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**Transitioning Ideas Into Action:  
Applying Evidence Based Practice To  
Your Next Innovative Diabetes Project**


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- Notice of Requirements For Successful Completion
  - Please refer to learning goals and objectives
  - Learners must attend the full activity and complete the evaluation in order to claim continuing education credit/hours
- Conflict of Interest (COI) and Financial Relationship Disclosures:
  - Presenter: Linda Kerr, RN, MSN, FNP-BC, CDE – Certified Pump Trainer – Medtronic Minimed
- Non-Endorsement of Products:
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### Evidence Based Practice


- Evidence Based Practice:
  - Improves patient outcomes
  - Conducted to solve problems and make clinical decisions
  - Projects conducted using rigorous methods to ensure unbiased recommendations
- Joint Commission:
  - Essential element in delivery of quality patient care
- Magnet Organizations:
  - Must demonstrate the support and advancement of EBP



Lee, Johnson, Newhouse, & Warren (2013)


### Inpatient Diabetes Management Evidence Based Guidelines

- The Joint Commission
- The American Association of Diabetes Educators
- The American Diabetes Association
- American College of Endocrinologists
- American Association of Clinical Endocrinologists
- American Heart Association
- Society of Thoracic Surgeons
- American Stroke Association
- Cystic Fibrosis – American Thoracic Society
- Hyperglycemia and Lower Limb Arthroplasty
- ...And Many More...



### Quality Improvement



- Outcome Improvement QI: Improve glycemic outcomes
  - Inpatient Diabetes Team Development Project
    - Improved patient & family satisfaction
    - Improved staff satisfaction
- Reactive or Descriptive QI: React to glycemic related adverse event
  - Orthopedic Surgery Glycemic Control Improvement Project
    - Decrease post-op infection
    - Apply SCIP cardiac glycemic control processes to orthopedic population
- Cost Containment QI: Cost effective diabetes related solutions
  - Decrease 30 Day readmission
    - Discharge pharmacist program
    - Follow up appointment for chronic diseases
    - Outpatient diabetes services
    - Gastroparesis nutrition project



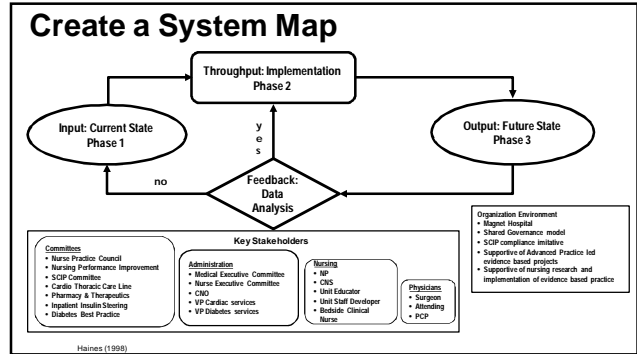
Kolke & Rie (2003)

### Translation of Evidence Into Practice

- Identify the target population
  - ALL patients admitted with a diagnosis of diabetes
  - Patients using insulin pump
  - Postoperative patient populations with diabetes/hyperglycemia
- Obtain organizational support
  - Identify key stakeholders
  - Committee participation
- Implementation plan
  - Patient and family education
  - Staff education
  - Physician/provider education
- Hardware adoption
  - Data analysis
  - Sustained results






Kresse, Kuklinski, & Carcione (2007)




### Project #1: Outcome Improvement QI Inpatient Certified Diabetes Educator Role

- Identify Multidisciplinary Diabetes Team
- Enhance Insulin-Use Safety
- Monitor Hypoglycemic Events
- Facilitate development of
  - Insulin Order Sets: Diabetes populations
  - Insulin Policy & Procedures: All Diabetes Populations
  - Diabetes related Nursing Standardized Procedures
- Identify High Risk Diabetes Populations
- Education:
  - Patient and families
  - All staff
  - Hospital administration
  - Physicians
  - Community

### Diabetes Team: Identify The Need

- Physician concerns: Patients discharged without adequate education for...
  - New diagnosis of diabetes, going home on medication
  - New to insulin
  - Admission with hypoglycemia, DKA, H+NS, insulin pump issues, A1c >8.0%
  - Nutrition education needs are not met
- Nursing concerns: Not enough time for....Not comfortable with...
  - Provision of diabetes education
  - Teaching BG meter use
  - Teaching insulin injection, use of insulin pens, dealing with insulin pumps, etc.
- Patient Concerns: Discharge home without...
  - Diabetes education, referral to outpatient classes and support groups
  - Diabetes education offered in patient's primary language
  - Correct prescriptions for insulin, medication, or devices
  - Referral to a medical home
- Organizational: Frequent readmissions
  - Accountable Care Organization
  - Chronic Disease Management




### What is Known: Literature Review

- Data Base Search
  - School/Hospital Online Library
  - Journal Finder
  - CINHAL
  - ProQuest
  - PubMed
  - PubMed
  - Google



