter (2007)
- Facts and Comparisons: Review of Natural Products
- online resources of Micromedex.com

D. Consider other cultural practices that may affect the patient's treatment plan, as appropriate.

Team Notes:

Key Recommendation 4. Participate as a member of the diabetes quality performance team.

Why?

The care of diabetes is challenging. Management is complex, and patients often present with other diagnoses or health concerns, including obesity, smoking, hypertension, and hyperlipidemia. The Centers for Disease Control and Prevention (CDC) has stated that the diabetes community has three challenges in response to the growing health burden: prevent diabetes, cure diabetes, and improve the quality of care of people with diabetes to avoid devastating complications.

http://www.qualityprofiles.org/leadership_series/diabetes/diabetes_current_state.asp#

Improving quality in diabetes care should be a priority because of prevalence, complications, costs, and health care disparities in addition to the fact that diabetes interventions work and there is a good potential for return on your investment in diabetes care. Pharmacists have expert knowledge on medication management and procurement that can be used to create, evaluate, and refine the quality improvement process.

How to Implement the Key Recommendation

A. Identify who is involved with quality improvement at your facility (i.e., quality improvement specialist, diabetes quality improvement teams).

B. Understand the process and outcome measures used for tracking the quality of diabetes care.

- Be familiar with the data elements used in quality measures and documentation practices
- Compare data with national benchmarks and identify gaps in data then set goals to improve diabetes care
- Identify tools and resources to build a quality improvement program. (RPMS, EHR, iCare, GPRA GUI, Meaningful Use)
- Maintain medication-related taxonomies used for quality reporting, such as the diabetes audit or CRS, and assist in providing solutions on ways to improve or maintain optimal patient care practices.

C. Utilize activities currently underway.

D. Create an inventory of your quality improvement actions and resources.

E. Develop a strategy for diabetes quality improvement.

F. Develop a preliminary "Plan" as part of the "Plan-Do-Study-Act" (PDSA) model of the cycle of quality improvement. The full quality improvement team must be part of the creation of the plan to ensure its relevance, completeness, and success for obtaining support from Promoting Quality Improvement

G. Identify what a pharmacist can uniquely contribute to promote quality improvement in health care and where help is needed, including:

- Provide leadership and vision
- Form partnerships and collaborations
- Assist in planning and goal setting
- Initiate measurement and reporting
- Include evaluation and accountability
- Enhance infrastructure

Team Notes:

Key Recommendation 5. Participate in Pharmacy and Therapeutics committees and procurement processes to assure availability of essential medication options.

Why?

Pharmacists are responsible for ensuring that drug availability, distribution, and control are safe, appropriate, and meet the needs of patient care (IHS Pharmacy Standards of Practice).

The Pharmacy and Therapeutics committee ensures the availability of medications that are safe, efficacious, and cost effective to patients and the communities they serve. Pharmacists can positively impact Pharmacy and Therapeutics committee decisions by providing expert knowledge on the pharmacodynamic, pharmacokinetic, and pharmacoeconomic impact of medications in balancing individual patient needs and public health resources.

Pharmacists can assist other clinicians in managing the formulary to ensure parity while providing an established process of checks and balances in obtaining medications for specific patient needs. Formulary management helps to improve portability and access to medications for patients who are accessing care services across the Indian Health System and helps to reduce the risk of medication errors.

Procurement and inventory management by pharmacists provides control, accountability, and ensures security of medications. It will enable pharmacy programs to comply with various forms of policy, legislation, and compliance such as those established by the Joint Commission, Office of the Inspector General (OIG), and others to promote medication safety and improve patient access to necessary treatments.

How to Implement the Key Recommendation

A. Participate in the Pharmacy and Therapeutics committee formulary processes.

- Actively participate in making medication selections by aligning local needs with the recommendations of the IHS National Core Formulary.

Action! <http://www.ihs.gov/MedicalPrograms/NPTC>

- Develop drug or drug class utilization reviews and monographs.

B. Serve as part of the diabetes team to assist in formulary management and evaluate medications for safety, cost, and need.

- Utilize health information technology to clearly identify formulary medications (such as Quick Orders or Formulary Alternatives).
- Communicate with other clinicians about formulary management and appropriate processes for requesting non-formulary medications.
- Monitor high risk, high cost, and high volume medications for appropriateness, safety, and effectiveness.

C. Assure that the pharmacy meets local, national, and other policies surrounding medication procurement and inventory management.

