

Pharmaceutical Care and Diabetes



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Indian Health Service
Division of Diabetes Treatment and Prevention
5300 Homestead Road, NE
Albuquerque, New Mexico 87110
(505) 248-4182

www.ihs.gov/medicalprograms/diabetes

Indian Health Diabetes Best Practice: Pharmaceutical Care and Diabetes

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What is pharmaceutical care?

Pharmaceutical care is the direct, responsible provision of medication-related care for the purpose of achieving definite outcomes that improve a patient's quality of life. It is also the determination of drug needs for a given individual and the provision of not only the required drug, but also the necessary services (before, during, or after treatment) to ensure optimally safe and effective drug therapy.

Why is pharmaceutical care important?

Pharmaceutical care and the expanded role of pharmacists* have been associated with many positive diabetes-related outcomes, including improved clinical measures, improved patient and provider satisfaction, and improved cost management. Consider these facts:

- Pharmacist-based diabetes programs that are integrated into primary care practice reduced A1c levels by an average of 1.9% over six months (Rothman *et al.*, 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 *et al.*, 2002).
- 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 *et al.*, 2002; Garrett and Martin, 2003; Cranor *et al.*, 2003).
- 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 and Martin, 2003; Cranor *et al.*, 2003).

Best practices for pharmaceutical care and diabetes

The best practices for pharmaceutical care and diabetes describe the best methods for providing:

- Patient education and medication counseling.
- Expertise in medication procurement and formulary processes.
- Expertise to ensure appropriate development of diabetes audit categories.
- Medication therapy management services and other expanded services based on the pharmacist's level of expertise.

Table 1 summarizes the best practices for pharmaceutical care and diabetes.

^{*} Pharmacists are among the most accessible health care providers in a community. As a result, they are in a position to provide highly accessible health care services to people with diabetes, collaborate with physicians and other health professionals, identify target patients, and choose, monitor, and maintain treatment efforts. Many states have passed legislation that expands the scope of practice for non-physician providers, including pharmacists (Cooper *et al.*, 1998). 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. Furthermore, medication therapy management services are a new 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 and other third party payers.

Table 1. Best practices for pharmaceutical care and diabetes.

Pharmacist Recommendations	Best Practices
	 Why? Patients who receive diabetes education, medication counseling, and instruction on diet, exercise, and home blood sugar monitoring by a pharmacist in an integrated primary care setting have: Improved blood sugar control (Irons et al., 2002; Coast-Senior et al., 1998; Jaber et al., 1996). One study demonstrated a reduction in A1c levels by an average of 1.9% over six months (Rothman et al., 2003). Greater adherence to prescribed therapy (Baran et al., 1999; Gerber et al., 1998). How? Establish a process in which pharmacists provide and document patient education and medication counseling. This includes: Providing verbal education to enhance the patient's understanding and use of medications as part of their overall treatment plan. For example: Assess the patient's understanding of medication therapy and use of medications as a component of their treatment plan.
	 Provide individualized medication education. Conduct group education classes. Provide training in glucometer use, insulin administration, and pattern management. Using the IHS Patient Education Protocols and Codes (PEP-C) for medication counseling. (The IHS PEP-C are available online at: www.ihs.gov (click on "Nationwide Programs and Initiatives" and select "Patient Education Protocols and Codes" under "Section Highlights").) Documenting patient education, including an accurate assessment of the patient's understanding of the education. (Please refer to the IHS PEP-C for more information on the patient education standards for documenting diabetes medication education.) Providing opportunities for active patient participation in health care decisions.

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Table 1. Best practices for pharmaceutical care and diabetes. (continued)

	Pharmacist Recommendations	Best Practices	
2.	Provide expertise in medication procurement and formulary processes	Why? Pharmacists provide expert knowledge and skills in medication procurement and use of formulary medications. These are essential for optimal pharmacologic care that improves availability and access to medication, ensures continuity of treatment, and reduces the risk of medication errors. Pharmacists play a critical role in making formulary decisions and in critically evaluating medications and medication classes for safety, efficacy, cost, and patient population needs.	
		 How? Pharmacists should: Participate in formulary processes. Actively participate in making medication selections by aligning local needs with the recommendations of the IHS National Core Formulary. Serve as part of the diabetes team to make formulary decisions and evaluate medications for safety, cost, and need. 	
3.	Provide expertise to ensure appropriate development of diabetes audit categories	 Why? Pharmacist involvement is essential to developing and managing medication categories (or taxonomies), which are used to evaluate the diabetes audit and report performance improvement processes. How? Pharmacists should provide a critical role in the appropriate development and management of local medication categories (or taxonomies) for the Diabetes Management System (DMS) and diabetes audit by: Developing complete and accurate medication categories (or taxonomies). Entering the medications prescribed by "outside" providers into the pharmacy database (using the Outside Prescription function). 	

