Quality improvement
Process/Cycle

Action orientated audit

By

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What is quality?

- Difficult-to-define words
- Understand at least in terms of concrete items such as cars, cameras and computers.
- We know it has something to do with goodness and value.
In terms of health care a number of dimensions of quality are talked about:

- effectiveness,
- equity,
- humanity and
- efficiency
- value for money
Quality improvement involves assessing the current level of performance in health care and efforts to improve the provision of health care.
The process of quality improvement is based on a **cycle**, so conceptualized because it is never ending.
Quality improvement cycle

1. Choose a topic
2. Form a team
3. Set standards
4. Gather data
5. Assess current practice
6. Develop and implement a plan
7. Evaluate
Choose a Topic

Some questions to ask in selecting a topic include the following:

- Is this something I / we have influence over or can do something about?
- Would dealing with this issue make a significant difference to the way we work?
- Why do I want to work on this?
Choose a Topic

- Will this process improve the experience and outcomes for our clients (patients)?

- Is success in improving quality in this area a possibility?
Form a Team

- QI is not a one man show.

- Health care is a team effort and only the team can bring about improvement.

- Who should be included in the team will depend on the topic chosen. Be as inclusive as possible.
Form a Team

- May consider a core team to lead and implement the process, and a broader support team (stakeholders) to include people of influence who are needed to support proposed changes.

- Include patients (clients) in the team wherever possible.
Set Standards

- Standards should be set towards one’s aim.

- Here evidence-based practice is important.
Standards

- Standards are **desired performance levels** for criteria chosen by the team.
- Criteria relate to
  - **structures** (staff and equipment),
  - **process** (activities taking place within the hospital), and outcomes (end points of care).
- Criteria should be **important, measurable** and clearly **related to quality of care**.
Gather Data

- This involves finding out what is happening at present in order to measure present practice against.
Assess Current Practice / analyze the gap

- The team *analyses* the data gathered and *compares it* to the standards set in order to ascertain the *gap* between current practice and desired outcomes.
Often it is difficult to understand why there is the gap between reality and ideals, and problem-analysis techniques are needed to analyse clearly what the reasons are.

Such techniques include brainstorming, fish-bone analysis, tree diagrams, and others.
Develop and Implement a Plan

- Decide what needs to happen to move towards the standards set.
- Focus on solutions rather than rehashing the problem or finding scapegoats.
- Think laterally and creatively. Solutions may be unexpectedly simple.
Develop and Implement a Plan

- If the gap between the standards and the reality is wide, aim for an incremental improvement in quality, making a plan that has reasonable chance of success.

- The ultimate aim of the spiral is to reach the standards, but the aim of each cycle is simply to move towards those standards.
Develop and Implement a Plan

- Therefore the team sets **specific objectives**, with a **practical action plan** linked to each objective.

- These objectives must be **realistic** in terms of context and current level of quality.

- The plan based on these objectives must clearly specify **who** will do **what** by **when**
Plan Must be **SMART**
- **S** - goals must be **Specific**
- **M** - targets should be **Measurable**
- **A** - goals should be **Adjustable**
- **R** - goals must be **Realistic**
- **T** - targets should be **Time based**
Then **make it happen**. The core team needs the support and help of colleagues and management – the other stakeholders referred to earlier.

- Implementation and feedback should be continuous.

- The team should meet regularly to ensure that implementation is happening and to make adjustments to the plan as is needed.

- Flexibility in terms of the plan is important.
The team needs to review whether there has been any improvement in the quality of the aspect of health care being addressed. To do that a new set of data needs to be gathered and compared with the previous data as well as the current and target standards. On the basis of this further plans are made and implemented and the spiral continues.
Cryptococcal Meningitis at Northdale Hospital

- Problem:
  - Recurrent readmissions for cryptococcal meningitis
  - Varying length of stays and patient outcomes
Form a team

- Clinical head: Dr. Sirkar
- Principal Family Physician: Dr. M. Naidoo
- Chief Family Physician: Prof Cassimjee
- Lab Microbiologist
- Principal Specialist Infectious diseases: Dr. Dawood – Greys
- Infection Control Practitioner
- Medical Ward unit manager
Identify current practice

Northdale Hospital statistics:
July 2006

Lumbar Punctures done: 107
Normal results on CSF = 68
= 63%

TB Meningitis on CSF = 20
= 19%

CryptoCoccal Meningitis = 14
= 13%

TB and CryptoCoccal Meningitis on CSF = 5
= 5%

Total cases of CryptoCoccal Meningitis = 18 = 18%

Currently 16 October 2006 6 patients with CryptoCoccal Meningitis in ward at present
Current Treatment Modalities:

1. **Fluconazole**
   - 800mg Fluconazole po stat
   - 400mg daily po for 3 months
   - 200mg daily po then for life

2. **Fluconazole**
   - 400mg daily po for 3 months
   - 200mg daily for life

3. **Amphotericin B**
   - 0.7 mg/kg/day ordered on diagnosis
   - Obtained and started by day 3
   - Stocks run out by day 7
   - Up to 3 day wait for further stocks to arrive
   - Duration of therapy usu under 7 days
   - Patients are then commenced on Fluconazole 400mg daily and discharged; supposedly duration of Fluconazole would then be for 3 months.
Other considerations – Current Practice

- At LP opening pressures are not measured
- No CSF manometers available
- Patients still complaining of headaches after 1 or 2 days of therapy for cryptococcal meningitis are assumed by some doctors to have
  - Resistance to treatment
  - Booked for urgent CT Brain scans
  - Request made to do therapeutic csf tap and drain 10 to 20mls of CSF
  - Started on IV Rocephin
  - Started on TB treatment
  - Booked for Urgent assessment at ARV Clinic
Length of stay is problematic as doctors are unsure when to discharge.

Patient education and family counseling is not done.

Families are expecting a cure.

Recurrent presentations of the same patient at night with headaches, after how many days should a diagnostic LP be redone, eg patients discharged today on Diflucan presents in 3 days with a new folder and gets a repeat LP.
Other considerations – Current Practice

- Patients from other hospitals on therapy for cryptococcal meningitis, what treatment regimen is to be used when the LP is done here?

- Routine screening for Cryptococcal Meningitis by ARV clinics, is this acceptable?

- After a therapeutic CSF tap, when should this be repeated and how often?

- Neurology and Neurosurgical registrars at higher levels of care often refer patients with cryptococcal meningitis for serial CSF taps, what protocol should be followed?

- Patients discharged after acute hospitalisation rarely present regularly for maintenance Fluconazole.

- Should Fluconazole be stopped in patients on ARVs?
Recommendations

- CSF culture is the gold standard in diagnosing an acute infection
- India Ink stain does not always mean intensive treatment
- Pulse therapy
- Resource needs for optimum therapy
- The ARV clinic - Cryptococcal Meningitis partnership
- Value of CSF manometry
- Development of a treatment guideline
FRAMEWORK FOR QUALITY IMPROVEMENT PROCESS

PROBLEM SOLVING
- Identify problems
- Define the problem
- Identify a team
- Analyse the problem
- Choose a solution
- Implement the solution

SYSTEMS DESIGN
- Plan
- Set standards
- Communicate standards

EVALUATE
Quality improvement cycle

Choose a topic

Form at team

Set standards

Gather data

Assess current practice

Develop and implement A plan

Evaluate
The end