- Understand local, national, and other policies surrounding medication procurement and inventory management.
- Understand the requirements for the use and distribution of medications and appropriate documentation and record keeping requirements.
- Become familiar with procurement software and inventory management reports such as the AMIS report, Controlled Substance Management report, and others.

Team Notes:

Part 3 Appendices, Tools, and Resources

Appendix A. Supplemental Information.

1. Importance of Pharmaceutical Care

Pharmaceutical care is associated with many positive diabetes-related outcomes, including improved clinical measures, improved patient and provider satisfaction, and improved cost management. Consider these facts:

- Pharmacists are among the most accessible health care providers. As a result, they are in a position to provide highly accessible health care services to people with diabetes; to collaborate with physicians and other health professionals; and to initiate, monitor, and maintain treatment efforts.
- Pharmacists have prescriptive authority either directly or indirectly through collaborative practice agreements and can optimize medications to improve outcomes while minimizing the risks of therapy. In 1996, the Indian Health Service (IHS) expanded the scope of pharmacy practice to include prescriptive authority by recognizing IHS pharmacists as primary care providers.
- Medication therapy management services are a component of Medicare Part D. This allows pharmacists to bill for and receive reimbursement for certain services from the Centers for Medicare and Medicaid Services (CMS), and other third-party payers.

2. Goal of Pharmaceutical Care

The goal of Pharmaceutical Care is to optimize the patient's health-related quality of life, and achieve positive clinical outcomes, within realistic economic expenditures. To achieve this goal, the following must be accomplished:

1. A professional relationship must be established and maintained.
2. Patient-specific medical information must be collected, organized, recorded, and maintained.
3. Patient-specific medical information must be evaluated and a drug therapy plan developed mutually with the patient.
4. The pharmacist must assure that the patient has all supplies, information, and knowledge necessary to carry out the drug therapy regimen.
5. The pharmacist must review, monitor, and modify the therapeutic plan as necessary and appropriate, in concert with the patient and health care team.

[From *A PRACTICAL GUIDE TO PHARMACEUTICAL CARE: A Clinical Skills Primer*]

3. Benefits and Risks of Implementing this Best Practice

There are many positive impacts and health benefits to implementing this Best Practice, including:

- Pharmacist-based diabetes programs that are integrated into primary care practice reduced A1C levels by an average of 1.9% over six months. (Rothman, 2003)
- Patients experience greater satisfaction with their care when pharmacists participate in diabetes care by providing education, coordinating care, adjusting medications, and providing directive guidance behaviors. (Singhal, 2002; Garrett, 2003; Cranor, 2003)
- Physician-supervised, pharmacist-managed primary care clinics demonstrated improved patient ability to achieve an A1C level of 7% or below as well as a reduction in the frequency of unscheduled clinic visits. (Irons, 2002)
- Pharmacy care has been associated with decreased direct medical costs of \$1,200 per patient per year, and an estimated annual increase in productivity of \$18,000 due to reduced sick time. (Garrett, 2003; Cranor, 2003)

There are no potential harms of implementing this Best Practice.

4. Health Questions Addressed by Best Practice

This Pharmaceutical Care Best Practice seeks to answer the following questions:

- Why is it important to engage the patient in making informed health decisions?
- Why is it important to review the patient's medication profile?
- How can pharmacists provide services to help patients address the Diabetes Standards of Care?
- Why is organizational expertise in medication procurement and the formulary process important?
- How can a pharmacist improve diabetes quality of care?

5. Sustaining a Pharmaceutical Care Program

It is common for new initiatives to require a certain level of maturity before care goals can be achieved. This maturational process may require more than a few years to produce the desired outcomes in a stable and self-sustaining fashion. Sustainability is a critical issue for programmatic success, and can be an elusive target.

In an IHS pharmacy survey, four key issues were identified as necessary to improve the pharmacists' ability to provide clinical services (IHS).

The four key issues were:

- Support from all stakeholders, including health care workers, administration, insurance companies, Tribal health boards, the community, and legislative bodies. Stakeholders must recognize and promote the role of the pharmacist as a clinician and be aware of the pharmacist's responsibilities when participating in collaborative practices.
- Training for both pharmacists and pharmacy technicians is required to enable the expansion of pharmacy roles. Pharmacy technicians should receive increased responsibility and assume some of the tasks shared currently by the pharmacist such as prescription preparation, maintenance of automation, and procurement.
- Standardization of clinical programs is beneficial for a number of reasons. First, it demonstrates successful implementation and provides a guideline for other sites. Second, national collection of well-defined outcomes measures for services can be used to evaluate pharmacist impact. Finally, standardization of credentials, such as the National Clinical Pharmacy Specialist (NCPS) credential, can enable advanced pharmacy practices to receive broader recognition and acceptance.
- Reimbursement from third party payers for pharmacy services is essential for maintaining and sustaining these programs for the future. Because current legislation will provide recognition of the pharmacist by the Centers for Medicare and Medicaid Services (CMS), it is essential for the IHS to adopt a billing policy that enables pharmacists to achieve reimbursement for services rendered. Pharmacists are encouraged to provide expanded services and must receive the support required to continue to do so. In addition, pharmacists have the opportunity to bill for and receive reimbursement for diabetes education as a certified diabetes educator if they work at a diabetes education site recognized by the American Diabetes Association (ADA) or the American Association of Diabetes Educators (AADE).

Appendix B. Key Measures Example

Remember—this is an example! Apply this process to your community using your data.

Diabetes patients are not always achieving standards of care for diabetes. Our health care center and community are concerned about the low percent of patients achieving target A1C and blood pressure goals.

Diabetes team takes action. Our diabetes team talked about addressing this problem and whether the pharmacy department could be more involved. We read the [Pharmaceutical Care Best Practice](#) and talked about the Key Recommendations.

Identified sources of data. Local data included:

- Audit data
- RPMS
- Review of medical records:
 - o 50% of patients with diabetes had an A1C less than 7%; percent of these patients with a pharmacist intervention was unclear.
 - o 20% of patients with diabetes had documented medication-related education by a pharmacist.
 - o There was no documented review of patient's medication profiles.

Selected suitable Best Practice. After thinking carefully about our goals and resources, and reviewing data, we decided the Pharmaceutical Care Best Practice was a good fit for us. We chose to work on two of the Key Recommendations: engaging the patient in making informed health decisions (through patient education/medication counseling, and review and evaluation of the patient's medication profile to assure appropriateness of medication therapy), and assisting patients in identifying and obtaining diabetes standards of care.

Identified Target Population. We decided to start implementing this Best Practice by applying the key recommendations to the current patients listed in our diabetes registry.

Identified Program goals:

- To increase the number of people who have their medication profiles reviewed
- To increase the number of people who receive medication education by a pharmacist
- To increase the number of people who achieve A1C target goals
- To improve delivery of diabetes services through the development of a pharmaceutical care component.

Identified SMART objectives based on our resources and data:

- To increase the percent of patients with diabetes with a documented review of their medication profile in the past twelve months from 0% to 50% by the end of the fiscal year.

- To increase the percent of patients with diabetes with documented medication education by a pharmacist in the past twelve months from 20% to 50% by the end of the fiscal year.
- To increase the percent of patients with diabetes with documented self-management care services by a pharmacist from 0% to 20% by the end of the fiscal year.
- To increase the percent of patients with diabetes with a documented intervention by a pharmacist who achieved target A1C in the past twelve months from 0% to 50% by the end of the fiscal year.

Selected Key Measures. We chose the corresponding Key Measures for these Objectives and Key Recommendations. Data will be collected and reviewed at baseline and mid-year.

Table 1. Selected Key Measures

A. Measure	B. Baseline or beginning value and date (collected prior to starting activities)	C. Most recent value and date (if applicable)	D. Data source (where did these numbers come from)
1.* Percent of patients with documented review of their medication profile by a pharmacist	0% as of 1/2/2011	20% as of 6/2/2011	RPMS
2.* Percent of patients with documented medication education by a pharmacist	20% as of 1/2/2011	30% as of 6/2/2011	RPMS
3. Percent of patients with documented diabetes self-management care services by a pharmacist	0% as of 1/2/2011	15% as if 6/2/2011	RPMS
4. Percent of patients with intervention by a pharmacist who achieve target A1C goal	0% as of 1/2/2011	20% as of 6/2/2011	RPMS

* Required Key Measure

Appendix C. Improving Pharmaceutical Care Programs Example

Remember—this is an example! Ask these questions in your community, thinking about your local needs, resources, and tracking systems.

