Diabetes Management: A Team Approach

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Collaborative care approach to diabetes management – NP role
- Inpatient Management
- Ambulatory Practice setting

Implementation of Chronic Disease Model strategies
- Patient self-management
- Clinical information systems
- Practice (re)design
Nurse Practitioners
Scope of Practice

- Diagnose and treat
- Adjust medications
- Order diagnostic tests
- Refer for consultation
- Health educators
- Focus on health behaviors
- System changes
Nurse Practitioner Role - Inpatient

- Direct Care
  - Inpatient consults/follow-up recommendations
  - Discharge planning
Nurse Practitioner Role - Inpatient

- Systems enhancement
  - Professional education
  - Patient education material development
  - Policy and Procedure development
  - Order set/protocol development
Chronic Care Model

- **Health Care System**
  - Health Care organization
  - Community Resources

- **Internal Physician organization**
  - Self-management support
  - Clinical information systems
  - Delivery system redesign, ie case management
  - Decision support\(^{(1)}\)

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\(^{(1)}\) Wagner, et al, “Improving Chronic Illness Care; Translating Evidence into Action.” Health Affairs 20:64-78, 2001
Benefits of Chronic Care Model

Use of components of CCM have been shown in most studies to improve diabetes outcomes.

- Decline in A1c (-0.6%)
- Decline in non-HDL cholesterol (-10.4 mg/dl)
- Increase in self-monitoring BG’s (+22.2%)
- Improvement in HDL cholesterol (+5.5 mg/dl)
- Improvement in diabetes knowledge test scores (+6.7%)
- Improvement in patient empowerment scores (+2)

Piatt, et al, “translating the chronic care model into the community: Results from a randomized controlled trial of a Multifaceted diabetes care intervention.” Diabetes care, 29(4); 211-7, 2006 Apr.
Ambulatory Team Players

- Patient
- PCP
- Nurse Practitioner
- Endocrinologist
- Education Team – Nurse, Dietitian
- Pharmacy
- Office support
- Social Service, Care Coordinator, Mental Health, Exer Phys
- Family Social support
- Other specialists: Ophthalmologist, Podiatry
Health Care Provider Responsibilities*

- Adherence to the system of intensive self-management of diabetes
- Measurement of outcomes
- Determination of patient satisfaction
- Listening to patient concerns
- Establishing and maintaining follow-up schedule
- Documentation
- Supervision of patient’s education
- Encouragement of use of preventive measures and risk reduction

*AACE Medical Guidelines for the Management of Diabetes, 2002*
Patient Responsibilities*

- Monitoring blood glucoses
- Exercise
- Dietary adherence
- Smoking cessation
- Medication adherence
- Overcoming psychologic and other barriers
- Healthy expression of feelings

*AACE Medical Guidelines for the Management of Diabetes, 2002*
Patient Responsibilities (cont)*

- Foot and eye care
- Understanding treatment targets
- Communication with diabetes care team
- Keeping appointments
- Record keeping
- Treating and modifying “targets” in collaboration with team

*AACE Medical Guidelines for the Management of Diabetes, 2002*
Nurse Practitioners – Collaborative Role

- Collaborate – medical management
  - Varied perspective/focus
  - Increase frequency of contact
- Patient education/self-management training
- Shared communication
  - Patient phone/email contact
  - Prescription refills, etc
- Care Coordination
- Practice design and enhancement
95% of the Work of Diabetes is the Patient’s Responsibility!
Diabetes Curriculum (ADA)

- Type of Diabetes and components of treatment plan
- Nutrition
- Exercise and Activity
- Diabetes medication
- Self-monitoring
- Prevention, detection, and treatment of acute and chronic complications
Diabetes Curriculum (cont)

- Foot, skin and dental care
- Behavior change strategies, goal setting and problem solving
- Preconception/pregnancy care
- Stress and psychosocial adjustment
- Family involvement and support
- Use of health care systems and community resources
Learner’s Ability to Retain Information

- 10% of what is read
- 26% of what is heard
- 30% of what is seen
- 50% of what is seen and heard
- 70% of what is said
- 90% of what is said as they do something
The Education Plan

- **Setting**
  - Individual or group

- **Active learning**
  - Have patient repeat info in own words
  - Demo/return demo

- **Patient education materials**
  - Reading level
  - Culturally sensitive
Knowledge is Power!

- Knowing and doing are two different things!
- Help translate knowledge into healthy behavior changes.
DSMT (Diabetes Self-Management Training) Reduces Costs, Improves Health Outcomes

National Institute of Health (NIH) conference, Dec 2008:

A systematic review of existing literature on DSMT programs found that 70% of all relevant studies showed DSMT resulted in decreased health care costs:

- Ave. medicare cost savings per month/per patient - $135 for those who have completed DSMT \(^{(2)}\)
- Cost savings for inpatient hospital costs, $160 per month/per patient \(^{(2)}\)

Patient who undergo DSMT program have, at a minimum, a 10% higher adherence rate with clinically appropriate, evidence based medical treatment to improve health outcomes. \(^{(1,2,3)}\)

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\(^{(3)}\) Costs and Benefits Associated with Diabetes Education, Susanne Boren, et al, Publ date: 2009 The Diabetes Educator.
Goals of DSME

- Reach desirable body weight
- Learn to shop for food (read labels for contents, etc)
- Choose appropriate quality and quantity of food at home or restaurant
- Increase physical activity, when feasible
- Take medication properly and regularly
- Understand main laboratory tests of metabolic control
- Recognize early symptoms of hypoglycemia and react appropriately
- Take appropriate action for concurrent illnesses
- Care for feet and buy appropriate footwear
- Attend checks for complications regularly

