A Qualitative Assessment of Trauma Care at Georgetown Public Hospital Corporation in Guyana

A Bruni[1], K Kazmi[1], K Bailey[2], N Rambaran[3], M Rambaran[3], B Cameron[2], J Pemberton[2]

ABSTRACT

Objective: *The purpose of this study was to gain qualitative feedback on trauma team performance at the Georgetown Public Hospital Corporation (GPHC), Guyana. Awareness of participants' self-identified strengths, weakness and areas for improvement can guide future trauma team training (TTT) programmes and local interventions.*

Methods: *This was a qualitative study. Ten health professionals working in trauma care at GPHC participated voluntarily. Participants filled out an anonymous questionnaire using the components of strengths, weaknesses, opportunities and threats (SWOT) analysis, and took part in a focus group discussion. Two researchers reviewed the qualitative data individually. Coding was agreed upon and data reduction occurred.*

Results: *The SWOT questionnaires identified a lack of material and human resources as barriers to optimal care during trauma scenarios. The focus group discussion identified issues related to team communication, cooperation, organization and training. Participants acknowledged the need to address hierarchies and pre-existing attitudes between different health professionals. They agreed that to maintain consistency in performance and patient care, a TTT course or an equivalent should be mandatory for all team members.*

Conclusions: *Qualitative feedback from trauma team members revealed that poor inter-professional communication and limited teamwork skills are considered major barriers to optimal team performance in trauma scenarios at GPHC. In addition to having all trauma staff complete a team training programme, an additional focus on communication skills and inter-professional collegiality will address participants' self-identified areas for improvement.*

Keywords: Inter-professional, patient care, trauma team training

Evaluación Cualitativa de la Atención de Traumas en la Corporación del Hospital Público de Georgetown en Guyana

A Bruni[1], K Kazmi[1], K Bailey[2], N Rambaran[3], M Rambaran[3], B Cameron[2], J Pemberton[2]

RESUMEN

Objetivo: *El propósito de este estudio fue obtener retroalimentación cualitativa sobre el trabajo del equipo de traumas de la Corporación del Hospital Público de Georgetown (GPHC, siglas en inglés), Guyana. El conocimiento de los participantes sobre las fortalezas, debilidades, y áreas de mejoría identificadas por ellos, puede servir de guía a los futuros programas de entrenamiento del equipo de traumas (EET) y las intervenciones locales.*

Métodos: *Este fue un estudio cualitativo. Diez profesionales de la salud que trabajan en la atención de traumas en el GPHC participaron voluntariamente. Los participantes llenaron un cuestionario anónimo cuyos componentes comprendían el análisis de fortalezas, opor-tunida-*

From: [1]Michael G DeGroote School of Medicine, McMaster University, [2]McMaster Pediatric Surgery Research Collaborative and [3]Georgetown Public Hospital Corporation, Georgetown, Guyana.

Correspondence: Dr A Bruni, 52 Halford Avenue, Toronto, ON, M6S 4E9, Canada. Email: alisonbruni@gmail.com

DOI: 10.7727/wimj.2014.331

des, debilidades, y amenazas (FODA), y tomaron parte en una discusión de grupo de enfoque. Dos investigadores revisaron los datos cualitativos individualmente. Se acordó la codificación y se produjo la reducción de datos.

Resultados: *Los cuestionarios FODA identificaron la falta de recursos materiales y humanos como barreras al cuidado óptimo en los escenarios de trauma. Las discusiones de los grupos focales identificaron problemas relacionados con la formación, la cooperación, organización y comunicación del equipo. Los participantes reconocieron la necesidad de abordar cuestiones de jerarquías y actitudes preexistentes entre los diferentes profesionales de la salud. Asimismo, acordaron que para mantener la consistencia en el trabajo y el cuidado del paciente, el curso de EET curso o equivalente debe ser obligatorio para todos los miembros del equipo.*

Conclusiones: *La retroalimentación cualitativa de los miembros del equipo de traumas reveló que la mala comunicación interprofesional y las limitadas habilidades para el trabajo en equipo, se consideran serias barreras para el óptimo desempeño del equipo en los escenarios de traumas del GPHC. Además de garantizar que todo el personal de traumas complete un programa de entrenamiento para el trabajo en equipo, un enfoque adicional en las habilidades de comunicación y colegialidad interprofesional abordará las áreas a mejorar que los mismos participantes identifiquen.*

Palabras claves: Interprofesional, cuidado del paciente, entrenamiento de equipo de traumas

West Indian Med J 2017; 66 (2): 203

BACKGROUND

Trauma remains a significant cause of morbidity and mortality in low-income countries (1). Inadequate systems of emergency care contribute to the devastation caused by trauma in these countries (2). In these settings, improved training in trauma care can reduce the burden of injury (3). A sustainable, low-cost and effective trauma team training (TTT) programme may improve outcomes in patient care (4).

