

Kenya APHIA Financing and Sustainability Project: Methodology for Developing Clinical Pathways, 1999

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METHODOLOGY FOR DEVELOPING CLINICAL PATHWAYS

INTRODUCTION

Fundamental shortcomings of the traditional health care delivery processes will prompt hospitals and other health care organizations to reengineer care processes and care givers work, in expectation of improvements in a broad range of operational performance measures. Care management is concerned with planning and coordinating care delivery activities in order to provide a smooth and effective progression toward desired clinical and financial outcomes through the timely and synchronized intervention of various disciplines- across time and across settings.

In a hospital, care management activities on a patient ward may include, but are not limited to, assessment and evaluation of a patient's needs upon admission, selection of a care guideline or "clinical pathway", alteration of a standard care guideline, collaboration with physicians and other clinical experts, discharge planning, and patient/family education and liaison. Clinical pathways are useful means to standardize care, to facilitate completeness of services, and to evaluate both the patient's progress and the therapeutic efficacy of the program. Typically, clinical pathways are used for high volume, high risk, and high cost diagnoses and procedures.

Clinical pathways:

- Clarify the big picture. All members of the health care team are aware of the overall care plan
- Extend the benefits of daily orders by providing an integrated overall plan for everyone to use
- Creates common expectations among doctors, nurses, and other care providers
- Ensures regular communication among care givers
- Promotes early problem detection and intervention
- Reduces variation in care and substantially improves outcomes
- An excellent tool for education- staff, students, and others regarding treatment plans and expected outcomes
- Improved working environment- encourages cooperation and mutual understanding of everyone's role in providing quality patient care

A clinical pathway is an optimal sequencing and timing of interventions by physicians, nurses, and other staff for a particular diagnosis or procedure, designed to minimize delays and resource utilization and to maximize the quality of care. The following aspects of the care process are typically tracked:

- Assessments
- Consultations
- Tests
- Treatments

- Nutrition
- Medications
- Activity
- Patient teaching
- Discharge planning
- Other additional categories based on the specific diagnosis or procedure

Clinical pathways feature:

- Comprehensiveness- decision making, services, and interactions among all providers of services for patients covered by the critical pathway
- Timeliness- critical pathways contain specific timelines for interventions to occur
- Collaboration- critical pathways are jointly developed by multiple health care professionals
- Manager- patients on critical pathways have a case manager or case coordinator, usually a nurse

ESTABLISHING CLINICAL PATHWAYS

The process for development and use of clinical pathways will vary among hospital organizations. Nevertheless, the following actions are commonly involved.

1. Select diagnosis and procedures for clinical pathways
 - Diagnosis or procedures are selected based on –
 - Case volume
 - Costs/financial impact
 - High risk/quality assurance issues
 - Not all diagnoses and procedures are suited to clinical pathways
2. Appoint a team to develop clinical pathways
 - The team should include all key caregivers and affected personnel- any member may lead the team
3. Select characteristics for clinical pathway
 - The team defines the scope and format of the clinical pathway and selects other characteristics.
4. Document current process
 - Most clinical pathway efforts begin by documenting current practices and outcomes through patient chart reviews. This helps the team understand the complexities and dependent relations in the process before instituting change. It also demonstrates differences between perceived and actual practices. Current practices are usually documented in detail, including the sequence of timing of specific procedures, treatments, consults and assessment, medications, diet, teaching, and other aspects of care

- Flowcharts and time estimates may be used to clarify understanding(see sample displayed in Figure 1)
 - The format of a clinical pathway is a matrix of activities by day or hour.(a sample is displayed in Figure 2)
5. Study internal and external practices
 - Research at this stage helps the team to clarify their understanding of practice variations and to visualize what an “ideal” pathway would encompass. Clinical pathways from other organizations are helpful during this phase.
 - Key questions:
 - What is done? Why?
 - Does it contribute value? Why?
 - Could it be done in an easier or faster way? Why?
 - What are the barriers to changing practices?
 6. Develop clinical pathway
 - Based on documentation of the current process and research concerning internal and external practices, the multidisciplinary team then develops the pathway.
 7. Implement the clinical pathway
 - Usually a case manager, often a nurse, is designated to track adherence to the clinical pathway, to intervene to facilitate desired outcomes, and to document variances. The team that implements the pathway should be the same team that developed it.
 8. Define key measures of conformance and outcomes
 - It is impossible and wasteful to try to measure everything. It is important to identify the key processes, decision criteria, and outcome measures for each pathway. These factors should be determined by the team during the development stage
 - Typically, measures include compliance with the pathway, timeliness, and types of variations from the pathway. These measures may be changed as knowledge is gained.
 9. Educate all affected staff
 - Every person who may be asked to implement the clinical pathway should be oriented to the clinical path
 - How to collect data
 - How to handle patients who vary from the pathway
 - How to use the clinical pathway for documentation purposes
 - Orientation should be completed before the pathway is implemented
 10. Analyze results. A number of different results can be analyzed:
 - Changes in utilization of resources
 - Variations from clinical pathways
 - Changes in outcomes-

- ❑ Length of stay
- ❑ Readmission rates
- ❑ Infection rates
- ❑ Perceptions of patients and staff

11. Improve clinical pathway as required

- Pathways should be modified based on the above analyses
- Based on availability of new knowledge and technologies
- Key reasons for variations from the clinical pathway provide useful information to improve the pathway continually

12. Results have been documented

- Reductions in length of stay
- Reduced costs and charges
- Improved communication- among doctors, nurses, other staff, and with patients and families
- The perceptions of doctors, nurses, and others are very important to the long-term success of the clinical pathway.

