
Article:
Sammy, I.A., Paul, J.F., Watson, H. et al. (2 more authors) (2013) Quality Assurance in Emergency Medicine - A Caribbean Perspective. Clinical Governance: An International Journal, 18 (4). 293 - 299 . ISSN 1477-7274

https://doi.org/10.1108/CGIJ-04-2013-0010

Emerald Clinical Governance: An International Journal

Quality Assurance in Emergency Medicine - A Caribbean Perspective

Journal:	*Clinical Governance: an International Journal*
Manuscript ID:	cgij-04-2013-0010.R1
Manuscript Type:	Original Article
Keywords:	Clinical governance, Emergency department, Organizational development for effective clinical governance, Risk management, Quality (assurance, improvement, structures, strategies, frameworks)

QUALITY ASSURANCE IN EMERGENCY MEDICINE – A CARIBBEAN PERSPECTIVE

ABSTRACT

Purpose

Emergency Medicine is a new specialty in the Caribbean. With the development of specialist training over the past 20 years, the issue of quality assurance and governance have become more prominent. This article explores the successes and challenges of implementing systems of quality assurance in this unique environment, highlighting issues peculiar to the Caribbean setting.

Design and Approach

This paper is a review of current practice in the Emergency Departments of the four major teaching hospitals of the University of the West Indies. Information was gathered through interviews with key stakeholders (including the respective ED residency directors, senior residents and senior nursing and administrative staff), review of departmental protocols and guidelines and reviews of current published and unpublished literature.

Findings

Examples of good practice were identified in all six components of the clinical governance framework (clinical audit, clinical effectiveness, research and development, openness, risk management and education & training). Challenges to implementation of quality management included an underdeveloped quality culture, inadequate data collection, poor incentives for improvement and high external pressures, including staff shortages, departmental crowding and lack of public empowerment.

Originality/value

This is the first published work on clinical governance and quality assurance in Emergency Medicine in the Caribbean. This paper gives an insight into the unique opportunities and challenges in the area

of quality management and clinical governance in the developing world, and suggests ways forward with regard to more effective implementation of quality initiatives in under-resourced jurisdictions.

INTRODUCTION

Quality assurance in Emergency Medicine has for some time provided a challenge to administrators and clinicians alike. On the one hand, a comprehensive system of quality improvement in the emergency setting is essential to ensure patient satisfaction, as well as patient safety and clinical effectiveness. On the other hand, in the uncontrolled and sometimes chaotic environment of the emergency department implementation of quality management systems can be difficult at the best of times (Ryan, 1999).

The Commonwealth Caribbean represents a group of developing small-island states with a common British colonial past. The Caribbean Community (CARICOM) includes the majority of these states, as well as Belize, Haiti and Suriname. The total population of the CARICOM is approximately 16 million [1]. This region is served by a regional university (the University of the West Indies) which provides (among other things) undergraduate and postgraduate medical training for its citizens. Since 1990, the University has trained specialist emergency physicians through its DM Emergency Medicine programme (Williams, 2008). Four islands provide residency training in the specialty (Barbados, Jamaica, Trinidad and Tobago and the Bahamas). In addition, Guyana has its own medical school, and has developed a residency programme in Emergency Medicine for its graduates, in collaboration with Vanderbilt University (Forget, 2013).

This paper seeks to describe the development of clinical governance in emergency medicine throughout the region, particularly in relation to the expansion of the specialty. The successes and challenges of these quality assurance systems, and the unique perspective of quality assurance in a

third world setting, are explored. Finally, the roles of the universities and their residency programmes in promoting a culture of quality improvement are highlighted.

METHODOLOGY

This is a descriptive paper based on information obtained from ~~interviews with~~surveys of clinical and administrative leaders in the field of emergency medicine in the English speaking Caribbean, and in particular in the campus territories of the University of the West Indies. A total of nine (9) clinical and administrative heads were interviewed, (Two (2) from each participating campus territory of the University of the West Indies, and one from Guyana). Data was also obtained from published research from the region, government monographs and institutional and national policy documents, including clinical and administrative guidelines in the specialty.