There are four fundamental questions to ask as you plan and implement your Best Practice. These questions (and sample answers) are:

1. Who is your target population?

- patients with type 2 diabetes

2. What are you trying to accomplish?

- to build a foundation for pharmaceutical care in the organization
- to build a foundation for pharmaceutical care across the region or IHS, Tribal, or urban (I/T/U) system to ease continuity of care with mobile patients, and
- to boost pharmacy and primary care provider competencies in offering patient-centered health care

3. How will you know if what you do makes things better?

- if there is improvement (efficiency or reliability) in a process, and
- by surveying the patients and staff

4. What can we do to make things better?

- Provide ongoing education to staff members.
- Develop a routine and regular method of providing feedback to staff and to the organization's management.
- Develop “champions” who will become interested and dedicated to ongoing improvement of systems of care.
- Enlist the aid of consultants who can provide expertise in pharmaceutical care and health delivery systems.

Appendix D. Descriptions and Examples of Pharmaceutical Care Best Practice Program

1. Basic Pharmaceutical Care Programs

Community Resources and Policies

- Identify alternative resources for medication procurement (e.g., patient assistance programs through pharmaceutical companies) when possible or indicated.
- Communicate with community resources that may be able to assist patients.

Organization Leadership

- Maintain a supportive culture for quality improvement and expansion of pharmacy programs.

Patient Self-management Support

- Have adequate and competent staff provide education, counseling, and medical and self-management support in private consultation areas that can accommodate patient and family members.

Delivery System Design: Services, Programs, Systems, and Procedures

- Establish a diabetes team that meets on a regular basis with a clearly defined role of the pharmacist as a member of the diabetes team.

Decision Support: Information and Training for Providers

- Train providers on the optimal use of drug therapy.

Clinical Information Systems: Collecting and Tracking Information

- Establish and maintain a diabetes registry

2. Intermediate Pharmaceutical Care Programs: Basic program plus the following:

Community Resources and Policies

- Coordinate services with Tribal and IHS programs to develop a network of care services that is accessible to all health care providers, including pharmacists.

Organization Leadership

- Support and develop national billing mechanisms for pharmacists at the national IHS level.
- Recognize and support basic and expanded pharmacy practice by administrators, policymakers, and Tribal organizations.
- Provide appropriate resources.
- Implement appropriate documentation methods to ensure the capture and retrieval of data elements for pharmacist program evaluation.

Patient Self-Management Support

- Maintain consistency among team members regarding education, support, and planning.
- Implement a process to provide patients with information from their medical records.

Delivery System Design: Services, Programs, Systems, and Procedures

- Provide information technology support for automated recommendations to enhance the distributive process and provide pharmacists with the opportunity to engage in expanded roles.

Decision Support: Information and Training for Providers

- Train providers on appropriate documentation.

Clinical Information Systems: Collecting and Tracking Information

- Use reminders to providers.
- Develop and document patient treatment plans, including assessments, education, and follow-up.

3. Comprehensive Pharmaceutical Care Program: Basic and intermediate programs plus the following:

Community Resources and Policies

- Develop and implement community education programs.
- Include national programs and other IHS, Tribal, and urban (I/T/U) health programs in your network of care services.
- Provide patient incentives to encourage participation in community programs.
- Conduct assessments of patient and community satisfaction and needs.
- Provide outreach and training to community members.

Organization Leadership

- Implement a system to monitor and evaluate safe, high quality clinical care, and outcomes.
- Develop specific protocols for collaborative practice agreements.
- Support and develop billing mechanisms for pharmacists at the national IHS level.
- Develop and implement a performance improvement plan to address identified needs.
- Support an integrated program that allows pharmacists to perform medication therapy management services.

Patient Self-Management Support

- Offer training to pharmacists who are interested in providing motivational interviewing.

- Provide education, self-management support, and standardized methods for documentation within the framework of an IHS-certified (or equivalent) curriculum.
- Provide culturally appropriate patient education materials at an appropriate reading level.

Delivery System Design: Services, Programs, Systems, and Procedures

- Adopt approved protocols or algorithms based upon evidence-based medicine.
- Use evidence-based medicine to support pharmacist involvement in medication therapy management services.

Decision Support: Information and Training for Providers

- Train providers to use pharmacist expertise to maximize patient outcomes.

Clinical Information Systems: Collecting and Tracking Information

- Use feedback systems capable of tracking information for outcomes, performance improvement programs, alerts for patient specific standards, and annual diabetes audits.

Examples

Community Resources and Policies

- Provide patients with access to assistance program resources available through pharmaceutical companies.
- Provide patients with information on community resources (e.g., gyms, support groups, tobacco cessation programs, and cooking classes).
- Provide community medication education presentations and pharmacy consultations.
- Network with state tobacco programs.
- Apply for grants to provide additional support to programs.
- Ensure easy access to pharmacy services.