Strategies for Behavior Change

- Autonomy motivation
  - Internal processes that drive behavior

- Autonomy support
  - Behaviors professionals use important to enhance motivation and self-directed behavior changes.
  - Assisting with goal setting is essential
  - Establishing collaborative goals greatly increases likelihood of success
  - Ongoing support essential in helping sustain behavior change over time.
Problems …

- **Barriers to patient adherence**
  - Lack of understanding of the disease
  - Asymptomatic character of diabetes
  - Necessity of daily interventions/need to alter lifestyle
  - Chronic nature of the disease
  - Patients unable to make/sustain healthy behavior changes

- **Organizational challenges of diabetes management**
  - Large volume of patients
  - Each patient needs exceptional level of attention
  - Multiple complications and considerations
  - Complex scheduling of office visits and checkups
...and Solutions

- **Patient-focused strategies**
  - Education and guidance to correct patient misperceptions
  - Significant patient motivation/effort
  - Intensive staff monitoring and interacting with patients
  - Patient education materials and referrals
  - Ongoing communication

- **Delivery system design strategies**
  - Maximize patient’s preparedness before office visit
  - Maintain communication between office visits
  - Develop administrative algorithm for patient management
  - Use disease-specific charts and checklists
  - Diabetes-focused visits
Compile Resources

- Specific educational tools for all aspects of diabetes care
- Tools to assist patients with self-titration of insulin dose(s).
- Directory of local specialists for referrals and consultations
- Directory of local diabetes care centers and educational groups
- Clinical information systems resources
  - Automated reminders
  - Computerized data summary of patient records
  - Performance feedback
  - Registries
Use Technology to Enhance Patient Care

- Meter downloads
- Use of email, fax, phone communication
- Templated notes
- Patient-oriented software programs
  - Education
  - Medical management tools
  - Coaching, support
Provide Patients With Educational and Reference Materials

- **Written instructions:**
  - National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) *Directory of Diabetes Organizations*
    - BP measurement
    - Glucose self-monitoring
  - National Diabetes Information Clearinghouse (NDIC)
    - “Need to know” tips for diet
    - Checklists for long-term care

- **List of ADA Education Recognition Programs**
  - American Diabetes Association - database of diabetes education programs searchable by region
Flowsheets, Checklists

Diabetes Visit Medical Record

Nurse Quarterly Visit Checklist

Nursing Checklist for Quarterly Planned Visit

The diabetic patients in this clinic will be receiving letters informing them of the need to schedule a planned diabetic visit. We would like the nursing staff to be aware of what that means for the patient, the physician and themselves. Please see the attached copy of the letter the patient will be receiving and also the proposed content of what a planned visit may encompass. The following is a checklist that was designed to assist you as the nurse, in preparing the patient for a planned visit.

1. Check the schedule daily for any planned diabetes visits and ensure that there is enough time allotted.

2. Ensure that all lab work done prior to the visit is on the chart for the physician to review (A1C, cholesterol, lipids, microalbumin).

3. Document weight, Blood pressure, vital signs, smoking status (if quit how long ago), allergies and medications (ask about aspirin usage). You may want to establish a medication card for the patient to carry with them, if they do not already have one. Remind the patient that the exam is focusing on their diabetes and that if they have other concerns they may need to be addressed at another visit. Document all concerns so the physician can appropriately prioritize.

4. Ask the patient for their home glucose logbook and any materials they brought with them from home or the diabetes school. Review or assist in helping the patient set personal self-management goals. If patient does not have or know how to establish a goal, give patient the sheet on setting goals and goal suggestion ideas. Tell the patient that the physician will be reviewing their goals with them today.

5. Check to see if patient is due for flu vaccines, pneumovax, or clotted eye exam. If they already had eye exams this year check for a report and/or ask whom they saw and attempt to get a report from the ophthalmologist for the patient’s record.

6. Chart all pertinent information on the Diabetes Flow sheet. The flow sheet is used only for diabetes planned visits.

7. Have patient remove socks and shoes for foot assessment and possible monoflament exam. Have gown and drape available for patient to change into for other portions of the exam if so desired by physician.

8. Make sure the tool box (education and resource materials) is in the room.

9. Check with patient before they leave to reinforce patient’s self-management goals, ensure appropriate resources and teaching materials have been given, referred that may be required are set up, and schedule if possible the next quarterly visit. Have patient fill in reminder card if office uses this tool as a reminder for next quarterly visit and lab work.
When Treatment Goals Are Not Met

- Assessment of barriers to adherence including lack of knowledge, financial constraints, competing demands, family responsibilities and family dynamics, depression, etc.
- Culturally appropriate and enhanced DSME
- Change in pharmacological therapy
- Initiation of or increase in SMBG
- More frequent contact with the patient
- Referral for mental health, social service support
Summary

- Diabetes is a complex and time-consuming disease.
- Proper diet and exercise, in addition to combination medical therapy, carefully monitored, can provide high quality of life.
- Appropriate use of staff and office management tools allows more time for patients’ medical needs.
- Health care team-patient partnership an essential aspect of effective care.
- Goal of patient self-management is critical to long-term diabetes care.

*Despite the challenges, the prudent use of therapeutics, a collaborative care approach, and patient self-management education, can result in high quality, cost-effect care for patients with diabetes.*
Resources

- American Diabetes Association

- Centers for Disease Control and Prevention

- National Diabetes Information Clearinghouse
  [www.niddk.nih.gov](http://www.niddk.nih.gov)

- American Association of Diabetes Educators
  [www.aadenet.org](http://www.aadenet.org)

- Juvenile Diabetes Research Foundation
  [www.jdf.org](http://www.jdf.org)
Thank you!