The information gathered was arranged according to the main themes in the clinical governance framework: education and training; clinical audit; clinical effectiveness; research and development; openness and risk management (~~Ref~~Currie, 2003). For each theme, examples of developments and initiatives in the region were described, as well as challenges to implementation and cultural barriers to change.

RESULTS AND DISCUSSION

Examples of best practice were seen in all six areas of the clinical governance framework; however many challenges were also identified, which have led to incomplete or inadequate implementation of these quality initiatives.

Education and Training

Formatted: Font: Italic

Since the inception of the DM Emergency Medicine postgraduate residency programme through the University of the West Indies (UWI) in Barbados in 1990, specialty training has grown steadily in the region. The program was introduced to the UWI campus in Jamaica in 1997, in Trinidad in 2005 and in the Bahamas in 2007. In total, there have been 67 graduates from this programme; most of these doctors have remained in the region to practice at public hospitals as consultants in the specialty. This expansion of trained specialists in the region's hospitals has had a significant impact on the quality of care provided in our emergency departments, through direct patient care, supervision of junior staff and re-organization of service provision using more efficient models of care. In addition, it has allowed a more aggressive approach to patient care in the emergency department, with more timely initiation of critical care pathways for patients. Specific examples of this latter benefit include the now widespread practice of emergency department thrombolysis for patients suffering myocardial infarction and the use of emergency ultrasound by emergency physicians to facilitate diagnosis of a variety of conditions, such as abdominal trauma, hydronephrosis and ectopic pregnancy (Sammy, 2008).

Unfortunately, the postgraduate training offered by the University of the West Indies has not had as widespread an impact as initially anticipated. Of the fifteen (15) territories served by the University, only the four campus territories (those in which residency training actually occurs) have benefitted significantly from specialist training, as most trainees remain in these territories after completion of their programme. In contrast, most of the 'non-campus' territories have no specialist emergency physicians, and those that do (for example St Lucia and St Vincent) have single-handed consultants. The reason for this is obvious – most specialists are more interested in working in a relatively advanced system of care, with like-minded and equally trained colleagues, so there is little attraction to taking up posts in less advanced hospitals as isolated specialists. The use of distance education to provide an intermediate level of training for doctors working in these 'non-campus' territories has been piloted in Tobago, with varied success, and has been proposed for Antigua (Sammy, 2006). Guyana, which has its own university independent of the UWI, has opted to develop a separate

training programme, in collaboration with Vanderbilt University (Boerner, 2012). The goal is to develop this programme to the stage where it is self-sustaining.

Training for other professionals in emergency medicine has also been undertaken in the region. Trinidad, Barbados and Jamaica all offer post-basic nursing qualifications in emergency medicine. However, these training programmes are unique to their own islands, and have not been standardized, making them less transferable to other jurisdictions. A similar situation pertains with regard to the training of emergency medical technicians in these territories. While some effort has been made to develop standards of accreditation for EMT training in the region, there has been no agreement regionally on this issue. In addition, most territories do not have legislation which allows these professionals to practice independently in the field, thus severely restricting their effectiveness in providing emergency care (Segree, 2006).

Clinical Audit

Formatted: Font: Italic

The DM residency programme has served as a catalyst for the introduction of clinical audit as a quality improvement tool in Emergency Medicine in the region. Residents in all campuses are required to perform an audit of some aspect of clinical practice during their training. These have included audits of the management of patients with a wide variety of conditions, including myocardial infarction (Lacki, 2012), patient assessment (Lalla, 2012), asthma care (Dasgupta, 2011), and head injuries (Kotapati, 2012). In addition, audits of administrative aspects of emergency medicine have also been undertaken, including waiting times (Ezeonyeasi, 2012), use of triage (Ramdhanie, 2012), turn-around times for laboratory results and staffing levels. Many of these audits have been presented in national and regional conferences and journals (Dookeeram, 2012).