Organization Leadership

- Provide personnel support by appointing clinical billets, incorporating the diabetes Best Practices into position descriptions, and assigning Best Practice recommendations into promotion precepts.
- Provide information on how pharmacists can bill for services.

- Include pharmacist representation on formulary workgroups and support formulary decisions. Provide adequate staffing and support for medication therapy management services.
- Develop and post protocols on the IHS pharmacy and IHS diabetes websites.
- Use diabetes registries that include specified outcome indicators and other clinical reporting systems to evaluate interventions.
- Identify billable clinic visits to ensure the sustainability of programs.

Patient Self-Management Support

- Provide appropriate documentation in patients' medical records.
- Provide opportunities for patients or families to attend group education programs.
- Assess patients for readiness to make lifestyle changes, barriers to change, and acceptance of prescribed therapies.
- Help patients set realistic goals that can be achieved in a step-wise manner and encourage them to meet their goals.

Delivery System Design: Services, Programs, Systems, and Procedures

- Sign approved collaborative agreements.
- Ensure access to assessment tools (e.g., blood pressure cuffs and point of care testing).
- Ensure access to consistent information.

Decision Support: Information and Training for Providers

- Use nationally recognized protocols for disease state management.
- Orient new providers on the hospital formulary, local policy and procedures, and services provided by the pharmacy.
- Develop information handouts for providers and medical handouts for patients.
- Ensure providers have access to online resources (e.g., diabetes prevention clearinghouse).

Clinical Information Systems: Collecting and Tracking Information

- Use the Resource and Patient Management System (RPMS) case management system, Diabetes Management System (DMS), and health maintenance reminders.
- Participate in the annual IHS *Diabetes Care and Outcomes Audit*.
- Generate performance improvement reports.

Appendix E. Elements for Reviewing the Medication Profile

- All medications used with no medical indication are identified
- All medical conditions for which there is not a medication prescribed are identified
- All medications inappropriately prescribed for a particular medical condition are identified
- All missing immunizations are identified
- Everything inappropriate in the current medication therapy regimen (dose, dosage form, schedule, duration, route of administration, method of administration) is identified
- All therapeutic duplications are identified
- All medications in the regimen to which the patient is allergic are identified
- Any presence or potential for adverse drug events is identified
- Any presence or potential for clinically significant drug interactions is identified
- Any interference with medical therapy by social, recreational, nonprescription or nontraditional medication use is identified
- Any instance of the patient not receiving full benefit of prescribed medication therapy is identified (e.g., system failure, clinical failure)
- Any lack of patient (or caregiver) understanding of his/her medication therapy is identified
- Any lack of patient adherence to medication regimen is identified
- If medication-use problems are found, chart documentation is written in time to be useful, and follows the health system's policies and procedures

Tools and Resources

Action! See Part 3 – Appendix D. for descriptions and examples of program components.

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Mazze RS, Strock E, Simonson GD, Bergenstal RM. Prevention, Detection and Treatment of Diabetes in Adults, Quick Guide, 4th Edition. International Diabetes Center. 2007.

National Diabetes Education Program. Diabetes Medications Supplement – Working Together to Manage Diabetes. US DHHS. Rev. 3/07.

Web-based Resources

Indian Health Diabetes Algorithm Cards. These cards were developed to be quick references on the topics: diabetes and glucose control, insulin usage, hyperlipidemia, hypertension, foot care, and chronic kidney disease.

<http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=resourcesDTTtreatmentAlgoritm>

Joslin Diabetes Center & Joslin Clinic. Clinical Guideline for Pharmacological Management of Type 2 Diabetes. 1/9/2009.

<http://www.joslin.org>

Diabetes Audit Category (Taxonomy) Management

IHS Diabetes Audit Information:

<http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=resourcesAudit>

Drug Information and Education

Cochrane Library: <http://www.cochrane.org/>

Epocrates: <http://www.epocrates.com/>

Micromedex: <http://www.micromedex.com/>

National Diabetes Education Program: <http://www.ndep.nih.gov/>

UpToDate: <http://www.uptodateonline.com/online/login.do>

Facts and Comparisons: <http://www.factsandcomparisons.com/>

Medication Procurement and Formulary Process

IHS National Core Formulary:

<http://www.ihs.gov/MedicalPrograms/PharmacyIssues/formulary/index.asp>

Medication Therapy Management Services

Centers for Medicare and Medicaid Services: <http://www.cms.hhs.gov>

Outcomes Pharmaceutical Health Care: <http://www.getoutcomes.com>

American Pharmacists Association:

<http://www.pharmacist.com/AM/Template.cfm?Template=/CM/ContentDisplay.cfm&ContentID=15581>

American College of Clinical Pharmacy: <http://www.accp.com/docs/positions/misc/MTMDefn.pdf>

Patient Education

IHS Patient Education Protocols and Codes:

<http://www.ihs.gov/healthed/index.cfm?module=pepc>

IHS Health Communication: <http://www.ihs.gov/healthcommunications/>

[UpToDate and Micromedex, referenced above, both have good patient handout material.]

