Diabetes Management of the Hospitalized Patient and Patient Care Transition

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OVERVIEW

- Barriers to diabetes management in the hospitalized setting
- Fundamental components of a Joint Commission Certified Inpatient Diabetes Program
- Transitions points in diabetes care and effective means to improve care through the continuum of care

Background: Diabetes

- It is estimated that nearly 26 million people in the United States have diabetes*
  - 8.3% of U.S. population
- Total estimated cost of diabetes in 2007 was $174 Billion**
  - **50% of medical expenditures attributed to hospital inpatient care**
  - People with diabetes spend 2.3 x more each year on medical care than people without diabetes

*Centers for Disease Control: National Diabetes Fact Sheet, 2011
** "Economic Costs of Diabetes in the U.S. in 2007", *Diabetes Care*, 31(3), 2008. 1-20.

Diabetes in Idaho

- 8% of the adult population in Idaho have diagnosis of diabetes*
  - Translates to approximately 90,0000 people
- From 1997 to 2009, diabetes has doubled in Idaho*
- Between 20 – 25% of SARMC inpatient population have diabetes

* 2009 Idaho Behavioral Risk Factor Surveillance System, Idaho Dept. of Health and Welfare, Division of Public Health, Bureau of Vital Records and Health Statistics

What We Hear……

From Patients……

- “My blood sugars get out of whack every time I go in the hospital”
- “I never had diabetes until I came to the hospital”
- “They didn’t give me the same doses of insulin I use at home”
- “They put me on insulin and stopped my diabetes meds”
- “They won’t let me use my own insulin from home”
- “They take my blood sugars more than I take them at home”
- “The nurses don’t understand diabetes”
- “I don’t get to eat what I want to”

From Outpatient Providers/Clinics

- Poor communication to PCP
  - Diabetes management during hospitalization
  - Ongoing diabetes issues
  - Medication discharge plan
- Question why home plan not followed
- Sending patient home on insulins or oral medications patients cannot afford

What We See…..

Patients admitted:

- Unable to state diabetes medications and/or doses of diabetes medications they are on
- No understanding of how their diabetes medications work
- No formal diabetes education
- No medical nutrition therapy education
- No sick day management plan
- Unaware of last A1C and/or do not know what an A1C is
- Prescribed large doses of long acting insulin and no/minimal rapid acting insulin to cover meals

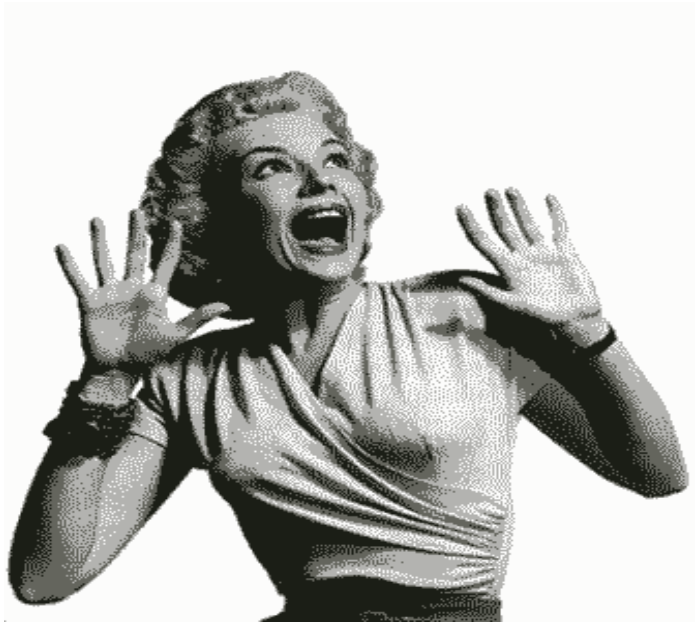
Barriers and Challenges: In The Hospital

- Systems
- Knowledge deficit among practitioners/nursing staff regarding management of diabetes and insulins
- Treatment inertia
- Room service meal ordering
- Timing of blood glucose checks & insulin administration
- NPO status/poor appetite

Barriers cont . . .

