Lessons Learned on the Journey to Standardizing Inpatient Diabetes Care and Maintaining It
by Betsy Gaudian MSN, RN-BC, RD, CDE

Objectives
At the completion of this presentation:
• the participant will be able to describe the interventions of the multi-disciplinary team necessary to achieve The Joint Commission Certification in Advanced Inpatient Diabetes
• List different methods of education used to improve the practice of diabetes care and list resulting outcomes
• Identify potential roadblocks & how they may be overcome

Saint Francis Hospital and Medical Center achieved The 84th Joint Commission (JC) Certification in Advanced Inpatient Diabetes in the USA on November 21, 2015
Benefits of TJC Certification:
- Improves the quality of patient care by reducing variation in clinical processes
- Provides a framework for program structure and management
- Provides an objective assessment of clinical excellence
- Creates a loyal, cohesive clinical team
- Promotes a culture of excellence across the organization

Benefits of TJC Certification- Cont.
- Facilitates marketing, contracting and reimbursement
- Strengthens community confidence in the quality & safety of care, treatment, and services
- Recognized by select insurers and other third parties
- Can fulfill some regulatory requirements

The Advisory Board for our “Inpatient Glycemic Initiative”
- President of the Hospital
- Chief Medical Officer
- Population Management Champion MD Diabetes: Dr. Latha Dulipsingh
- Other Hospital Endocrinologists
- Physician Department Heads/ Hospitalists

Advisory Board Continued
- Nursing Administration
- Nursing Education
- Director Case Management
- Director Food and Nutrition Services
- Director of the Laboratory
- Emergency Room Administration
- Information Technology

Advisory Board Meetings
- Set and Led by Dr. Latha Dulipsingh, Endocrinologist, Population Management Champion: Diabetes & Metabolic Services
- Held on an as needed basis
- Board Members changed over time
### Other Important Resources

- The Joint Commission Staff and Manual
- Environmental Services
- Legal Department & Finance Department
- Medical Records & Printing
- HealthStream Module Artists & Sim Lab
- Center for Health Equity for language interpretation and translation of materials
- Hospital Photographer

### Other Important Resources

- Human Resources
- Web Designers & Library
- Volunteer Services Director
- Radiology, Special Testing Areas
- Biomedical Engineer
- Special Orientation for Travel RN’s
- Marketing and Graphic Designers

### Steering Committees

- Core Advisory Team
  - Leaders: Endocrine Chair & two CDE’s (one full time, one 8hrs./wk).
  - Managers, Educators, Staff RN’s, Multidisciplinary Colleagues, Guests
  - Met weekly x 2 years until Certified, then Monthly. After certification, 1 CDE (only myself)
- Diabetes Champions 1-2 from each unit
  - Meet 5 x year (1 hr) and invited to two 3 credit seminars a year

### Inpatient Initiative Initial Core Team

![Inpatient Initiative Initial Core Team](image)

### Core Team Member: Sheree Brown

An RD who worked in the IT department was *Invaluable*! The Epic EHR Systems Analyst (who is also an RD) built many Diabetes-specific flowsheets, reports, and education content.

### Core Team Member: Linda Taylor

A nurse manager, a seasoned hospital employee, was seeking a DNP in Nursing-Population Health: Diabetes during our certification preparation & *Invaluable* to us Her knowledge, passion, skills, guidance and endurance guided us to succeed in standardizing the hospital’s diabetes care
Lesson #1 Where’s the money?
Non-hospital product Representatives & Community Leaders are important people too!

Provided teaching/demo insulin pens, pen needles, free meters, education & sponsored champion lunches and biannual seminars

Lesson #2 FLEXIBILITY
CREATE BACK UP PLANS

Need for Flexibility
• All individuals have certain strengths & gifts
• Learn who can do what for you, when, where & for how long
• Team membership is fluid: people come & go for various reasons
• Express appreciation for volunteered time
• Seek out very motivated supporters

Lesson #3- Education is KEY
• Deliver Education in various modalities
• Different folks learn differently
• Regularly plan to update education tools
• Education is ongoing and requires repetition, ensure tools don’t get lost
• New folks come, educated folks leave

Who Needs Education ?
• MYSELF
• RN’s, Aides
• MD/s & Providers
• Dietitians
• Pharmacists
• Managers
• Educators
• Residents, Interns
• Student Nurses
• Travel RNs
• Administration
• Community

Patients Also Need Education
• We created a small booklet for all patients with a diagnosis of diabetes mellitus
• It is called the “Inpatient Diabetes Guide”
• Nursing can use it as a guide to assess individual understanding of survival skills and teach or review knowledge deficits
Patient Education

- Units needed instruction on how to order the book from contracted printer
- Staff were instructed to document the book was “given to the patient” and to enter information in it
- The book should go home with the patient

English Inpatient Diabetes Guide

- First Edition (23 pages) 6000 copies printed $ 0.62 each. Distributed April 2014
- 2nd Edition English books (25 pages) 6000 copies printed @ $0.62 ea, December 2015
- 3rd 6000 English printed Dec 2016 @ $0.62 No revisions. Next will revise Nutrition Label
- I have printer advise me of the # left in the warehouse (it’s in Boston) monthly

