Clinical Governance: Quality Health-Care System for 21st Century

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Abstract

Clinical governance is a system through which all organizations in the health system are accountable for continuously improving the quality of their clinical services and ensuring high standard of care by creating a facilitative environment in which excellence flourishes. Clinical governance has not been an important component of healthcare delivery in Nigeria. Clinical Governance has become the most important component of health care system for the 21st century. The aim is that, health care should be safe, effective, patient centered, timely, efficient and equitable.

Keywords: Clinical governance, health-care delivery, Nigeria

What is Clinical Governance?

1. Clinical governance is a system through which all of the organizations in the health system are accountable for continuously improving the quality of their clinical services and ensuring high standards of patient care by creating a facilitative environment in which excellence will flourish. Clinical governance is a way of making sure that everyone who passes through health system is well cared for. It is a system that enables staff to perform to the highest possible standards
2. What the above mean in practice:
   - Put patients/clients/customers first and last
   - Improve standards of working
   - Learn from experience
   - Enable staff and team use information effectively.

Components of Clinical Governance

The following components have been identified as necessary:

1. Clear national standards
2. Mechanisms for ensuring local delivery of these standards
3. Mechanisms for monitoring the delivery of these standards.

Identified standards

- Clinical standard: Continuing professional development and lifelong learning, job plan, risk management, etc.
- Evidence-based medicine: This can be applied by workforce planning and monitored by clinical audit.

Clinical Governance in Nigeria

- The question to ask is: Do we have clear national standards in Nigeria?
- Until recently, we did not. However, the National Health Act came into force in November 2016 although not yet implemented. It attempts to set out clear national standards for Nigeria. Implementation of the Act will attempt to ensure local delivery of the standards and possibly monitoring of the delivery
- Clinical governance has not been an important component of our health delivery system in Nigeria. It is not taught in medical schools and during residency and very few health institutions pay attention to it. However, clinical governance has become the most vital component of the 21st-century medical care and forms the basis of this lecture.

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Aims for the Health-care System in the 21st Century

- Health care should be:
  - Safe: Avoiding injuries to patients from the care that is intended to help them
  - Effective: Providing services based on scientific knowledge to all who can benefit
  - Patient centered: Providing care that: Is respectful of and responsive to individual preferences, needs, and values
  - Timely: Reducing waits and undue delays for patients
  - Efficient: Avoiding waste of supplies, ideas, and energy
  - Equitable: Providing health service that does not vary in quality because of personal characteristics, gender, ethnicity, or socioeconomic status.

Evolution of Modern Health Care

Stage 1 health-care development (19th and early to mid-20th century)

- It is characterized by highly fragmented delivery system with physicians and hospital and other health-care organizations functioning autonomously
- Patients rely on physician training and experience and good intentions for guidance
- Individual clinicians do their best to stay abreast of the literature and rely on their own experience to make best decisions
- Information technology (IT) tools are entirely absent. Patients' role tends to be passive
- This is still the stage of development of many health-care institutions in Nigeria, especially at primary health-care and general medical practice level.

Stage 2 health-care development (20th century)

- It is characterized by the formation of well-defined networks, greater use of informal mechanisms to increase patient involvement in clinical decision-making, and formation of loosely structured multidisciplinary teams
- Health care is organized around areas of specializations and institutions
- Patients have more access to health information through print, video, or internet-based materials than Stage 1 and more formal mechanisms exist for patient input
- Most health data are however paper based. Little patient information is shared among settings or practice
- This is the stage of some health-care settings in Nigeria at secondary and tertiary levels. Many have not even attained this level.

Stage 3 health-care development (late 20th century)

- Health care is still organized in a way that is oriented to the interests of professionals and institutions, but there is some movement toward patient-centered system and recognition that individual patients differ in their preferences and needs
- Team practice is common, but changes in roles are often slowed by stymied institutional, labor, and financial structures and by law and custom
- Some training for team practice occurs, but that training is typically fragmented and isolated by health discipline such as medicine, nursing, or physiotherapy
- Clinicians and managers recognize the increasing complexities of health care and opportunity presented by IT
- In Nigeria, there are very few public and private tertiary institutions operating at this level.