While the introduction of clinical audit demonstrates the progress made with regard to quality assurance, the system is still in evolution. Many of the audits undertaken have ended up as

academic exercises, with little or no impact on the quality of care provided. For example, a series of audits performed over several sites and comparing different years demonstrated very low levels of compliance with standards of care for patients requiring thrombolysis for myocardial infarction. The percentage of patients who received treatment within the time specified by local standards of care was very low, with little or no change over the years (18% in 2009 versus 11% in 2011) (Deen, 2012). These results suggest that, while clinicians in training accept the need for clinical audit as an academic exercise, they have not yet fully embraced it as a tool for quality improvement.

Clinical Effectiveness—t

Formatted: Font: Italic

The introduction of specialist training in Emergency Medicine in the Caribbean has stimulated the development and implementation of clinical guidelines at many different levels. Most large departments have developed written guidelines for common clinical conditions. In general these are taken from international guidelines, and adapted to local conditions. Apart from departmental protocols, there have been some efforts to produce and disseminate national guidance on specific conditions. In particular, most territories have produced written guidelines for the management of specific infectious threats (Influenza H1N1; Dengue fever; SARS) during or in anticipation of an outbreak. In Trinidad, the Ministry of Health also has produced a book of Standard Operating Procedures (SOPs) for all Emergency Departments in the country.

The main limitation of these guidelines and protocols is the inadequate and variable uptake and implementation at the ground level. As discussed in relation to clinical audit, most assessments of adherence to guidelines suggest that this is quite low, even in the more progressive departments. In addition, while departmental guidelines generally have a better 'buy in' from local practitioners, national guidelines (such as the SOPs produced by the Ministry of Health in Trinidad) are less readily accepted.

Research and Development

The DM Emergency Medicine programme requires all residents to conduct and submit a research project as part of their thesis. This has led to a steady and growing stream of local and regional research on a wide variety of topics pertinent to the specialty, including sickle cell disease (Thompson, 2012), frequent attenders (Williams,2012), violence in the ED (including domestic violence) (Bullock, 2008), paediatric emergency medicine (Ali, 2012) and elderly care emergency medicine (Moonesar, 2011). This research has contributed to the general fund of knowledge in the specialty worldwide, and has provided a unique insight into the peculiarities of practice of the specialty in a third world setting. Certain research themes have grown out of this continuing research output; these include elderly care emergency medicine, violence in the ED and resuscitation in the ED setting.

The planning and conduct of research in Emergency Medicine in the Caribbean is not without its challenges. While emergency departments throughout the region provide a rich source of research material in the form of patients with unique clinical and pathological characteristics, support for research is limited. None of the emergency departments in any of the teaching hospitals has a computerized record system, so all data must be collected manually. Funding for research in the field is restricted – DM residents at the University of the West Indies are not afforded access to the grant funding that is available to PhD or MPhil students. Because of these limitations, the majority of research conducted to date has been limited in scope, reach and depth. There have been no multi-center trial and most studies are conducted over a limited time-frame (usually less than one year and often as short as three months). There have been few interventional trials in emergency medicine in the region; the majority of studies have been observational studies, surveys and clinical audits.

Openness

Formatted: Font: Italic

~~a~~A culture of accountability and transparency has been slow to develop within the health service in the Caribbean. Most hospitals have Quality departments which coordinate quality initiatives throughout the institution. In the Caribbean setting, a large part of this work centers on complaints management. In this respect, the Quality Department tends to work closely with the Emergency Department, as a large proportion of complaints are generated from incidents that occur in or arise from the Emergency Department.

Other aspects of openness are less well developed; inter-agency cooperation is slowly growing, in specific areas. In particular, the link between pre-hospital care and the emergency department has been strengthened in Barbados and Jamaica with the appointment of trained Emergency Physicians as Medical Directors of their respective public EMS systems. In addition, the drive to refining the emergency response to child abuse and sexual abuse has generated useful inter-agency work in several territories, including Jamaica and Trinidad [2].