In 2006, McMaster University and the Canadian Network of International Surgery (CNIS) introduced TTT in Guyana in order to standardize training in trauma (5). The TTT course is a unique inter-professional three-day course that includes a review of mandatory knowledge, practice of technical skills, and teamwork/leadership exercises. The TTT programme at GPHC has included 205 participants from across Guyana, with 2–3 courses provided per year (6). Although TTT courses have been offered at GPHC, the purpose of this study was not to assess the TTT course itself, but rather, to explore the subjective performance of trauma team members at GPHC including self-identified strengths, weaknesses and areas for improvement in team functioning. By using descriptive and exploratory techniques, quantitative research investigates participants' attitudes, beliefs and experiences and has the ability to systematically answer research questions that are not qualitative in nature (7). In collaboration with the local trauma team leadership at GPHC, it was deemed important to gain qualitative feedback from trauma team members in order to understand their particular training needs. The purpose of this study was to identify specific barriers to optimal trauma team performance at GPHC, which can ultimately be used as a guide to further develop local trauma training in Guyana.

SUBJECTS AND METHODS

This was a qualitative study conducted collaboratively by faculty of McMaster University and Georgetown Public Hospital Corporation. The McMaster Research Ethics Board and the Institute of Health Science Education at GPHC approved the study. An invitation for voluntary participation was extended to all health professionals participating in trauma care at GPHC. Ten participants were able to participate, including: five nurses, four staff physicians and one orthopaedic technician (total n = 10). This was a purposeful sample that was felt to be representative of the local trauma team members. Written formal consent was obtained from each participant. All participants had previously completed the TTT course at GPHC. However, this was not a requirement for participation in the study, as our goal was not to assess the TTT course itself, but rather the overall functioning of the trauma team.

Eight of the participants filled out a qualitative, anonymous questionnaire using the components of

strengths, weaknesses, opportunities and threats (SWOT) analysis to gauge their views on their own personal strengths and weaknesses in trauma care as well as more general opportunities and threats to improved team functioning during trauma scenarios (Appendix B) (8).

Appendix B

GPHC Trauma Program
SWOT Analysis template

Date: Code:

Strengths	*Weaknesses*
• What areas in trauma care do you feel the most confident in?	• What areas in trauma care do you feel the least confident in?
Opportunities	*Threats*
• When do you do your best work? What would facilitate this? • Do you see any opportunities to providing optimal care as a result of a change in regulations, resource accessibility, equipment, personnel, or government?	• What prevents you from doing your best work? What would facilitate this? • Do you see any barriers to providing optimal care as a result of current regulations, resource accessibility, equipment, personnel, or government?

(Otal, 2011).

All ten participants took part in a focus group discussion regarding areas for improvement in trauma team performance at GPHC (Appendix A).

Appendix A: Focus Group Discussion Guide

Introduction: Welcome and thank you for agreeing to participate.

1. When the team is responding to a trauma case, what is the degree of organization?
2. Without targeting a person, do you think everyone has a clear understanding of his or her role? If not, why?
3. What trauma scenario do you think the team responds to the best? Do you think the team's response needs to improve on any specific trauma scenarios? Which ones?
4. Is trauma team training effective?
5. How effective is communication between health professionals and their patients and family? Are there any barriers or breakdowns in communication?
6. How effective is communication between different health professional roles? Are there any barriers or breakdowns in communication between the different health professional roles?
7. How do you think communication can be improved?
8. Describe a situation where you witnessed excellent patient care.
9. What is the biggest barrier to optimal patient care, and why?
10. Where would you like to see the trauma program in 5 years?
11. Where do you think the most important action(s) is (are) to get us there?

Two researchers (AB and KK) reviewed the qualitative data individually. An interative process which agreed upon coding and data reduction occurred. The data results were sent to participants for member checking and were validated with a 50% response, indicating that the reported results are reflective of the participants' views. Individual identifiers were not collected, and all results were reported and stored in aggregate to maintain individual confidentially and job security.

RESULTS

This qualitative study demonstrated specific areas for improvement identified by the trauma team members at the GPHC, notably in communication, cooperation skills and human resources. The SWOT questionnaires (Table 1) identified training for more staff and proper equipment as opportunities for improved trauma care.

A lack of both material and human resources were noted as threats to optimal care. In regard to specific trauma scenarios, participants self-identified strengths included: the management of major bleeds, fractures and polytrauma; weaknesses included management of gunshot wounds. During the focus group, participants discussed overall trauma team performance, identifying three common areas they felt required improvement: (1) communication, (2) cooperation/organization and (3) training.