- Meal patterns/foods different than home setting
- Obtaining accurate information of home diabetes medications
- Critical/acute illness
- Parenteral, enteral feeding
- IV fluids containing dextrose
- Steroid therapy
- Change in normal activity level

Fear Factor – HYPOGLYCEMIA!!!!



The Joint Commission Advanced Inpatient Diabetes Certification

- The Joint Commission Advanced Inpatient Diabetes Certification recognizes hospitals that make exceptional efforts to foster better outcomes
- Criteria was developed in conjunction with the American Diabetes Association & American Association of Clinical Endocrinologist
- Demonstrates compliance with national standards
- Signal to the community that quality care for patients with diabetes is an organizational priority

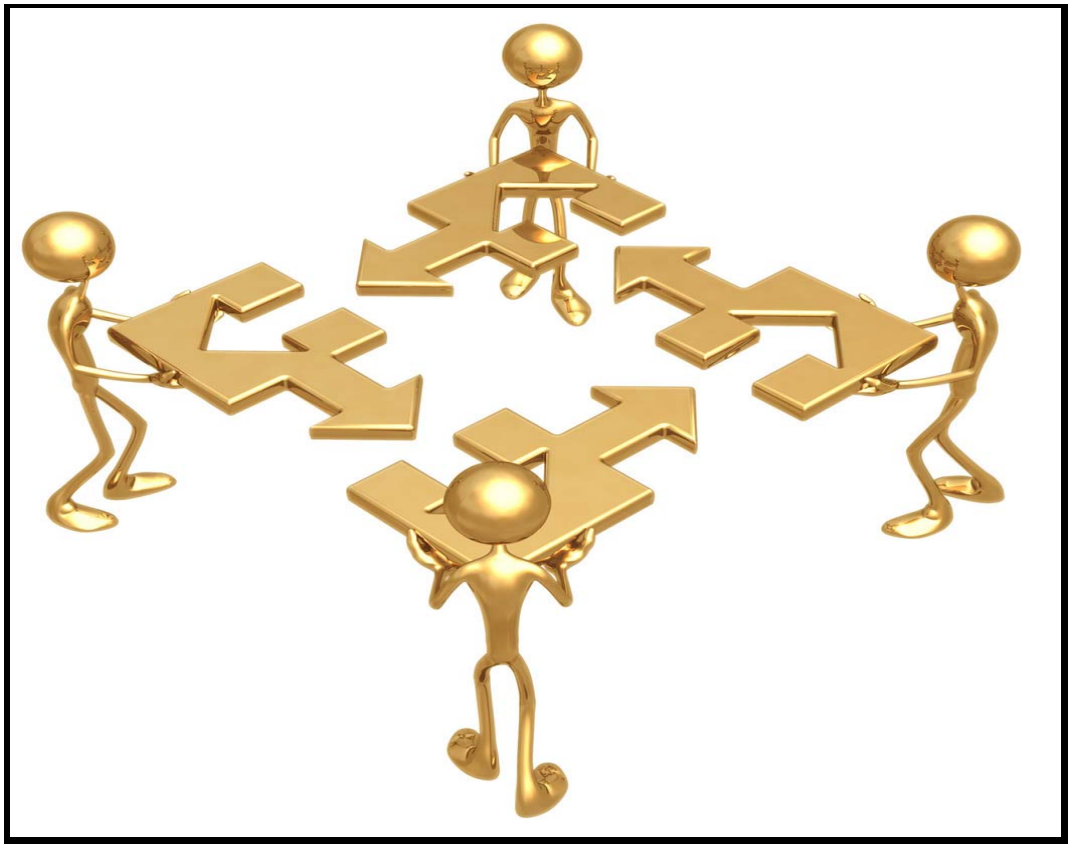
Joint Commission Certification of Advanced Inpatient Diabetes Management

Saint Alphonsus was the 17th hospital in the nation to receive this certification on April 30th, 2010