While the culture of transparency and accountability is being fostered through inter-agency collaboration and a more open approach to complaints management, this has not yet extended to any formal cooperation between staff in the emergency departments and the general public. Quality initiatives generally include limited assessments of patient satisfaction. This may be compounded by the persistent paternalistic approach to patient care taken by many emergency physicians and health care providers; however the DM programme has a strong emphasis on training in ethics, communication skills and empathy, in an effort to reverse this attitude towards patients (Sammy, 2006).

Risk management

Formatted: Font: Italic

The culture of risk management in Caribbean Emergency Medicine is limited. While the Quality Departments in most institutions have a remit to pursue the agenda of risk management this usually translates to complaints management. While other systems of risk management such as incident reporting and 'near miss' reporting have been explored in some settings (for example, by the Quality Department at the Eric Williams Medical Sciences Complex in Trinidad), this has not been fully embraced by clinical staff.

CONCLUSION

Quality assurance is a developing concept in emergency medicine in the Caribbean. Several initiatives have been implemented across many areas of quality assurance including the establishment of a regional training programme in the specialty; the introduction of clinical audit; establishment of clinical guidelines for common emergency presentations; a growing research base; improvements in the culture of openness and refinement of the risk management process. However, several underlying issues continue to hinder the full realization of the quality assurance agenda in Caribbean emergency medicine. Specific challenges include generally poor record keeping; shortages of staffing and equipment and ongoing pressures of crowding and long waiting times.

Further maturation and development of Emergency Medicine in the Caribbean, sustained by a strong formal postgraduate training programme, will help to fuel the growth of a robust and effective quality assurance system within the specialty. In addition, a strengthening of the culture of governance can be achieved by empowerment of the current quality departments, and closer links between these departments and the clinical leadership in Emergency Medicine. One practical way forward would before public hospitals to adopt the clinical audit cycles currently utilized in the academic programmes. This would encourage hospitals to 'close the loop' on audit by implementati of recommendations and reassessment of clinical practice. In summary, a closer liaison between

Formatted: Indent: First line: 0.25"

emergency medicine training programmes in the Caribbean and clinical practice in the specialty will foster better clinical governance, through practical application of academic knowledge.

1. "Regional Statistics – Caribbean Community Secretariat 2011 – CARICOM's mid-year population estimate, 2000 – 2010". Available at: http://caricomstats.org/Files/Databases/vital%20statistics/Midyear_Population.pdf (Accessed 27th April 2013).

2. Inter-Agency Campaign on Violence Against Women and Girls, UNITED NATIONS DEVELOPMENT PROGRAM (UNDP). Regional Project RLA/97/014 - National Reports on the Situation of Gender Violence Against Women. NATIONAL REPORT TRINIDAD and TOBAGO, APRIL 1999. http://freeofviolence.org/trintobbigfile.pdf

REFERENCES

Ali, K. et al (2012), "Is the APLS formula used to calculate weight-for-age applicable to a Trinidadian population?", *BMC Emergency Medicine*, Vol. 12, No. 9.

Boerner, C (2012), "Emergency Medicine efforts in Guyana lauded", available at http://news.vanderbilt.edu/2012/12/emergency-medicine-efforts-in-guyana-lauded/ (accessed 27th April 2013)

Bullock K. et al (2008), "A pilot study: predicting retaliatory intent and examining victimization at the University Hospital of the West Indies", *Acad Emerg Med*, Vol. 15, Suppl. 1, pp. 270–1.

Currie, L. et al (2003), "Clinical Governance, an RCN Resource Guide", available at http://www.ntac.nhs.uk/web/FILES/SuprapubicFoley/002036.pdf (accessed 4th June 2013).

Dasgupta S., et al (2011), "A clinical audit of the management of acute asthmatic attacks in adults and children presenting to an Emergency department", *West Indian Med J,* Vol. 60, Suppl 4: pp. 46 – 47.