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Table 1. Best practices for pharmaceutical care and diabetes. (continued)

Pharmacist Recommendations	Best Practices		
4. Provide	Why?		
medication therapy management	Primary care practices with pharmacists who have skills and certification in medication therapy management services are associated with:		
services and	 Reduced medication errors and adverse drug reactions. 		
other expanded services based on the pharmacist's level of expertise	 Improved markers of metabolism, including A1c, blood pressure, and lipid levels (Rothman <i>et al.</i>, 2003; Nowak <i>et al.</i>, 2002; Bluml <i>et al.</i>, 2000; Coast-Senior <i>et al.</i>, 1998). 		
level of expertise	 Decreased complications, including amputations, chronic kidney disease, cardiovascular events, retinopathy, neuropathy, and improved satisfaction with pharmacy services (Choe <i>et al.</i>, 2005; Krass <i>et al.</i>, 2005; Irons <i>et al.</i>, 2002; Singhal <i>et al.</i>, 2002; Ried <i>et al.</i>, 1999). 		
	How?		
	Pharmacists should provide a critical role in providing medication therapy management services by:		
	 Performing or obtaining necessary assessments of the patient's health status. For example: 		
	 Monitor labs and vital signs for safety and efficacy of prescribed medications. 		
	 Perform foot checks and foot exams. 		
	 Assess patients for signs of adverse reactions to medications. 		
	 Performing a comprehensive medication review to identify, resolve, and prevent medication-related problems, including adverse drug events. For example: 		
	Conduct chart reviews.		
	 Perform "brown bag" medication reviews and evaluations. 		
	Participate in performance improvement projects.		
	 Establishing a physician-supervised, pharmacy-managed primary care clinic (or collaborative practice): 		
	 Provide medication dosage monitoring and adjustment through face-to-face interventions and telephone follow-up. 		
	 Develop medication algorithms and guidelines. 		
	 Conduct and administer immunization screenings. Prescribe and administer immunizations. 		

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Table 1. Best practices for pharmaceutical care and diabetes. (continued)

Pharmacist Recommendations	Best Practices		
4. Provide medication therapy management services and other expanded services based on the pharmacist's level of expertise (continued)	 Perform medication review and dosing protocols in collaboration with providers. Obtain National Clinical Pharmacy Specialist credentialing.** Formulating a medication treatment plan. For example: Assess patient needs, and provide education, referrals, or access to potentially beneficial services. Provide counseling on nutrition, exercise, and home blood sugar monitoring. Provide directive guidance and social support, including information, encouragement, and feedback on drug therapy. Selecting, initiating, modifying, or administering medication therapy (e.g., adjust medication dose to treat patients to goal). Monitoring and evaluating the patient's response to therapy, including safety and effectiveness. For example: Screen for drug interactions with prescriptions, over-the-counter medications, and herbal supplements. Order and monitor labs and vital signs to ensure the optimal dose of medication necessary to achieve goals while reducing risks or adverse effects. Provide point-of-care (POC) testing to increase patient accessibility to monitoring services. 		

^{**}The IHS National Clinical Pharmacy Specialist (NCPS) Program's goal is to establish a national system for credentialing IHS, tribal, and urban pharmacists in an effort to promote enhanced patient outcomes. Additional information regarding the IHS National Clinical Pharmacist Certification process can be obtained at the IHS pharmacy intranet site at: home.ihs.gov.

Best practices for health care organizations

A health care organization that wants to improve pharmaceutical care must be motivated and prepared for change throughout the entire organization. The organization's leadership must identify pharmaceutical care as important work. They must also develop clear improvement goals, policies, and effective improvement strategies. This will help encourage the entire organization to make changes that will help improve pharmaceutical care for people with diabetes.