The Joint Commission
Accreditation Vs. Certification

- Accreditation
  - Organization-wide evaluation of care, processes and functions
  - Must be accredited to receive reimbursement from Medicare and Medicaid
  - Specific standards must be met throughout organization
  - Surveys occur every three years
- Disease Specific Certification
  - Voluntary, not an add on to accreditation
  - Based on service-specific evaluation of care and outcome
  - Specific criteria must be met
  - Disease specific data collected and turned in monthly
  - 2 year review cycle

Components: Joint Commission Advanced Diabetes Inpatient Program



A Multidisciplinary Team

- A multidisciplinary program team is identified with a designated team leader
- OUR Team
  - Senior Leader Champion, Bob Polk, MD
  - Endocrinology Champion, Julie Foote, MD
  - APRNs, CNO, Hospitalist, RN's- Formal and informal nursing leaders, Registered Dietitians, Pharmacist, Performance Improvement/QI, Patient Safety,Data Team Representative, Lab: POC Coordinator

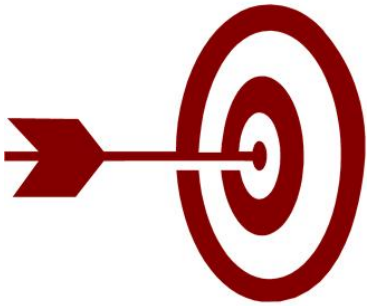
Medical Record

- All patients with diabetes are identified as having diabetes in the medical record at admission & discharge
- Documentation in the MR reflects:
  - Type of DM; home medications; weight
  - Control prior to admission & hyperglycemia on admission
  - Nutritional screening results
  - Nutrition plan and anticipated nutritional status
  - Comprehension & competence of diabetes self-management activities

Glycemic Target Ranges

Blood Glucose Targets

- SARMC
  - 100 to 150 mg/dl before meals and fasting
  - Random blood glucose <180 mg/dl



A1C

- An A1C is drawn at the time of admission on patients with a known diagnosis of diabetes unless results of the patient's A1C drawn within the last 60 days are known, or the patient has a medical condition or has received therapy that would confound results

Patient Safety

- Plans for the treatment of hypoglycemia and hyperglycemia are established for each patient
  - Hypoglycemia protocol approved by Med Exec
    - $\leq$ 70 mg/dl for non-pregnant patients
    - < 60 for pregnant patients
- Episodes of hypoglycemia are tracked & contributing reasons identified and evaluated for trends

Delivering/Facilitating Clinical Care

- A plan for coordinating administration of insulin and delivery of meals
- Nutritional assessments for patients not consistently reaching glucose targets

Facilitating Care Cont . . . .

- Written protocols are developed for the management of patients on IV insulin infusions
- Written blood glucose monitoring protocols for patients with known diabetes are developed
- Results of blood glucose monitoring are available to all members of the health care team

Staff Providing Management/Care

- Staff working with patients with diabetes have education specific to the management of diabetes

Supporting
Diabetes Self-Management Education

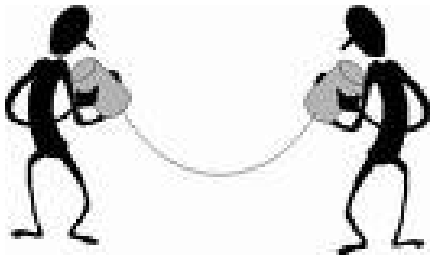
Patients with newly diagnosed diabetes or educational deficits have the following educational components reflected in the Plan of Care:

- Medication Management, Nutrition Management
- Signs/symptoms and treatment of hypo/hyperglycemia
- Blood glucose monitoring, Sick day guideline, Exercise
- Contact information at discharge for ongoing diabetes medical management and emergency situations

- Plan for post-discharge education or self-management support

Clinical Information Management

- The patient and the practitioner managing his/her diabetes care after discharge are informed about the patient's A1C results and any unresolved issues related to glucose management



SAMG Inpatient Glycemic Management Service

- Consultative service using APRNs
  - 2 Nurse Practitioners and 1 Clinical Nurse Specialist
  - Dr. Julie Foote, Medical Director
  - Service started in August 2009

