The Adoption and Thematic Analysis of a Social Media Platform for the Management of Pediatric Difficult Airways – A Pedi-R Study

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Background/Introduction: In 2014, the Pediatric Difficult Intubation Registry (a special interest group of the Society for Pediatric Anesthesia) established a WhatsApp™ discussion group whose goal was to foster discussion among pediatric anesthesia airway experts. Participants can post a case for discussion or seek advice on strategies to assess, diagnose and manage upcoming cases. Depending on the geographical location, available resources, expertise and experience, the local practice may vary somewhat.   The aim of this study was to categorize the patterns of use into the following themes: advice seeking; clinical case-sharing; educational content; administrative content; and miscellaneous.

Methods: Following ethics approval and approval from the Pedi-R community, data from the Pedi-R WhatsApp™ chat archive (9/30/14 through 3/23/19) was downloaded into an excel spread-sheet for analysis. Using methods previously described by Carmona (2018) the content was analyzed. We defined a stem as a new post that was not in response to a previous post. Subsequent posts in response to a stem were labelled as first generation, second generation, third generation, or greater than third generation responses. Media was defined as a post that was an image, video, document or link.

Results: There was a total of 5782 messages archived in the Pedi-R WhatsApp group. With a study period of 1636 days this was an average of 3.5 posts per day. Almost 40% (2170/5782) occurred on Thursdays and Fridays. 350 (6.0%) posts were original stems; 2360 (40.8 %), 1284 (22.2%), 712 (12.3%), and 930 (16.0%) were first generation, second generation, third generation, and greater than third generation responses, respectively. 125 (35.7%) stems include media. On average stems generated 15 responses (range= 0-175).
The three stem categories that generated the most responses were clinical case sharing (mean 25.8 +/- 5.8 responses), advice seeking – patient care (mean 22.7 +/- 4.4 responses), and advice seeking-medication/equipment availability (mean 15.5 +/- 6.7 responses).
A total of 447 responses in the chat included media. 38 (8.5 %) included a link to a website/article/social media. The majority of media responses were images, 382 (85.0%), with videos attached in 27 (6.0%) of media responses. We identified a cluster of 6 users who were responsible for almost 60% of all the posts.
An image or video that featured a patient or case was included in 155 (37.9%) of media responses, and those that featured equipment included in 62 (15.1%) There were 289 responses that included emojis. Posts with media generated more responses, mean (SD, 26.5 (SD 4.23) compared to posts without media 8.9 (1.5), $P = 0.02$.   29 (8.2%) of stems provided an update, suggesting the poster had used the advice provided in the chat to influence their management of a difficult airway patient

Discussion: The Pedi-R Collaborative Whatsapp is a highly active multi-national group. The use of the platform suggests that social media is able to assist in providing discussion and guidance on the management of difficult airways in children. As posts with media were popular, it is incumbent on groups using such platforms to exercise the appropriate practices for sharing patient data.

Conclusion: The Pedi-R Collaborative Whatsapp group has demonstrated adoption and a pattern of use that suggests it meets a need.