Spanish 2nd Most Common Language

- ~ 94.5% inpatients speak English
- ~3.5% inpatients speak Spanish
- The Curtis D. Robinson Center for Health Equity at St Francis translated our book into Spanish: 12-2014. Book cost was $2.00 each because we ordered 2000
- The 4,067 word translation took 5 Hours and cost $1013.40 incurred by the center

Spanish Book 2nd edition

- The Spanish book was re-translated to match the English 2nd ed in 12/2015
- This 2nd edition 730 word translation cost $146.00 and took 2.5 hours
- 2000 Spanish Books 2nd edition were printed in February 2017 for $2.02
- Each page now matches English book

Video- On Demand

- Appropriate Video’s were placed on our individual room TV’s system for education by our Bio-Engineering Department
- Directions are provided to patients to view the videos using the bedside phone
- Nursing can set this up and document this education was done (without having to do it)
Topics of video’s put on room TV’s
• Basic Skills for Controlling Diabetes
• Injecting Insulin- English and Spanish (E & S)
• Diabetes foot and Skin Care (E & S)
• Gest. Diabetes
• Medication/Insulin
• Nutrition & weight
• Taking Small Steps
• More Video’s on hospital website

Education for Nurses
• HealthStream Computer Modules (5) PP
  – “Hypoglycemia for non-pregnant adults” (3-nurse, aide, all other hospital staff)
  – “Overview of Diabetes”
  – “Types of Insulin & How it Works"
  – “Discharge planning”

HealthStream Continued
• “Teaching Patients Survival Skills”- Sim Lab used & video’s put in the Module
  • This meant creating scripts, practicing and being videotaped in the Simulation Laboratory, & technical support to insert
  • Done in Spring 2014 & “Hypoglycemia for All Hospital Staff” created in Jan 2016

Other Modes of Education
• 27 Resource Notebooks were made
• I had to visit 27 units to update notebooks
• We then asked for an Infonet Tile 2015 and it was granted!
• Electronic Resources then available 24/7
• Next: learn to modify & update the Infonet

Lesson #4 Dream Big & Go for IT !
Lesson # 5- Provide Useful Tools

### Conversion of HbA1c to eAG

**Estimated Average Glucose for last 2-3 months**

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Develop Pocket Guides

- For RN’s, laminated
- Providers, laminated
- Double sided page diabetes standards distributed to all hospital staff
- Initially had pocket guides printed
- Then determined it would cost less to buy a laminator and use a volunteer

Monthly Tip Sheets

- I create a tip sheet each month based on the current education need
- First one was July 2015, after implementing the hypoglycemia protocol to teach what 15 Grams of Carbohydrate specifically is
- One color copy is given to each floor and it is posted on our Infonet (electronic)

Tip of Month Topics

Management of:
- Hypoglycemia policy
- Prevent Hypoglycemia
- Education Videos on Room TV’s
- Give patients the book and explain new “A1c”

Management of:
- Survival Skills
- Clean POCT machine
- Documentation
- Insulin Pumps
- Meds affecting Glucose
### Lesson # 6 - Education: One to One
- Sometimes it is best to visit staff and sit with them for a few minutes to teach.
- 6 Insulin Rep's came over 2 days from 6 AM to 11 pm and rounded to teach each staff RN how to teach use of an insulin pen.
- Demo pens are available on units for teaching, they are not used in the hospital.

### I Meet all new Staff in Orientation
- Introduce myself.
- Introduce our certification, their responsibility.
- Review with RN’s how to teach insulin pen.
- Review with RN’s hypoglycemia policy.
- Review with RN’s call me if an insulin pump.

### Lesson # 7 - Develop Champions
- Solicit 1 or 2 Champions from each unit.
- Ask them to update staff regularly.
- Empower them to be the “go to” person.
- Reward them: lunch meetings, spotlight them.
- Orient new Champions, they come and go.
- Learn what they do best and how - share.

### Champions - Train the Trainer 2015

### Lesson # 8 - Use Free Help Skillfully
- There is just myself supporting the Advanced Certification for Inpatient Diabetes.
- Nurses on “light duty” have been used to help me on a day-to-day basis on occasion.
- Volunteers also are used periodically.
- Education and delegation of tasks is a skill.
Staff Continuing Education

- We put on two seminars a year
- “sweet & low” is in November: provider focused but nurses also come, note the name is not the sweetener name
- “Sweet & Simple” is in April: nursing focused
- Pharmacists and Dietitians come to both
- Continuing Education credits given (3) for all

sweet & low/ Sweet & Simple

sweet & low 1st Annual Conference

- Free with 3 hr. Continuing Ed Credit for MD, RN, RD, Pharmacist Employees
- November 13, 2014
- Caroline Isbey RN, MSN, CDE Associate Director The Joint Commission
- Dawn Smiley MD, MSCR- Emory University
- Marie McDonnell MD, Brigham & Women’s

sweet & low 2nd Annual Conference

- Free with 3 hr. Continuing Ed Credit for MD, RN, RD Pharmacist Employees
- November 12, 2015
- Francisco Pasquel MD- Emory University
- James Bernene MD- Hospital of Central CT
- Charles Graeber MD- Hospital of Central CT

sweet & low 3rd Annual Conference

- Free with 3 hr. Continuing Ed Credit for MD, RN, RD Pharmacist Employees
- November 10, 2016
- Ken Chen- MD Women & Infants Hosp, RI
- Priyathama Vellanki MD-Emory University
- Carlos Mendez MD, Wisconsin College Med.