Glycemic Management Service

- Assessment of patient: medical history, home diabetes management, medications & current illness
- Management of all diabetes care during patient hospitalization which includes:
  - Prescribing insulin/oral diabetes medications
  - Ongoing assessment of patient glycemic control, changing insulin requirements & titration of insulin doses
  - Assessing for educational needs and referring for diabetes education as needed to safely discharge home
  - Writing diabetes discharge orders & plan for home diabetes management
  - Referrals for outpatient diabetes education

SAMG Inpatient Diabetes Educator

- Reviews daily list of all patients with POC BGs
- Ensures all patient's admitted with DX of diabetes have A1C drawn
- Able to triage patients based on needs and discharge plan
- Provides education to all patients newly diagnosed; new to insulin or oral meds; new to BG monitoring; admitted in DKA/HHS; diabetes complications; complicated home routine
- Easily assessable to all staff
- Communicates with practitioners
- Assists with getting referral from provider for outpatient diabetes education and support as needed

Closing the Gap:

Inpatient ⟷ Outpatient

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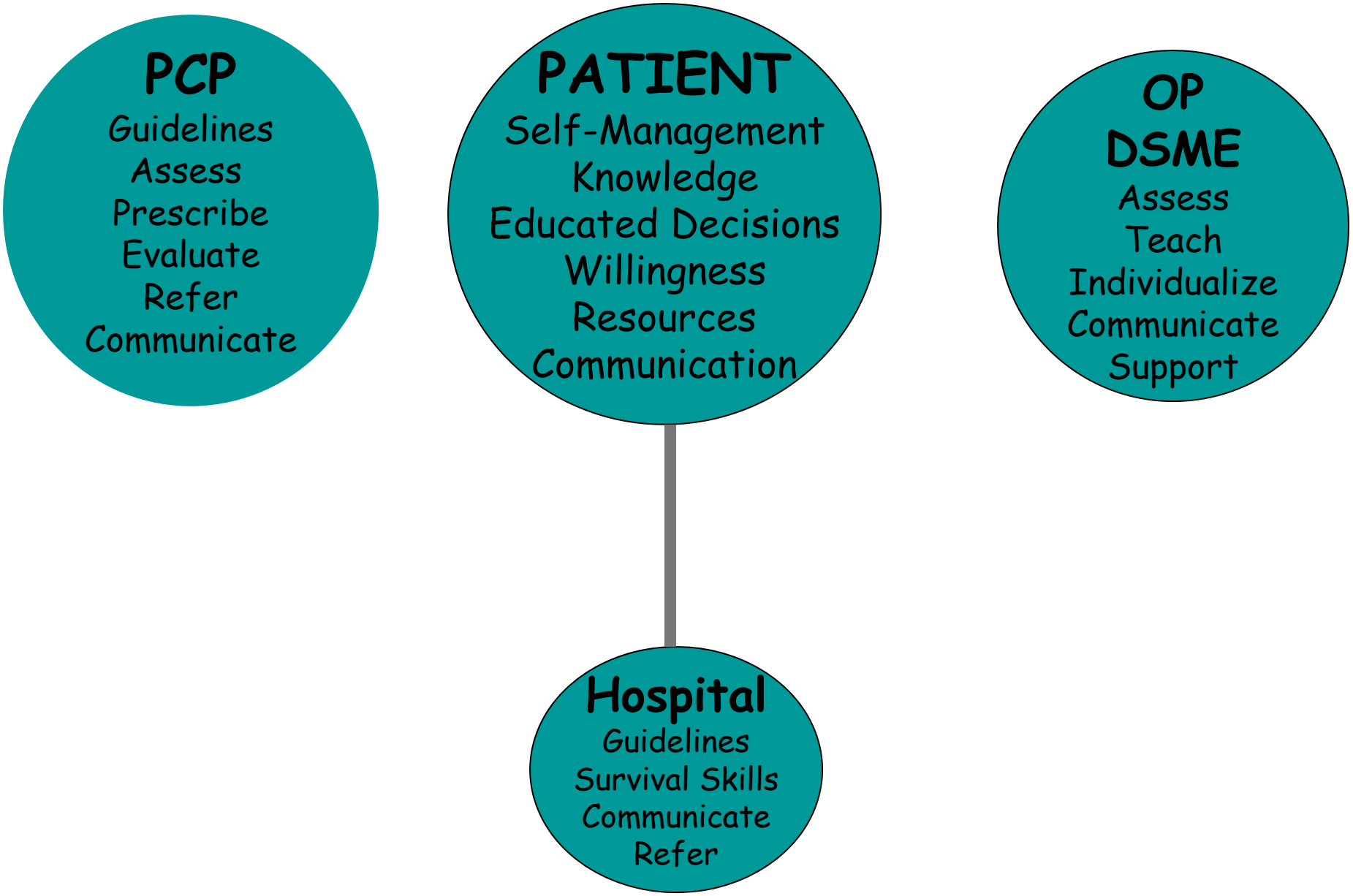