SUMMARY

These clinical pathways are initiated either at the time of admission or at the time of a surgical procedure; they end at the time of discharge. Clinical pathways establish optimal resource utilization and improve communication among doctors, nurses, and other staff. They reduce unnecessary variation in the delivery of and outputs from care. They have been shown to reduce length of stay, improve teaching, reduce costs, and improve the working environment of doctors, nurses, and others. Also, it has been demonstrated that clinical pathways are highly consistent with efforts to stimulate quality improvement.

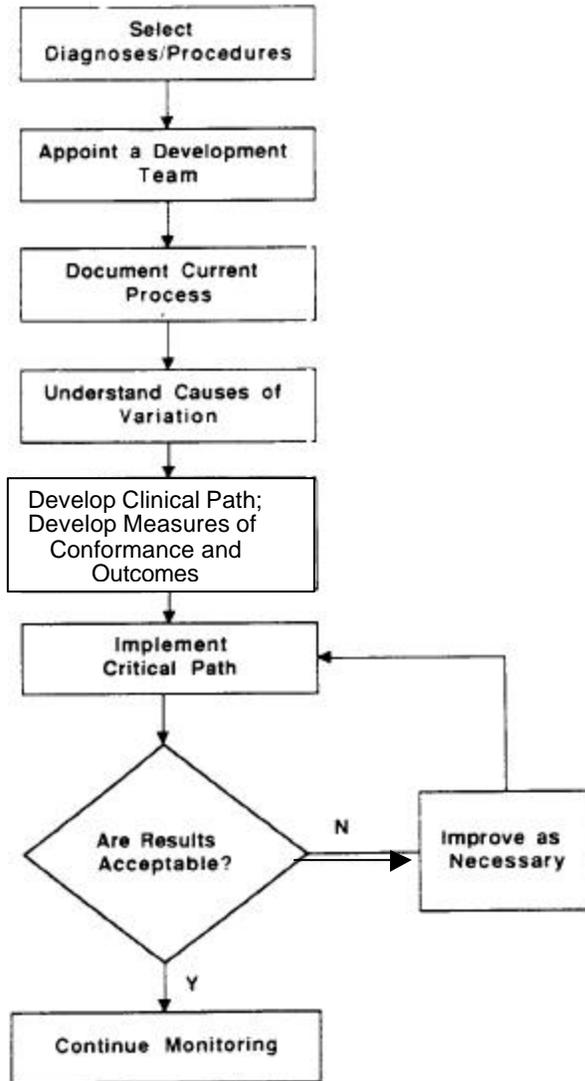


Figure 1 DEVELOPING AND IMPLEMENTING CLINICAL PATHWAYS

CLINICAL PATHWAY: Cervical Spinal Cord Injury with Neurological deficit- without respiratory complications

Attending Doctor:

Date Initiated:

Procedure: Spinal Fusion

Expected LOS: 5 days

	DAY 1 (Admission)	DAY 2/3 (Surgery)	DAY 4/5 (Transfer)	DAY 6/7 (discharge)
Date				
Consults	PMR SCI social worker, SCI nurse, Orthotics, Rehabilitation engineering	Physical, Occupational therapy	Dietitian	Transfer to PMR-SCI Svc.
Tests	Lateral C-spine, CXR, MRI, ABG, Admission Profile.	PARU: CBC, CHEM A & B. ABG CXR. Lateral C-spine	CBC, CHEM A & B ABG, CXR, Lateral C-spine with position change	
Activity	Bedrest (If Stryker, do not turn until lateral C-splines Turn q2h. ROM q4h. Consider rotc test for pulmonary management	Hospital bed turn q2h (log roll) HOB no greater than 30 degrees. ROM q4h. Splints per OT	ROM q4h with progression to sitting. Splints per OT.	
Treatments	Vitals, spinal motor scale checks q1 h. Pin level checks qlh Temperature q2-4h Respiratory assessment q2-4h with Respiratory parameters q2-4h Quad cough technlque q3-4h Foley to DD Assess need for P & PD Bowel Program begun: LCC/SUPP. 0, per NC > Antiembotic socks w ith SCD IS q1hC&DB Nurse Call Device (rehab engineering) Prism Glasses (OT) Maintain traction as ordered (check topknot q2h) Pin care q day.	Vitals, spinal motor scale checks to q 1 -3h Pin level checks q 1 -3h Discontinue o2 if o2 sat >96% Maintain Halo Vest. Pin care q day Neck dressing checked q 1-3 h	Vitals, spinal motor scale checks q4h. Pin level checks q4h Continue Bowel Program Assess for hyperreflexia- BP, Sweats, HA	
Medications	Consider Heparin SQ IVF as ordered Antibiotics x24h Histamine Antagonists IV/NG Narcotic Analgesics IV/1MING Benadryl PRN Consider Steroid	Discontinue antibiotics Discontinue steroid drip	Consider Heparin lock Histamine antagonist PC Analgesics P0	
Diet	NPO x Ice chips NO to LCS If nauseated – NPO	Advanced to clear liquids If Bowel sounds present.	Diet as tolerated (at preadmission level)	
Patient and Family Education	Teach anxiety relief measures (i.e. guided imagery, relaxation techniques) PreOp education per unit policy. Orient patient and Family to ICU policy, procedures and family support group. Assess discharge needs	Assess family/patient knowledge of injury and consequences. Assess psychological stage of injury	Prepare for transfer to acute care unit Reassess discharge needs Consider rehabilitation dept. tour- patient and family	Prepare for transfer to rehab unit