Pharmacist Organizations

American College of Clinical Pharmacy: <http://www.accp.com>

American Pharmacists Association: <http://www.pharmacist.com>

American Society of Consultant Pharmacists: <http://www.ascp.com/>

American Society of Health Systems Pharmacists: <http://www.ashp.org>

National Community Pharmacist Association: <http://www.ncpanet.org>

IHS Division of Diabetes Treatment and Prevention [Internet].

- **A workbook (with online training course) on effective program planning and evaluation.** [Updated 2009 April 27; cited 2009 June] Creating Strong Diabetes Programs: Plan a Trip to Success [38 pages with one page sample in appendix]. Available from: <http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Training/WebBased/Basics/CreatingWorkbook.pdf>
- **An online training course on effective program planning and evaluation.** [Updated 2009 July; cited 2009 June] Creating Strong Diabetes Programs: Plan a Trip to Success. Available from: <http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=trainingBasicsCreating>

Examples of Current Best Practice Programs

Acoma-Canoncito-Laguna Service Unit

LCDR Wil Darwin Jr., PharmD, NCPS, CDE

(505) 552-5393

wil.darwinjr@ihs.gov

The pharmacy program at Acoma-Canoncito-Laguna Service Unit provides patient education and disease state management services, including screening for kidney function and cardiovascular disease. The program also adheres to standards of care, including immunizations and laboratory monitoring.

Alaska Native Diabetes Team at the Alaska Native Medical Center

LCDR Judy B Thompson

Alaska Area Diabetes Pharmacist

4315 Diplomacy Dr. Anchorage, AK 99508

907-729-2164

This program uses an integrative team approach to diabetes care. Each patient seen in the diabetes clinic visits with a medical provider, the pharmacists/educator, and the dietician/educator at the point of care. The pharmacist assists with medication reconciliation and reviewing the chart to ensure the patient is meeting all standards of care for patients with diabetes. Medication recommendations are commonly made to reduce cardiovascular disease risk among patients with diabetes. Interventions include disease management services that address high blood pressure, high blood glucose, hyperlipidemia, aspirin use, chronic kidney

disease, and tobacco cessation through pharmacologic therapy and lifestyle modification (e.g., diet, exercise, and stress reduction).

Claremore Indian Hospital

LCDR Ryan Schupbach, PharmD, NCPS, BCPS
(918) 342-6455

ryan.schupbach@ihs.gov

The Claremore Indian Hospital's Cardiovascular Risk Reduction Clinic delivers pharmacy managed patient-centered care. This clinic provides evidence-based and financially responsible cardiovascular risk reduction therapy.

Yakama Nation

Rex Quaempts, MD
Clinical Director, Yakama Healthy Heart Program Director

rex.quaempts@ihs.gov

Robin John, RPh
Cardiovascular Diabetes Clinical Coordinator
(509) 865-2102 ext 299

robin.john@ihs.gov

This program developed a pharmacist-based clinic designed to monitor, modify, and adjust medications for diabetes, high blood pressure, and lipids to help patients meet goals. They also provide community activities such as Dance Away Diabetes classes, track meets, powwows, and conferences.

Whiteriver Indian Hospital

CDR Kristy Klinger
928-338-3612

kristy.klinger@ihs.gov

The Healthy Heart Project utilizes two pharmacists in its multi-disciplinary diabetes case management program. Participants are assigned to a pharmacist/case manager who helps develop the skills and knowledge needed for managing diabetes. Collaborative agreements/guidelines allow the pharmacists to make medication adjustments for diabetes, hypertension, and dyslipidemia. The cornerstone of our program is the continuity and relationship building between case manager and participant.

Additional Contacts

Contacting other people involved in diabetes pharmaceutical care is important because they can help you get started. Your peers at other health care organizations can share their expertise, materials, and ideas, and can also tell you what has worked for them and what has not. This can help you avoid reinventing the wheel.

Area Diabetes Consultants website:

<http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=peopleADC>

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