Essay on clinical pathways

The decision support systems that are now used by many of the healthcare providers have aided to their better decision making capabilities. Due to the Invasion of Information Technology in the healthcare domain, computers are used to validate and suggest the Healthcare professionals about the diagnosis of the disease and the correct line of treatment for the Patients. According to various sources this kind of system has given a whole new Dimension to the management of delivery of healthcare.

Quality management Science is a branch of science that deals with the new and improved approaches in managing the delivery of healthcare. Clinical Pathways is one such contribution by Quality Management science to the Healthcare industry.

Clinical Pathways is interdisciplinary in Focus. It is both a Tool and a concept that embeds guidelines and protocols and evidence-based best practices into everyday use for a Patient. Clinical pathways is usually misunderstood with Clinical Protocols where Clinical Protocols is all about defining and standardizing the line of treatment for particular diseases. They are basically treatment recommendations and are used to minimize the treatment variations. Protocols are also mostly focused on guideline compliance, and they do are not much focused on the rate-limiting steps during the individual Patient care process. Whereas, Clinical Pathways is a super set of Clinical protocols and along with the guidelines and treatment recommendations it also includes a continuous monitoring and data-evaluation element in it.

This essay deals with the various definitions of Clinical Pathways, its need and the procedure of development of a Clinical Pathway. It also deals with

the Limitations and Potential Benefits of Implementing a Clinical Pathway. Finally a conclusion shows some of the universal assumptions and addresses the challenges of adoption of Clinical Pathways.

The term “ Clinical Pathway” was first used at the New England Medical Centre in 1985. (Zander et al. (1987). This term is now internationally accepted in all settings of healthcare management. (Hindle & Yazbeck 2005, Sermeus et al. 2005, Vanhaecht et al. 2005). There has been a difference in the meaning of Clinical pathway from Country to country, as an example, the term clinical pathway in U. S. A basically defined the ways to balance the cost and the quality as the costs of healthcare are escalating, whereas in United Kingdom Clinical pathways define continuum of care across various healthcare settings. As there are different purposes for the same term, there is no widely accepted definition of Clinical Pathways.

According to (De Bleser et al. 2006) A Clinical Pathway states the goal of care based on Evidence based Medicine Guidelines and Best Practices. To improve the quality of care, increase patient satisfaction, make use of resources efficiently and reduce the Risks- this is the main aim of Clinical Pathways. It basically stresses on efficient patient care management system in well-defined period of time.

Garbin (Garbin, B. A. 1995) defines a Clinical Pathway as a comprehensive method of planning, delivering, and monitoring patient care.

Clinical Pathways are also known as Care Pathways, care maps, integrated Care Pathways or critical Pathways. These are used to manage the quality of

Healthcare and standardize the care process based on the evidence-based outcomes.

2. The Need for Clinical Pathways

The need of a standardized pathway or Route in developing the treatment lines for every individual patient is very necessary. Clinical Pathways are basically necessary in order to

a) Improve the patient care quality by reducing the medical errors with the help of decision support systems and also by eliminating prolonged length of stay.

b) Maximize the efficient use of resources in order to reduce the cost.

c) Design Effective Clinical Processes i. e., Best Practices based on the clinical evidences.

d) Standardize those effective diagnostic and Treatment lines in order to attain higher percentage of Success in terms of Positive Patient Outcomes.

3. Clinical Pathway Development

In order to develop a Successful Clinical Pathway there is a need for analysing different problems that are there in the system. A questionnaire is to be build and then the problems in the system are to be identified. The problems on why the patient outcomes are not satisfactory can be listed down by the employees in every discipline ranging from a nurse to a Physician, and hence Clinical Pathways are Multidisciplinary in focus.

After analysing and identifying the problem, there is a need to build a PDSA (Plan Do Study Act) Cycle to improve the service, as PDSA is a model widely used as an improvement model. The steps in PDSA Cycle for Clinical Pathway Development are explained below.

In this cycle questions are designed such as what is going wrong in the system, and in what area, what is the role of each employee in the care delivery cycle and what are the outcomes we need to achieve are also specified in this stage. Based on this a Plan is developed and it is ready to implement.

An experiment is conducted to see if the proposed plan is working and then any unexpected outcomes are noted down. If there are any such unexpected outcomes then everyone looks at the plan and studies it and sees whether the outcomes might be different considering different conditions.

Then a decision is made as to what is to be done in the next cycle. If the plan was unsuccessful due to no positive outcomes, should the change be abandoned or implemented is decided.

Using Plan Do Study Act Cycle in Endoscopy, Cardiff and Vale NHS trust reported better patient outcomes. There was a reduction in nurse-led patient’s non-attendance or cancellation rate from 18% to 6%. This would scale up to increase in attendance of 500 patients a year.

The various prerequisites for a clinical Pathway development are: There is a need for a strong commitment by Senior Management, nurse leads and Physicians, The clinical pathway documentation should be clear, easy, simple

and user friendly. The pathway should consider why interventions are performed and by whom, this is necessary because the role of each professional involved in the care cycle contributes to the outcomes of the Patient Healthcare Quality.