Deen, S. *et al* (2012), "What percentage of patients are thrombolysed within the time recommended by the American Heart Association?", *Caribbean Medical Journal,* Vol. 74, No. 2, p. 47.

Dookeeram, D. (2012), "Emergency Medicine Conference 2012 – Updates and Issues", *Caribbean Medical Journal,* Vol. 74, No. 2, pp. 46 – 50.

Ezeonyeasi S., Bharrath, C., Awosolu, B. and Naidoo, P. (2012), "A retrospective study of the time taken to attend to level three patients by the emergency team at the Princes Town District Health Facility (PTDHF)", *Caribbean Medical Journal,* Vol. 74, No. 2, p. 47.

Forget, N.P. *et al* (2013), "Emergency Medicine in Guyana: Lessons Learned from Developing the Country's First Degree-Conferring Residency Program", *Western Journal of Emergency Medicine,* DOI: 10.5811/westjem.2013.3.12714

Formatted: Left, Space After: 0 pt, Don't adjust space between Latin and Asian text, Don't adjust space between Asian text and numbers

Formatted: Font: Italic

Kotapati, V and Yeddala, S. (2012), "Door to CT scan initiation time in stroke patients presenting to the A&E Dept, POSGH", *Caribbean Medical Journal,* Vol. 74, No. 2, p. 48.

Lacki, S., Matthews, F. and Nsedinma, O. (2012), "Audit of Registration-Thrombolysis time at the Sangre Grande Accident and Emergency Department", *Caribbean Medical Journal,* Vol. 74, No. 2, p. 48.

Lalla, R. and Chauhan, D. (2012), "The use of the peak expiratory flow (PEF) meter in the management of acute exacerbations of asthma in the Adult Emergency Department at the Eric Williams Medical Sciences Complex", *Caribbean Medical Journal,* Vol. 74, No. 2, p. 48.

Moonesar, R. and Sammy, I. (2011), "Social Support in Elderly Patients Presenting to the Emergency Department in Trinidad and Tobago", paper presented at College of Emergency Medicine Annual Research Day, 7th November 2012, Sheffield, UK.

Ramdhanie, J. and Ramsumair, R. (2012), "A retrospective audit assessing the compliance to the Canadian Triage and Acuity Scale (CTAS) time objectives at the Chaguanas Emergency Department", *Caribbean Medical Journal,* Vol. 74, No. 2, p. 48.

Ryan N and Hurst K (1999), "Clinical governance in accident and emergency services", *Int J Health Care Qual Assur Inc Leadersh Health Serv*, Vol. 12, No. 6, pp. 267-71.

Sammy, I. *et al* (2006), "A blended approach to emergency medicine training: developing an integrated curriculum for mature learners", available at http://pcf4.dec.uwi.edu/viewabstract.php?id=140 (accessed 27th April 2013).

Sammy, I (2008), "Emergency Medicine in Trinidad and Tobago – A Historical Perspective and Developmental Strategy", *Caribbean Medical Journal*, Vol. 70, No. 2, pp. 14 – 22.

Segree, W. *et al* (2006), "The Roles and Responsibilities of Physicians in PreHospital Emergency Medical Services A Caribbean Perspective", *West Indian Med J,* Vol. 55, No. 1, pp. 52 – 55.

Thompson C., et al (2008), "Utility of free haemoglobin as an objective marker of acute vasoocclusive episodes in patients who present with sickle cell pain crisis", *Acad Emerg Med*, Vol. 15, Suppl. 1, p. 207.

Williams, C. (2012), "'Frequent attenders', A profile of the patient with multiple emergency department visits in Barbados", *Caribbean Medical Journal,* Vol. 74, No. 2, p. 48.

Williams, E.W. *et al* (2008), "The evolution of emergency medicine in Jamaica", *West Indian Med J,* Vol. 57, No. 2, pp. 161 - 165.

Formatted: Left, Pattern: Clear (White)

Formatted: Font: Kern at 18 pt