Table 2 describes the best practices for health care organizations.

Table 2. Best practices for health care organizations.

Organization Recommendations	Best Practices		
System and programmatic changes to implement pharmacist-based diabetes care into primary care practice	 Why? Health care systems that have: (1) a pharmacist-based diabetes care program integrated into primary care practice; and (2) expanded roles of pharmacists are associated with: Increased patient and provider satisfaction (Cranor et al., 2003; Garrett and Martin, 2003; Singhal et al., 2002). Increased likelihood that patients accept therapies (Krass et al., 2005; Bluml et al., 2000; Baran et al., 1999; Gerber et al., 1998). Increase in patients keeping their appointments (Zillich et al., 2004). Reduction in the frequency of unscheduled diabetes-related clinic visits per patient per year (Irons et al., 2002). Reduction in health care costs (Cranor et al., 2003; Garrett and Martin, 2003). How? The following activities can help improve pharmaceutical care for people with diabetes: Obtain commitment from organizational leadership to expand and support the role of pharmacists and pharmacy-based programs. Establish organization-wide goals that include a commitment to pharmacist-based diabetes care. Create and implement organization-wide plans and strategies for improvement. 		
	improvement.		

Essential elements of best practice pharmaceutical care programs

High quality diabetes care involves implementing six essential elements in your health care organization. These elements are:

- Community resources and policies.
- Health care organization leadership.
- Patient self-management support.
- Delivery system design: Services, programs, systems, and procedures.
- Decision support: Information and training for providers.
- Clinical information systems: Collecting and tracking information.

Table 3 summarizes how these elements apply to basic, intermediate, and comprehensive pharmaceutical care programs.

*Adapted from the Chronic Care Model, which was developed by the MacColl Institute for Healthcare Innovation at the Group Health Cooperative. For more information on the Chronic Care Model, visit their website at www.improvingchroniccare.org.

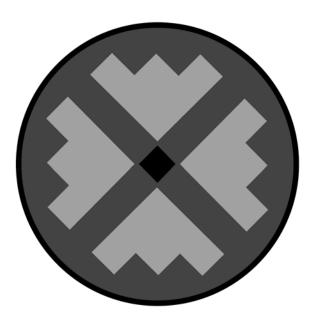


Table 3. Essential elements of basic, intermediate, and comprehensive best practice pharmaceutical care programs for patients with diabetes.

Basic Pharmaceutical Care Programs	Intermediate Pharmaceutical Care Programs Basic program <i>plus</i> :	Comprehensive Pharmaceutical Care Programs Basic and intermediate programs <i>plus</i> :	Examples
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. 	- Coordinate services with tribal and IHS programs to develop a network of care services that is accessible to all health care providers, including pharmacists.	 Develop and implement community education programs. Include national programs and other IHS, tribal, and urban Indian 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. 	 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.

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Table 3. Essential elements of basic, intermediate, and comprehensive best practice pharmaceutical care programs for patients with diabetes. (continued)

Basic Pharmaceutical Care Programs	Intermediate Pharmaceutical Care Programs Basic program <i>plus</i> :	Comprehensive Pharmaceutical Care Programs Basic and intermediate programs <i>plus</i> :	Examples
Maintain a supportive culture for quality improvement and expansion of pharmacy programs.	 Support and develop national billing mechanisms for pharmacists at the national IHS level. Recognize and support basic and expanded pharmacy practice by administrators, policy makers, and tribal organizations. Provide appropriate resources. Implement appropriate documentation methods to ensure the capture and retrievability of data elements for pharmacist program evaluation. 	 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. 	 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
(Table 3 continued on next page)			programs.

Table 3. Essential elements of basic, intermediate, and comprehensive best practice pharmaceutical care programs for patients with diabetes. (continued)

Basic Pharmaceutical Care Programs	Intermediate Pharmaceutical Care Programs Basic program <i>plus</i> :	Comprehensive Pharmaceutical Care Programs Basic and intermediate programs <i>plus</i> :	Examples
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.	 Maintain consistency among team members regarding education, support, and planning. Implement a process to provide patients with information from their medical records. 	 Offer training to pharmacists who are interested in providing motivational interviewing. Provide education, selfmanagement 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. 	 Use the electronic health record or Patient Care Component (PCC+) forms to document patient education using the IHS Patient Education Codes. Provide appropriate documentation in patients' medical records. Using local lesson plans, provide pharmacists with training on how to provide self-management training and how to provide consistent and uniform diabetes education. 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 stepwise manner, and encourage them to meet their goals.