Most participants agreed that when responding to a trauma case, communication could be improved. One participant stated that the quality of communication within the team is related to the members' attitudes towards each other. This led to a discussion about the role

Table: Responses to the strenghts, weakness, opportunities and threats questionnaires (total n = 8)

Individual strengths	**n**	**Individual weaknesses**	**n**
Resuscitation of polytrauma	2	Management of gunshot wounds	2
Management of major bleeds	2		
Management of fractures	2		
Opportunities		**Threats**	
Proper equipment/resources	6	Lack of material resources	8
Training for more staff	3	Lack of human resources or cooperation	4
Proper regulations, policies	2		

of professionalism in patient care.

"Can it [communication] be improved? Yes.…with a change in attitude".

Several participants identified the existence of hierarchies within the trauma team that sometimes impede optimal team function. These are associated with pre-existing attitudes and opposing personalities that impair free-flowing communication and bring tension into the trauma response.

"The main problem with working on a team is…. the pre-existing relationships that exist between the different levels of professionals".

It was suggested that to achieve a change in attitudes, more inter-professional exchanges should take place outside of the trauma setting; for example, social gatherings and team building exercises.

"If we want a better working environment we need a platform where we can get to know one another… so that we can understand the person we're working with".

Most participants noted that the trauma team requires better cooperation between members, instead of delegating tasks to others.

"Teamwork is one of the most serious weaknesses in the emergency department".

It was noted by one participant that the degree of team organization depends on the amount of experience of the team members and on the appropriate delegation of tasks. The participants stated that in order to improve teamwork, it is important to define each member's roles and responsibilities and that this can be achieved by making a trauma team training course mandatory for all staff involved in trauma care.

Although all study participants had previously completed a TTT course, it was noted that not all trauma staff at GPHC have done so, resulting in inconsistent levels of training. This leads to a discrepancy between the protocols that exist in the Accident and Emergency Department and what actually occurs during the resuscitation scenario.

"I think everybody should be doing it "[Trauma Team Training]", all the different levels of professionals, as part of their curriculum coming through".

DISCUSSION

This qualitative study elicited the strengths, weaknesses, and areas for improvement in trauma team performance at GPHC. Most notably, participants indicated weaknesses in communication, teamwork and organization. The effectiveness of the TTT course at GPHC has previously been assessed using objective measurements of knowledge retention (4, 6). However, the research staff and local trauma leaders at GPHC also recognized the value of obtaining qualitative feedback from participants, to identify specific barriers to optimal team performance during trauma scenarios. A previous study has found that trauma team participants can reliably self-assess their own teamwork skills (9). Furthermore, a recent study used qualitative feedback from inter-professional staff working in First Aid and Transportation (FAT) during the Iran-Iraq War to shape further improvements to the local FAT curriculum (10).

Although participants noted a lack of material and human resources as a threat to optimal patient care, the most significant limitation identified during the focus group discussion was inter-professional communication and teamwork. These findings are supported by a Cochrane review, which noted that increased collaboration between health professionals improved staff satisfaction and their understanding of patient care (11). Specific barriers to collaboration noted among trauma team participants at the GPHC include: hierarchical relationships, pre-existing attitudes and a misunderstanding

of roles. Previous studies have identified that inter-personal conflict in the operating room is one of the team factors associated with errors and adverse patient events (12–14).

These inter-personal factors would be challenging to resolve by simply increasing funding or improving access to proper trauma care equipment in Guyana. Instead, future trauma team training (or equivalent interventions) may require a more significant focus on inter-personal team building exercises and cooperation, in order to optimize team function during trauma scenarios. For example, a team training programme entitled Team STEPPS, which places a significant focus on communications and teamwork skills, was found to result in a significant improvement in all teamwork domains (communication, leadership, situational awareness and mutual support) leading to improved efficiency of patient care (15). Furthermore, our study participants suggested that they would likely benefit from other methods of developing respectful relationships between staff, such as social gatherings outside of the workplace.