4. Clinical pathways – Implementation Strategy

The Implementation strategy of the Clinical Pathway Development can be as follows.

a) Selection of a Topic: There is a need to first Identify what is the high-volume, High-cost treatment and diagnosis Department which needs to be optimized, based on that we can create efficient Pathway for that particular area of concern. Example: Developing a Clinical Pathway for Cardiovascular diseases and procedures.

b) Selection of a Team: There is a need of Identifying active group of Nurses and Physicians who can take up leadership positions. Not only the team consists of Physicians and nurses but also representatives from all the groups involved in the care delivery process are needed.

c) Evaluation of the Current Care Process: After the first two steps are completed, A careful review of the medical records is required. This step can prove to be the key to understand Current variation in the treatment process and also lets us identify the intermediate outcomes.

d) Evaluation of Medical Evidence and External Practices: After evaluating the current inefficient practices, there is a need to search for and identify the

best practices. To do this there is a need to evaluate the medical literature available to identify the evidence of Best Practices.

If there is no such best practice literature available, then the department can consider the best practices of other institutions or can consider their own historical Institutional practices as the benchmark to develop the best practice at their Hospital.

e) Formulation of Critical or Clinical Pathway Format: The pathway should include a Gantt chart or a time and task matrix to keep a track of the performance. Also a simple check list is to be maintained for a spectrum of pathways.

f) Documentation and analysis of Variance: The most important aspect in the development of a Clinical Pathway is the identification of Key features in the Process Improvement. Variance in Clinical Pathways can be caused due to the omission of the performance of an action at an inappropriate time. Most often the inappropriate time can be attributed to late service or a service that is given for a long period of time. Example: The length of stay in the ICU (Intensive care unit). (Nicola Davis, et al. 2005)

5. Benefits of Clinical Pathways

Clinical Pathways support standardization by establishing protocols not only for the Treatment Procedure but also for the entire staff involved in the care cycle. Once the Standardization is established, the variance in the patient outcomes for the same treatment procedure can be reduced to a significant extent. Clinical Pathways are proven to improve Clinical Outcomes.

Clinical Pathways support training of the staff that would lead to better performance from the staff. Resources are used efficiently due to the use of Clinical Pathways and can also lead to reduction in the documentation of Patients.

Clinical Pathways provide a means of continuous improvement and thus guarantees high quality of care. The continuous improvement is done by the Plan Do Study and Act Model. Another major benefit of Clinical pathways is that it helps improve communication between different departments of care delivery within the organization and also help manage clinical risk and empower patients. (Nicola Davis, et al. 2005)

These standardized Pathways provide a baseline for future initiatives and finally is expected to reduce costs by reducing the variance and the length of stay of patients and increasing the quality of care by increasing the patient attendance and thereby preventing the risk of severity of the diseases by continuous monitoring.(Joanne B, et al)

Various technologies used in the development of Clinical Pathways are Oracle 9i which is used as the common data storage, HL7, Edifact and XML protocols are used to support the integration of systems.

6. Potential Problems to Introduction of Clinical pathways

Implementation of Clinical Pathways requires extreme commitment from the staff and demands the organizational structure to modify itself to suit the demands. It may actually require the establishment of new organizational structure.

It requires the use of new Technology for which the Hospital might need to do an initial Investment. The introduction of IT and the change in the organizational structure might take some time to get accepted at the workplace. The clinical pathways formulated will suit the standard condition or the usual conditions better than unusual or unpredictable conditions and hence if the condition is unusual the Clinical pathway defined can be ineffective. Also the standardized Pathways don't respond well to the unpredictable changes in a patient's condition.

There is a need to ensure that outcomes and variance is properly recorded and audited, so that the effort that is being spent doesn't go a waste, and the outcomes attained are authentic and doesn't give false inferences.

7. Conclusion:

Though there have been so many anticipated benefits of implementing Clinical Pathways, its benefits have not been tested in a controlled and a scientific Fashion to get quantifiable benefits. There have been only pilot studies and success has been achieved only by some of the Health Management Organizations by the implementation of Decision Support Systems which form a part of Clinical Pathways. The Partners healthcare system has reported an outcomes improvement in 68% of trials using Clinical Decision Support system. As already mentioned in the Potential problems section of the report, the Clinical Pathways works effectively for some of the usual and predictable conditions and may not be effective for unpredictable conditions. Partners' healthcare clinical Decision Support system was unable to suggest treatments for 28% of the cases and in 55% of the cases it didn't have any usable information (Ely JW, et al. 2005). This

shows that there is a need of complete and perfect implementation of a Clinical Pathways in order to reap quantifiable benefits.

There is a potential barrier for the adoption of Clinical Pathways due to resistance of senior physicians to flexibly adopt the changes and make them believe in the benefits of implementing Clinical Pathways. The resistance is basically due to the intrusion of IT into the system and also the Pathways would offend and question the integrity of the senior Physicians is the assumption.

If the junior medical staff is engaged into this venture, they would find it difficult to participate in the implementation of the pathways due to their limited free time and heavy work load. There is also one more major challenge in the implementation due to the mismatch in common meeting times across various disciplines. As the crux of implementing Clinical Pathways is to get the multidisciplinary staff involved, this would be really difficult to get all the heterogeneous staff involved in the training and implementation of Clinical Pathways.

Considering all the factors we can conclude that there is not yet any scientific study in the area of Clinical Pathways that can guarantee the significant benefits. This area remains untouched and opens a lot of scope for research in this area. The outcomes are yet to be measured and inference is yet to be made in a concrete scientific manner.