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Table 3. Essential elements of basic, intermediate, and comprehensive best practice pharmaceutical care programs for patients with diabetes. (continued)

Basic Pharmaceutical Care Programs	Intermediate Pharmaceutical Care Programs Basic program <i>plus</i> :	Comprehensive Pharmaceutical Care Programs Basic and intermediate programs <i>plus</i> :	Examples
Delivery system design: Services, p	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. 	 Provide information technology support for automated recommendations to enhance the distributive process and provide pharmacists with the opportunity to engage in expanded roles. 	 Adopt approved protocols or algorithms based upon evidence-based medicine. Use evidence-based medicine to support pharmacist involvement in medication therapy management services. 	 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 t	raining for providers		
- Train providers on the optimal use of drug therapy.	- Train providers on appropriate documentation.	Train providers to use pharmacist expertise to maximize patient outcomes.	 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).

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Table 3. Essential elements of basic, intermediate, and comprehensive best practice pharmaceutical care programs for patients with diabetes. (continued)

Basic Pharmaceutical Care Programs	Intermediate Pharmaceutical Care Programs Basic program <i>plus</i> :	Comprehensive Pharmaceutical Care Programs Basic and intermediate programs <i>plus</i> :	Examples
Clinical information systems: Colle	cting and tracking information		
Establish and maintain a diabetes registry.	 Use reminders to providers. Develop and document patient treatment plans, including assessments, education, and follow-up. 	Use feedback systems capable of tracking information for outcomes, performance improvement programs, alerts for patient specific standards, and annual diabetes audits.	 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.

Evaluating your pharmaceutical care program

Evaluation is important because it helps you see what is working and what is not working in your pharmaceutical care program. It will show you if adjustments or changes need to be made in order to improve your program. Evaluation also provides you with information that you can use to share your successes with clients, providers, tribal leaders, administrators, the community, funders, and other stakeholders.

Consider including the following when developing your program and evaluation:

- Ensure that program evaluations take place at each site.
- Use available tools, such as the diabetes audit, computer databases, cost data, and patient data, to prepare performance improvement plans.
- Assess the competencies for pharmacists providing services.
- Assess staffing patterns and workload.
- Collect baseline data to evaluate outcomes and assess change from baseline over time.
- Assess available resources, needs, and areas for improvement.

Sustaining your pharmaceutical care program

In a recent IHS pharmacy survey, four key issues were identified as necessary to improve the ability for pharmacists to provide clinical services (IHS, 2004). These four key issues were:

- <u>Support</u> 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.
- <u>Training</u> 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.
- <u>Standardization of clinical programs</u> 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 an American Diabetes Association (ADA) or IHS recognized diabetes education site.

Contacting others for help

Contacting other people involved in 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 worked. This can help you avoid reinventing the wheel. Here are some tips on how to connect with others:

- Ask your Area Diabetes Consultant for the names of people who may be able to help you.
- Contact the IHS Division of Diabetes Treatment and Prevention for ideas. They may be able to point you in the right direction.
- Ask the IHS Integrated Diabetes Education Recognition Program for suggested contacts.
 They have names and contact information for people who work with IHS-accredited diabetes education programs.
- Flip through issues of *Health for Native Life Magazine*. The magazine profiles many diabetes programs throughout Indian Country. The articles may give you ideas for activities to try and people to contact.
- Review resources from the National Diabetes Education Program (NDEP). NDEP offers
 materials that will help your program get started, including information specifically for
 American Indians and Alaska Natives. You can access these resources at the website:
 www.ndep.nih.gov

Real-world best practice programs

Acoma-Canoncito-Laguna Service Unit

LCDR Wil Darwin Jr., PharmD, NCPS, CDE

(505) 552-5393

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 Area Diabetes Team at the Alaska Native Medical Center

LT Judy Thompson, PharmD, BCPS

(907) 729-2164

→ jbthompson @anmc.org

 □ 4315 Diplomacy Drive Anchorage, Alaska 99508

This program uses an integrative team approach to diabetes care. The pharmacist is a member of the diabetes team and works in the clinic along with the provider to see each patient at the point of care. The pharmacist also reviews labs and medications for appropriateness of therapy, evaluates patient comprehension of the regimen, and makes recommendations to help the patient meet the standards of care.