Currently, the TTT course does incorporate inter-professional team building exercises, including debriefing and feedback sessions that focus on effective communication, delegation and leadership as a trauma team. However, study participants noted that the degree of training among trauma staff remains somewhat inconsistent as not all staff have completed the TTT course, which results in an inadequate understanding of the existing treatment protocols in the Accident and Emergency Department. A previous review of the TTT programme in Guyana has demonstrated participants' improved essential trauma knowledge (4) and researchers have suggested that a recently piloted TTT update course be made official to fill the gap in trauma education (16). Qualitative feedback obtained through our study demonstrates that a mandatory TTT course (or equivalent) for all trauma staff may improve subjective team performance. Strengths of this study includes the multimodal data collection (questionnaires focus group discussion) and participation from individuals of various professional backgrounds. Limitations include the small simple size (n = 10) compared to the number of trauma staff working at GPHC. Although this study was solely qualitative in nature, future quantitative research could delineate the outcome of TTT courses on patient morbidity and mortality in Guyana. Furthermore, research could specifically focus on the effect of increased training in inter-professional communication and teamwork. We recognize that some of the suggestions for improvement identified in this study should be evaluated for their feasibility in the low-income setting of Guyana prior to implementation, as they may require additional time and resources for training. These suggestions must be considered within the scope of other national health priorities in Guyana.

CONCLUSION

This study has identified specific strengths, weaknesses and areas for improvement in trauma team performance at Georgetown Public Hospital Corporation in Guyana. Qualitative feedback revealed that poor inter-professional communication and limited teamwork skills are seen as major barriers to optimal team performance. Although the TTT course includes: inter-professional trauma management practice, many health professionals working in the GPHC Accident and Emergency Department have not completed the course. To ameliorate these factors, local directors may consider making a Trauma Team Training (or equivalent) course mandatory for all trauma staff. Furthermore, the authors would recommend undertaking methods to improve inter-professional collaboration; these might include a greater focus on teamwork skills training as well as inter-professional events outside of the workplace. Specific feedback gained from this study can be used to guide future trauma team training in Guyana.

REFERENCES

1. Hofman K, Primack A, Keusch G, Hrynkow S. Addressing the growing burden of trauma and injury in low and middle-income countries. Am J Public Health 2005; **95:** 13–17.
2. Razzak JA, Kellermann AL. Emergency medical care in developing countries: is it worthwhile? Bull World Health Organ 2002; **80:** 900–5.
3. Mock C, Quansah R, Addae-Mensah L, Donkor P. The development of continuing education for trauma care in an African nation. Injury 2005; **36:** 725–32.
4. Pemberton J, Rambaran M, Cameron BH. Evaluating the long-term impact of the trauma team training course in Guyana: an explanatory mixed-methods approach. Am J Surg 2013; **205:** 119–24.
5. Canadian Network for International Surgery (CNIS). Trauma team training [Internet]. 2012 [cited 2 Oct 2013]. Available from: http://www.cnis.ca/what-we-do/safer-communities-in-africa-program/trauma-team-training-course-ttt/
6. Bergman S, Deckelbaum D, Lett R, Haas B, Demyttenaere S, Munthali V et al. Assessing the impact of the trauma team training program in Tanzania. J Trauma 2008; **65:** 879–83.
7. Otal D. McMaster children's hospital trauma program SWOT analysis. McMaster University (unpublished) 2011.
8. McLaughlin T, Hennecke P, Garraway NR, Evans DC, Hameed M, Simons RK et al. A predeployment trauma team training course creates confidence in teamwork and clinical skills: a post-

Afghanistan deployment validation study of Canadian forces healthcare personnel. J Trauma 2011; **71:** S487-93.
9. O'Reilly GM, Fitzgerald M, Dewan Y, Chou K, Mathew J, Peters N. The alfred trauma team training program in India and Sri Lanka. Emer Med Australasia 2011; **23:** 632–9.
10. Dhillon S, Pemberton J, Hoit G, Bailey K, Rambaran N, Cameron BH. Trauma team training: a pilot and evaluation of the TTT Update Course in Georgetown, Guyana [Internet]. Bethune Round Table; May 2012 [cited 2 Oct 2013]. Available from: http://fhs.mcmaster.ca/mpsrc/documents/BRTAbstract_Combined-May2012.pdf
11. Zwarenstein M, Bryant W. Interventions to promote collaboration between nurses and doctors. Cochrane Database Syst Rev 2000; (2).
12. Gawande AA, Zinner MJ, Studdert DM, Brennan TA. Analysis of errors reported by surgeons at three teaching hospitals. Surgery 2003; **133:** 614–21.
13. Christian CK, Gustafson ML, Roth EM, Sheridan TB, Gandhi TK, Dwyer K. A prospective study of patient safety in the operating room. Surgery 2006; **139:** 159–73.
14. Catchpole KR, Giddings AEB, Hirst DT, Dale T, Peek GJ, de Leval MR. A method for measuring threats and errors in surgery. Cogn Tech Work 2008; **10:** 295–304.
15. Capella J, Smith S, Philp A, Putnam T, Gilbert C, Fry W. Teamwork training improves the clinical care of trauma patients. J Surg Educ 2010; **67:** 439–43.