### What is Known: Literature Review

- Key Words
  - Inpatient
  - Cardiac Surgery/Postoperative Care
  - Glycemic/Glucose
  - Management
  - Insulin Management
  - Surgical
  - Perioperative
  - Hypoglycemia



### What is Known: Literature Review

- Evidence Based Articles: Peer Reviewed
  - Consensus Statements
    - Moghissi et al., (2009) – AACE/ADA Inpatient Glycemic Control
  - Clinical Practice Guidelines
    - Umptierrez et al., (2012) – Endocrine Society CPGs
    - Lazar et al., (2009) - STS Practice Guidelines
  - Government Resource
  - Systematic Reviews/Meta-Analysis
    - Newhouse et al., (2011) – APN outcomes 1990-2008
    - Krause (2005) – Economic Effectives of Disease Management Programs
  - Position Statements
    - Clement et al., (2004)
  - Randomized Clinical Trials
  - Case Study
  - Opinion

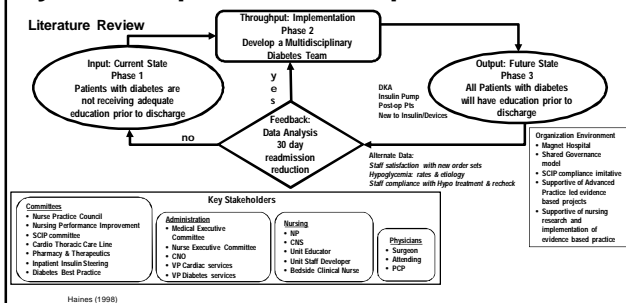


### What is Known: Literature Review

- Scholarly Journals
  - Annals of Thoracic Surgery
  - Diabetes Care
  - Endocrine Practice
  - Journal of Clinical Endocrinology
  - CMS.Gov
  - The Diabetes Educator
  - Nursing Economics
  - American Journal of Health System Pharmacists
  - American Association of Nurse Anesthetists Journal
  - Nursing Administration Quarterly
  - International Journal of Healthcare
  - Disease Management
  - Applied Psychology



### System Map: Outcome Improvement QI

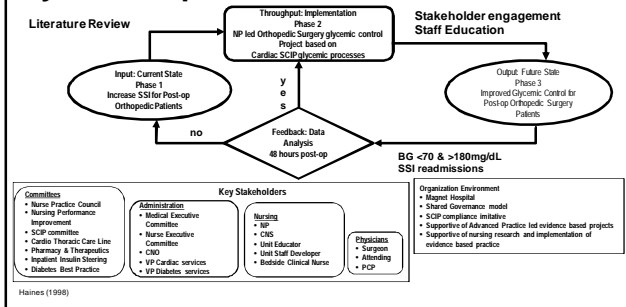


### Project #2: Reactive/Descriptive QI Orthopedic Postoperative Glycemic Control

- Physician Concerns: Increased infection rate...
  - Poor glycemic control for patients with diabetes
  - Uncomfortable with insulin therapy
  - Unfamiliar with current inpatient glycemic guidelines
- Nursing Concerns: Not enough time for...Not comfortable with...
  - Provision of diabetes education
  - Complex insulin therapies
  - Transition from inpatient insulin to home oral diabetes medications
- Patient Concerns:
  - Inpatient insulin
  - Diabetes education, referral to outpatient resources
  - Discharge home with correct prescriptions for insulin, medication, or devices
- Organizational: Cost effective plan
  - 30 day readmission
  - Surgical site infection



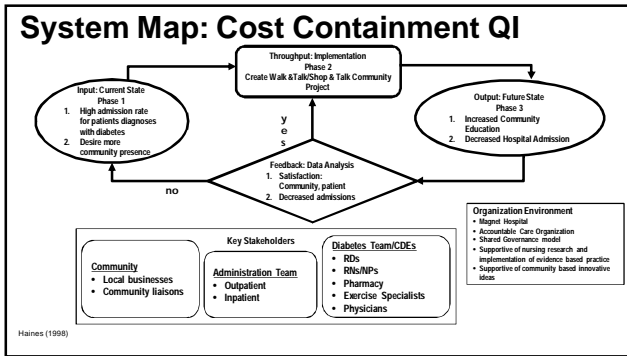
### System Map: Reactive QI



### Project #3: Cost Containment Hospital Admission/Readmissions

- Physician/Organization concerns: Cost effective plan
  - Reduction of hospital admission/readmissions
    - Legal considerations
      - Participation waivers
      - Office of Inspector General (OIG) Compliance
- Diabetes Team/CDEs Concerns:
  - Scheduling
  - Weekend events
  - Curriculum development
  - Consistent quality
  - Safety considerations
  - "Rain day" notification
  - Confirmation of attendance
- Patient Concerns:
  - Safety
  - Special needs





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