Stage 4 health-care development

- This is the health-care system of the 21st century and supports a continuing improvement in the six aims of safety, effectiveness, patient centeredness, timeliness, efficiency, and equity
- Health-care organizations in this stage have the characteristics of other high-performing organizations. Patients have the opportunity to exercise as much or as little control over treatment decisions as they choose
- Services are coordinated across practices, settings, etc., using increasingly sophisticated information systems
- Nigerian health-care systems are still in Stage 1 or Stage 2, very few in Stage 3, and none in Stage 4. To be world class and in tandem with the 21st century care, it has to move to Stage 4.

What to Do to Improve Health-care Process to Stage 4

- To successfully carry out these improvements in Nigeria, health-care process should be completely redesigned and transformed in ways very different from what is currently obtaining in all sectors of health care in the country. It should be redesigned and made to be:
  1. Safe: Avoiding injuries to patients from the care that is intended to help them
  2. Effective: Providing services based on scientific knowledge to all who can benefit
  3. Patient centered: Providing care that: Is respectful of and responsive to individual preferences, needs, and values
  4. Timely: Reducing waits and undue delays for patients
  5. Efficient: Avoiding waste of supplies, ideas, and energy
  6. Equitable: Providing health service that does not vary in quality because of personal characteristics, gender, ethnicity, or socioeconomic status.

Challenges in Redesigning Health-care Process

To redesign health care, health-care managers will need to meet the following six challenges:

1. Redesign of care process based on best practices

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2. Knowledge and skills' management
3. Use of ITs to improve access to clinical information and support clinical decision-making
4. Development of effective teams
5. Coordination of care across patient conditions, services, and settings over time
6. Incorporation of performance and outcome measurements for improvement and accountability.

Redesigning for Safety

- Health care should be safe: Avoiding injuries to patients from the care that is intended to help them
- The prevention, detection, and mitigation of harm occur in learning environments, not in an environment of blame and reprisal
- Designing systems for safety requires specific, clear, and consistent efforts to develop a work culture that encourages reporting of errors and hazardous conditions and communication among staff about safety concerns
- There is also a need for transparency. The health-care system should make information available to patients and their relatives that allows them to make informed decision when selecting treatment plans.

Designing System for Safety Involves Three-Part Strategy

1. Designing systems to prevent errors by simplification and standardization and avoid reliance on memory
2. Designing procedures to make errors visible when they occur
3. Designing procedures that can mitigate harm from errors, for example, having antidotes or training staff to deal with unexpected complications during treatment, etc.

Illustrative Case on Safety in Patient Management

- Mrs. F. O. had a deep-vein thrombosis which was treated with heparin and subsequently warfarin. She was discharged on 10 mg of warfarin daily. Two months later, she was admitted with right hemiparesis. Her blood pressure was 140/90 and pulse was 65/min. She is not a known hypertensive or diabetic patient. A computed tomography (CT) scan showed intracerebral hemorrhage on the left parietal lobe. Clotting studies showed international normalized ratio (INR) of 6.0.

Comments

- This patient had intracerebral hemorrhage complicating warfarin poisoning. She was on treatment with warfarin without weekly INR. She took the medication for 2 months without monitoring her INR, thus breaking safely rule
- This patient with stroke was given Vitamin K, warfarin was withdrawn, and INR was monitored. Routine intravenous (IV) dextrose saline 3 L a day, 20% mannitol 400 ml stat to run fast over 20 min, and 200 ml every 4 h to run fast over 10 min for 24 h were given (the patient had raised intracranial pressure). She improved gradually and was discharged home after 4-week admission.

How to Design for Safety

- There should be well-articulated standard procedures for all therapeutic activities, for example: (i) for warfarin treatment, weekly INR and adjustment of the warfarin dose to obtain INR between 2 and 3. (ii) For horse serum such as anti-tetanus serum, a test dose before administering
- There must be antidote if there are toxic or idiosyncratic reactions, for example: (i) Vitamin K for warfarin intoxication; (ii) subcutaneous adrenaline for anaphylactic reactions.

Redesigning for Effectiveness: Scientific Knowledge

- For effectiveness, patients should receive care based on the best available scientific knowledge. Care should not vary illogically from clinician to clinician or from place to place but should be evidence based
- This calls for knowledge and skills management from growing complexity of knowledge
- Health-care today is characterized by more to know, more to do, and more people involved in doing it
- Science and technologies involved in health care have advanced more rapidly than our ability to deliver them safely, effectively, and efficiently. This rapid growth of knowledge constitutes a big challenge to health-care workforce
- The weakest link in delivering quality care is poor knowledge and not necessarily lack of sophisticated medical equipment.