Albuquerque Indian Health Center: Special Diabetes Program for Indians Healthy Heart Project

LCDR MaryJo Zunic, PharmD

(505) 248-7741

 Albuquerque Indian Health Center 801 Vassar Drive NE Albuquerque, New Mexico 87106

This program uses a case management model of care to reduce cardiovascular disease risk among patients with diabetes. Interventions include disease management services that address high blood pressure, high blood sugar, hyperlipidemia, aspirin use, and tobacco cessation through pharmacologic therapy and lifestyle modification (e.g., diet, exercise, and stress reduction). The program also provides family planning services, immunization prescribing, and administration.

Claremore Indian Hospital

LCDR Ryan Schupbach, PharmD, NCPS, BCPS

(918) 342-6455

† ryan.schupbach@ihs.gov

≥ 101 South Moore Claremore, Oklahoma 74017

The Claremore Indian Hospital's Cardiovascular Risk Reduction and Disease Prevention Program provides evidence-based and financially responsible cardiovascular risk reduction therapy to achieve positive outcomes (e.g., reducing cardiovascular risk) that improve the patient's quality of life through reducing morbidity and mortality associated with cardiovascular disease. The risk factor reduction is done in the most fiscally productive manner while minimizing adverse events and not compromising effectiveness.

Salt River Pima-Maricopa Indian Community Diabetes Program

Carol Heim, RPh, CDE

(480) 946-9066

The pharmacist in this program provides group patient education through scheduled diabetes classes. The pharmacist also provides representation for people with diabetes on medical rounds at the Salt River Indian Health Center, and performs patient profiling at the Salt River Dialysis Center.

Sells Hospital Diabetes Education Program

Barbara Khan, MS, RD, CDE

barbara.khan@ihs.gov

PO Box 548 Sells, Arizona 85624

Pharmacists and pharmacy students provide diabetes-specific counseling and some medication management during monthly education programs.

Yakama Nation: Special Diabetes Program for Indians Healthy Heart Project

Will Davids, PharmD, and Rex Quaempts, MD

- william.davids@ihs.gov
- nex.quaempts@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. (Currently in the planning phase.)

Helpful websites

Diabetes Audit Category (Taxonomy) Management

- HS Division of Diabetes Treatment and Prevention: www.ihs.gov/MedicalPrograms/Diabetes
- HS Diabetes Audit Information: www.dmaudit.com

Drug Information and Education

- Cochrane Library: www.cochrane.org
- ePocrates: www.epocrates.com
- Medscape: www.medscape.com
- Micromedex: www.micromedex.com
- 4 UpToDate: www.uptodateonline.com

Medication Procurement and Formulary Process

- HS National Core Formulary: www.ihs.gov/MedicalPrograms/PharmacyIssues/formulary/index.asp
- Department of Defense Pharmacoeconomic Center: www.pec.ha.osd.mil/

Medication Therapy Management Services

- American Society of Consultant Pharmacists Issue Paper: www.ascp.com/medicarerx/docs/ASCPMTMS.pdf
- Centers for Medicare and Medicaid Services: www.cms.hhs.gov
- Outcomes Pharmaceutical Health Care: www.getoutcomes.com

Patient Education

IHS Patient Education Protocols and Codes: www.ihs.gov/NonMedicalPrograms/HealthEd/index.cfm?module=initiative&option=protocols&n ewquery=dsp NatlPatientEd Protocols.cfm

Pharmacist Organizations

- Academy of Managed Care Pharmacy: www.amcp.org
- American College of Clinical Pharmacy: www.accp.com
- American Pharmacists Association: www.apha.org
- American Society of Consultant Pharmacists: www.ascp.com
- American Society of Health Systems Pharmacists: www.ashp.org
- National Association of the Boards of Pharmacy: http://nabp.net
- A National Community Pharmacist Association: www.ncpa.net
- A National Pharmacy Council: www.npcnnow.org

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