PCP
Guidelines
Assess
Prescribe
Evaluate
Refer
Communicate
PATIENT
Self-Management
Knowledge
Educated Decisions
Willingness
Resources
Communication
OP
DSME
Assess
Teach
Individualize
Communicate
Support
Hospital
Guidelines
Survival Skills
Communicate
Refer

Diabetes Self-Management Education (DSME)

- Inpatient
  - Limited focus and retention
  - “Survival Skills”
- Outpatient
  - Helps facilitate the knowledge, skill, and ability necessary for diabetes self-management
  - Certified Diabetes Educators (CDE)

Outpatient Diabetes Education:

Our Changing Community

- Humphreys Diabetes Center was founded in 1987 with a generous donation from Fred Humphreys and sponsorship of SARMC
  - Began as a small department at SARMC
- In 1996, St. Lukes joined as a co-sponser and HDC became a free-standing diabetes center

Changing Community cont . . .

- Both health systems contributed annually to subsidize HDC ($300,000 each last year)
- Increased demand for diabetes services, increased cost of operations and decreased reimbursement for diabetes education made current HDC organizational model unsustainable
- St. Luke's assumed full sponsorship of HDC April 1, 2011

Saint Alphonsus

- Saint Alphonsus Outpatient Diabetes Care and Education Program opened on April 4, 2011

Two Locations to Meet Community Needs

- Saint Alphonsus Regional Medical Center
  Liberty Medical Park
  900 N Liberty, Suite 100
  Boise, ID 83704

- Saint Alphonsus Meridian Health Plaza
  3025 W. Cherry Lane
  Meridian, ID 83642

Program Staffed By….

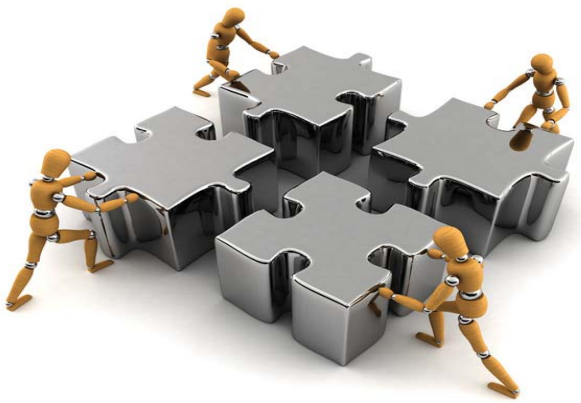
- Certified Diabetes Educators
  - Facilitate knowledge & skills needed
  - Ongoing support & resource to patient & provider
  - Advocate
- Advanced Practice RNs
  - Clinical Nurse Specialist
  - Nurse Practitioners
  - Work with primary care provider *not* replace

Saint Alphonsus Diabetes Program Services

- DSME for type 1, type 2, gestational diabetes, and diabetes complicated by pregnancy
- Medical management of diabetes
- Foot care
- Wound care
- Insulin pump therapy

Ultimate Goal

- Provide excellent care for the patient with diabetes throughout the continuum of care through established processes for transitions in care
  - Collaboration
  - Communication



Questions & Comments