Preparing the Workforce

- To achieve the six aims of 21st-century health care, additional skills may be required of health professionals
- The types of new enhanced skills required by health professionals might include, for example, the ability to:
  1. Use a variety of approaches to deliver health care
  2. Synthesize the evidence base and combine the evidence base and knowledge about outcome and patient preference to tailor care for an individual patient
  3. Communicate with patients in an open manner to support their decision-making and self-management.

Training Needs

- Health practitioners need training in core knowledge focused on causes, basic mechanism of disease, patient

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management, and expected outcome as effective tools to support their clinical decision-making as well as communication with patients for self-management and prevention
- They need to constantly update their knowledge in common clinical conditions they come across and this should be a habit
- Those to carry out these training must be effective in teaching evidence-based practice and patient care skills and must be experienced in conducting literature search to evaluate the current knowledge.

Illustrative Cases: Effectiveness of Treatment as a Factor of Knowledge

First case

- A 60-year-old trader, C. A., was admitted by a general practitioner having sustained a stroke with left-sided hemiparesis
- On examination, he had a pulse of 60/min and blood pressure of 220/110. He had muscle power Grade 4 on the left upper and lower limbs. He was treated with IV hydralazine to reduce the blood pressure
- On the 2nd day, he had blood pressure of 150/90. The paralysis got worse with muscle power Grade 0 on the left limbs; he became drowsy and showed clear evidence of deterioration.

Second case

- A 55-year-old accountant was admitted to a teaching hospital having sustained ischemic stroke with right-sided hemiparesis. He was a known hypertensive patient but was not taking his medication regularly and had been lost to follow-up
- On examination, he had right-sided hemiparesis with muscle power Grade 1 on the right upper limb and Grade 2 on the right lower limb. He had expressive aphasia. He had a pulse of 60/min and blood pressure of 210/120. He was conscious but drowsy
- He was treated with dextrose saline ½ L 4 h, 20% mannitol 400 ml with frusemide 20 mg IV, followed by 200 ml 4 h with 10 mg IV for 24 h. The next day, he had greatly improved. He looked brighter and was no drowsier. He had muscle power Grade 3 on the upper limbs and Grade 4 on the lower limb. The aphasia had greatly improved. His pulse was 88/min and blood pressure was 180/100.

Comments

- The first patient was treated by a doctor with poor knowledge of how to treat stroke. He therefore did not know that blood pressure should not be reduced in patients with ischemic stroke because of loss of autoregulation. He reduced the blood pressure with hydralazine and made the patient worse
- The second patient improved because he was treated by a doctor with correct knowledge. Not only did he not reduce blood pressure he recognized that he had raised intracranial pressure. He gave fluid therapy to increase brain circulation and mannitol to reduce intracranial pressure. The patient therefore improved rapidly.

Illustrative Case: Lack of Clinical Expertise Medical Treatment

- A. B. is an accountant who saw a doctor on account of sudden onset of double vision. Prior to the episode, he was well
- On examination, the doctor found that he had double vision on looking to the right on account of 6th nerve palsy. He then suspected a raised intracranial pressure from a possible brain tumor since 6th nerve palsy usually suggests raised intracranial pressure. He ordered a CT scan of the brain from Medicure Diagnostic Centre, which turned out to be normal. He requested an magnetic resonance imaging (MRI) which was also normal
- He then requested MRI with contrast which was also normal. The MRI was sent to India for interpretation which came back normal
- He was then referred for further treatment in India. The patient could not afford the N3 million that was the estimated cost given to him. He complained about this to a friend and was then taken by him to a local neurologist who examined him and requested a blood sugar and HbAlc investigation. He was found to be a diabetic. The 6th nerve palsy was attributable to diabetic mononeuropathy. He therefore did not need any further imaging after the CT scan.

Comments

- Before he was seen by a neurologist, he had spent N400,000.00 on investigations. He would have saved this money if he had been referred to neurologist by the first doctor who saw him. This illustrates the fact that sophisticated medical equipment is not the answer but expert knowledge.

Redesigning for Effectiveness: Applying Evidence to Health Care

Evidence-based practice

- Evidence-based practice is the integration of best research evidence with clinical expertise and patient values
- Evidence has always contributed to clinical decision-making, but the standard of evidence has become more stringent and tools for its assembly and analysis have become more powerful and more widely available
- The most common approach to synthesizing and integrating the results of the primary studies is the conduct of systematic reviews and the development of evidence-based practice guidelines.