1st Sweet & Simple April 29, 2015

- Free with 3 hr. Continuing Ed Credit for RN’s, RD’s and Pharmacists
- Hypoglycemia: Without being “Sugar Coated”
- Teach Me, Show Me: What’s Teach-Back
- Daily Living with Diabetes: Inpatient ED
2nd Sweet & Simple April 27, 2016

- Free with 3 hr. Continuing Ed Credit for RN’s, RD’s and Pharmacists
- Living with Diabetes - The Challenges
- Inpatient Insulin Management
- Consistent Carbohydrate Diet for People with Diabetes: At home and in the Hospital

3rd Sweet & Simple April 26, 2017

- Free 3 Credit hours for RN's, RD's, R.Ph
- Diabetes and Mental Health - What is the Connection?
- Non-Insulin Hypoglycemic Agents: What you need to know
- Diabetes Nutrition Management in the Real World

So much to learn, So much to teach

The Task at Hand for Certification

Attaining & maintaining certification is work but standardization has paid off -2014 JC Manual

DSPR - Program Management -42 elements (e)
DSDF - Delivering or Facilitating Clinical Care (31 elements or metrics identified)
DSSE - Supporting Self - Management (16 e)
DSCT - Clinical Information Management (22 e)
DSPM - Performance Measurement (25 e) [=136]

HealthStream and a Pilot Study

- Education was assigned to two floors 1st
- Pilot study: We looked at implementation of Ed: assessment, distributing books, getting A1c's, teaching survival skills PRN, d/c plan
- Research Article published on this pilot in Connecticut Medicine, Vol. 80, #4, April 2016, pages 231-237

Pilot Study Looking at Education

- Data was extracted from the EHR and examined at three time periods:
  - Time 1 Pre-study: two months prior to training (April and May 2014);
  - Time 2 Study: two months of intensive training on the intervention units (2 months)
  - Time 3 Follow-up: three months post-training (August through October 2014)
Baseline-Interventions-Follow up

• Blue is control group
• Red is Study Group
• Graph shows % HbA1c's ordered after education

Results

• A total of 144 patients with a primary or secondary diagnosis of diabetes were admitted to two units between June 1 and July 31, 2014. This group was compared to patients (N = 1173) with a primary or secondary diagnosis of diabetes admitted to the rest of the hospital including intensive care, medical, and postsurgical units. This group (N=1173) served as the control group.

Explanation for the graph:

• Prior to the pilot education program, HbA1c tests performed in the intervention units did not differ from tests performed in the hospital (26% for both). After education: note the increase in the HbA1c testing, the overall difference between the intervention & control groups improved & was statistically significant (P < .002)

Metrics

• Metrics were hand calculated before our Electronic Health Record (EHR) - in 4/2014
• Once the EHR was in place, we could then have reports built of our metrics (* next page means manually calculated values)
  - # of hypoglycemia events < 70mg/dl
  - # of hyperglycemic events > 200 mg/dl
  - # of diabetes patients who had HbA1c's

### Metrics

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<th>% of Hypoglycemia Events</th>
<th>Hypoglycemia Rate</th>
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### Infonet Metrics for Hospital Units

[Graph showing metrics for hospital units]
Monthly Floor Metric Report

Incidence of Hyperglycemia

Jan Feb Mar Apr May Jun July Aug Sept Oct Nov Dec

Incidence of Hypoglycemia

Jan Feb Mar Apr May Jun July Aug Sept Oct Nov Dec

Percentage of HbA1c checked

Jan Feb Mar Apr May Jun July Aug Sept Oct Nov Dec

Road Blocks and Challenges

#1 - Thorough Education: all staff, all patients
Each Unit communicates to staff differently
#2 - Meetings must be cancelled if high census
#3 - Dr. Dulipsingh and I were new employees to hospital working on getting certified

Other Challenges Encountered

#4 - Maternity goals different: hypoglycemia
#5 - Emergency Room (not an in-patient area) developed their own hypoglycemia protocol
#6 - Hypoglycemia policy is for adults but we have 2 Behavioral Health units which accept ages 5-12 year old kids and 13-17 year olds. Sometimes exceptions are made

Challenges continued

#7 - We learned from our mistakes:
* Our first MD speaker for a symposium did not arrive for her 8:00 AM presentation
* The hospital merged with “Trinity Health” and changes followed
#8 - Developing follow up appointments on weekends when provider offices are closed
Most Important Lesson Learned

To get up when you are down, to fight more intensely when you are struggling; to put in the extra effort when you are in sheer pain, to comeback when nobody expects you to, and to stand tall when everyone is pulling you down are what make a champion” Apoorve Dubey

Thank You for your Interest!

Questions??