Systematic reviews

- Two organized efforts are directed at conducting systematic reviews or meta-analysis:

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- The first is the Cochrane collaboration, an international network of health-care professionals, researchers, and consumers, which develops and maintains regularly updated reviews of evidence from randomized controlled trials and other research studies. The collaboration maintains the Cochrane library, a collection of several databases, that is updated quarterly and distributed annually to subscribers on CDROM or via the Internet
- Second, the agency for Healthcare Research and Quality Evidence-based practice Center program was started in 1997 and has resulted in the establishment of 12 centers, located mainly in universities, medical centers, and private research centers.

Practice guidelines

- Clinical practice guideline can be defined as systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances (Institute of Medicine, 1992)
- Guidelines build on synthesis of evidence, but go one step further to provide formal conclusions or recommendations about appropriate and necessary care for specific type of patients
- Guidelines vary greatly in the degree to which they are derived from and consistent with evidence base in order to identify those with adequate evidence base.

Clinical guidelines

- The Agency for Healthcare Research and Quality in Partnership with American Medical Association has developed a national guideline clearing house which became operational in 1999. The clearing house provides online access to a large and growing repository of evidence-based practice guidelines
- However, developing and disseminating practice guidelines alone has minimal effect on clinical practice (Cabana *et al*., 1999). However, a growing evidence indicates that guidelines implemented with patient-specific feedback and computer-generated reminders lead to significant improvements
- Effective clinical guidelines are needed for the management of common diseases in Nigeria and effort should be made to develop them in all specialties adapting the existing international clinical guidelines.

Illustrative Case: Evidence-based Practice

- Case 1: A. O was a 35-year-old civil servant who was admitted with cardio-embolic stroke due to mitral stenosis and atrial fibrillation. He was treated with full heparin and then given warfarin. On the 2nd week, he suddenly became comatose and CT scan showed intracerebral hemorrhage, i.e., hemorrhagic transformation of ischemic stroke
- Case 2: B. O. was an accountant who was admitted to the hospital with cardio-embolic stroke due to mitral stenosis with atrial fibrillation. He had left hemiparesis with muscle power Grade 2 on the upper and Grade 3 on the lower limbs. He was given dextrose saline 3 L a day and aspirin 300 mg daily. He improved and was discharged home after the 4th week of admission. There was no recurrence of the stroke during admission.

Comments

The first patient was treated by a doctor who did not follow evidence-based practice guidelines and gave anticoagulant to the patient ostensibly to prevent a stroke recurrence. However, evidence-based practice suggests that there should not be anticoagulation as this may cause hemorrhagic complication of the cerebral infarction. This indeed occurred in this patient. The second patient did not have anticoagulant and recovered.

Redesigning for Patient Centeredness

- The system should be designed to meet the most common types of needs but capable of responding to individual patient choices. Patients should be given the necessary information and the opportunity to exercise the degree of control they chose. They should have unfettered access to their own medical information and to clinical knowledge
- Clinicians and patients should communicate freely and share information. This can be achieved by training health workers on correct social skills. Such training is gradually being recognized as important and in the department of medicine, patient communication is now routinely being taught to medical students. Residents are also examined on it. It should however be formally extended to all health workers including nursing staff, physiotherapists, pharmacists, social workers, and others.

Building a Patient-centered Culture: Role of Communication

Communicating effectively with patients and families

- Communicating effectively with patients and families is a cornerstone of providing quality health care. The manner in which a health-care provider communicates information to a patient can be equally as important as the information being conveyed
- Patients who understand their providers are more likely to accept their health problems, understand their treatment options, modify their behavior, and adhere to follow-up instructions. The single most important criterion by which patients judge us is by the way we interact with them
- It stands to reason therefore that effective communication is at the core of providing patient-centered care. Patient surveys have demonstrated when communication is lacking, it is palpably felt and can lead to patients feeling increased anxiety, vulnerability, and powerlessness
- In one-on-one interactions with patients, and in organizational systems in place to promote dialog,

patient-centered hospitals are demonstrating the profound difference between communicating to patients and families and communicating with them. Communicating to them does not necessarily mean you are communicating with them.

Illustrative Case: Patient Centeredness

- Dr. A. O. was a general manager in a Government parastatal. He came to see a neurologist because of severe deterioration in his cognitive functions and inability to function
- He had earlier been seen by a doctor, who said he is a psychiatrist, because of his inability to sleep and feeling of tiredness. He prescribed some medications whose name he was not told. The doctor said that he would not tell him the name of the drugs and that he should trust him. He did not tell him what he thought was wrong with him either. He was asked to discontinue all the drugs and he improved. He had depression which was successfully treated.

Comments

His initial doctor was not patient centered and did not communicate effectively with him. He complicated his problems which was easily taken care of by due explanation.

Redesigning for Timeliness

- Reducing waits and undue delays for patients: Many institutions use several methods to ensure this including improved scheduling of appointments, use of IT, and increased efficiency and patient centeredness in all activities of the hospital
- This is the weakest link in our health-care system, especially in public hospitals. It is not unusual for patients to spend a whole day in the hospital outpatient in order to see a doctor and get a prescription and treatment.

Illustrative Case Histories

- Case 1: A. A., a trader, was referred by a private medical practitioner to a government specialist hospital as a result of an illness which was beyond his expertise. He went to the clinic but could not see any specialist because the clinic was only accepting 15 letters and he was number 22. The following week, he left home at 4 am but still could not see the doctor because he was number 17. On the 3rd week, he slept in the hospital from the previous day before he made the first 15 and was able to see the specialist
- Case 2: R. A., a homemaker, was referred to a specialist in a government hospital. She was seen and asked to be registered by the medical records to be properly seen. Because of the large crowd, this took about 2 h. After registration, she lined up to be seen by the specialist which took another 2 h. The patient was therefore eventually seen by the specialist after 4 h and she was given a prescription to collect at the pharmacy.

Comments

- This is the common experience in government specialist hospitals. Because of the large number of patients attending the hospitals, patients usually have to wait long hours before seeing the specialist and may sometimes not be accepted in some clinics if newly referred. This is a challenge that needs to be addressed.

Redesigning for Efficiency

Efficient care

- Cooperation among clinicians: Clinicians and institutions should actively collaborate and communicate to ensure appropriate exchange of information and coordination of care
- The Pareto (80/20) principle is based on the recognition that a small number of causes (20%) is responsible for a large percentage (80%) of effect. Using this, design for the usual but recognize and plan for the unusual
- Determine what work is routine and design simple, standard, and low-cost process for performing this work efficiently and reliably. This leaves the more complex work to be performed, employing processes that appropriately use high-skilled personnel or more advanced technologies, for example, routine vital signs taken by the nurse
- Mass customization: A health-care example of mass customization is having standardized instructions for patient with given health problem, but writing in further information for those with additional health condition. This is particularly useful in primary health-care setting.

Redesigning for Efficiency: The Role of Information Technology and Internet

- The 21st-century health-care systems will require considerable financial investment in IT infrastructures by health-care organizations. The health-care workforce in Nigeria are highly variable in their IT knowledge and usage at present
- All health-care workers and providers will require encouragement and training in the use of IT for improvement in their knowledge and skills in health-care delivery.

Potential Benefits of Information Technology

- Consumer health: Consumers are using the Internet to search for health information
- Clinical care: The Internet has the potential to make health-care delivery more timely and responsive to consumer preferences. Examples are the reminder systems, telemedicine applications such as teleradiology, and e-mails
- Administrative and financial transactions: To date, the area in which information systems have been used most extensively in health care has been to improve the service

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and efficiency of various administrative and financial transactions.

Professional Education

- The Internet can be a powerful tool for undergraduate and graduate medical education. IT and the Internet can be a powerful tool for continuing medical education for all types of health professionals. Some of the uses include:
  1. Accessing reference materials
  2. Distance education with transmission of lectures and educational videos online. Virtual lectures, virtual classrooms, forums, and discussions online
  3. Simulations of procedures: Simulation programs to teach surgical skills.
- Public health: IT can be used to improve the quality of health care at the population level. Applications include incident reporting, disease surveillance, transfer of epidemiology maps for monitoring of spread of disease, maintenance, or registries
- Research: The Internet opens up many options to improve researchers' access to database and literature, enhancing collegiate interactions and shortening the time required to conduct certain types of research.

Redesigning for Equitable Health Care

- Equitable health care means providing health service that does not vary in quality because of personal characteristics, gender, ethnicity, or socioeconomic status. This is the basis of universal health coverage (UHC). The World health assembly resolution 58.33 taken in 2005 says everyone should be able to access health services and not be subject to financial hardship in doing so
- Achieving UHC is one of the targets the nations of the world set when adopting the Sustainable Development Goals in 2015 after the Millennium Development Goal. All UN Member States have agreed to try to achieve UHC by 2030, as part of the Sustainable Development Goals.

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