

Evaluating the Effect of Proper Use of “Tell Me Exactly What Happened” on Chief Complaint Selection and Information Gathering at Emergency Police Dispatch

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ABSTRACT

Introduction: When evaluating the information provided by 911 callers, Emergency Police Dispatchers (EPDs) use scripted protocols to ensure that important details are not missed and that questions are not omitted. Specifically, at the beginning of the call, EPDs ask callers to “Tell me exactly what happened” (TMEWH). Since EPDs must select the correct Chief Complaint (CC) Protocol based on the caller’s response, getting a complete response to TMEWH—and interpreting it correctly—is one of the most significant elements of an EPD’s job. However, no studies have yet evaluated the use of TMEWH in gathering adequate information for CC selection or the impact of that selection on later information gathering by EPDs.

Objectives: The primary objective of this study was to determine whether asking TMEWH and/or clarifying provides information that is useful later in the call (in terms of CC selection, Key Question (KQ) answers, and final coding). A secondary objective was to identify the effect of asking TMEWH on call prioritization time (CPT)—the elapsed time from the launch of dispatch system (ProQA) to when a final dispatch code was assigned.

Methods: This was a retrospective quantitative study involving review of audio of calls handled on the Police Priority Dispatch System™ (PPDS™) (Priority Dispatch Corp., Salt Lake City, Utah, USA). Calls were collected during normal quality assurance (QA) call review at the participating agencies: Morris County Department of Law and Public Safety and Williamson County Emergency Communications. Measured outcomes included whether TMEWH was asked, how many of the KQs were considered obvious, the total number of KQs, whether the correct CC was chosen, and the CPT.

Results: A total of 422 audio files were reviewed. Overall, TMEWH was asked in almost half (48.9%) of cases. A majority of calls (94.1%) resulted in the dispatcher appropriately initially identifying the CC. Asking TMEWH did not have a statistically significant impact on the appropriateness of the initial CC selection ($p = 0.6682$), nor did using the clarifier ($p = 0.6447$). In roughly half of the calls the EPD utilized a clarifier (50.7%). The use of a clarifier did not have significant influence on the selection of an appropriate CC nor on the CPT; however, the occurrence of a spontaneous caller statement was significantly associated with less use of clarifiers ($p < 0.001$). CPT did not differ significantly by whether TMEWH was asked ($p = 0.1568$), nor by whether a clarifier was used ($p = 0.1116$); however, the total number of obvious KQs (or KQs that should have been obvious, given what the caller provided at Case Entry) varied significantly by whether TMEWH was asked ($p = 0.003$), with more questions being considered obvious or “already answered” when TMEWH was not asked.

Conclusions: TMEWH does not significantly increase call times and provides important information when callers do not spontaneously present a sufficient problem description. When spontaneous caller statements made at the opening of calls are adequate, EPDs can effectively identify and select the proper CC. EPDs should err on the side of asking TMEWH and use clarifiers when the spontaneous caller statement is not sufficient to appropriately select the CC.

INTRODUCTION

Emergency police dispatching takes place in a non-visual environment. Unlike on-scene responders, who can evaluate the scene directly, emergency police dispatchers (EPDs) can only evaluate the scene indirectly, via the information

provided by the 911 caller. EPDs gather this information using scripted protocols, ensuring that important information is not missed and questions not overlooked. However, the most critical and difficult part of the EPD’s job may be the gathering of the initial problem description, which uses a scripted question but also requires interpretation on the part of the EPD. Specifically, at the beginning of the call, the EPD asks the caller to “Tell me exactly what happened” (TMEWH). Based on the caller’s response, the EPD selects a Chief Complaint (CC) Protocol—a situation-specific scripted protocol that provides the prompts to drill down into the caller’s situation.

Getting a complete response to TMEWH, and interpreting it correctly, is therefore one of the most important elements of an EPD’s job. Selecting the wrong CC can lead to gathering incomplete information (including missing safety information that is valuable for officers), not providing needed instructions, or sending the wrong type of response. Anecdotal evidence suggests that EPDs do not always ask this important question, instead relying on the caller’s initial statement, provided unprompted at the moment of call pick-up. The problem with relying wholly on such statements has been demonstrated many times by studies of so-called “excited utterances”—the unprompted and often highly emotional statements made to police officers when they arrive on a scene. Recent studies have found that such excited utterances are not only imperfect or incomplete, but are sometimes even retracted by the speaker him- or herself later.^{1,2} Similarly, the first unprompted utterance by a 911 caller may or may not provide the complete, relevant information needed to select the most appropriate CC, and may focus instead on quickly-stated, emotional claims.

While some recent research has provided new insight into EPD practices such as the gathering of weapons information,³ no studies have yet evaluated the use of the question, TMEWH in gathering adequate information for CC selection, or the impact of that selection on later information gathering by the EPD.

OBJECTIVES

The objectives of this study were to: (a) Determine whether asking TMEWH and/or clarifying the caller’s initial spontaneous statement provides information that is useful later in the call (in terms of CC selection, Key Question (KQ) answers, and final coding), (b) Determine the effect of asking TMEWH per protocol script and clarifier on total call prioritization time (CPT)—the elapsed time from the launch of dispatch system (ProQA) to when a final dispatch code was assigned.

METHODS

This was a prospective study involving review of audio of calls handled on the Police Priority Dispatch System™ (PPDS). Calls were collected during normal quality assurance (QA) call review at the participating agencies. A minimum of 200 calls were reviewed by an IAED-certified ED-Q at each agency according to a pre-specified collection form designed for this study. Collected data included whether TMEWH was asked, how many of the KQs were considered obvious, the total

number of KQs, whether the correct CC was chosen, and the total time from call answer to time to dispatch determinant. Study reviewers also determined whether the caller provided an initial problem statement (“spontaneous caller statement”).

Definitions

A KQ was considered obvious when information provided during the spontaneous caller statement made it unnecessary to ask the KQ when it appeared later in the questioning sequence (because the question was already answered). KQs considered obvious included those the reviewers believed should have been obvious, even if the EPD asked the question anyway. Such clarification, which ensures that the correct information has been collected, is considered valid EPD practice, but for this study, all KQs that were or could have been answered using only the spontaneous caller statement or answer to TMEWH were included in the group “obvious or (should have been)” whether the EPD handling the call considered them obvious or not.

CC selection was considered “obvious” when sufficient information was provided by the caller’s initial problem statement to allow the EPD to correctly identify the CC without asking TMEWH. This determination was made by the study reviewers. In some cases, study reviewers did not consider CC selection obvious even when EPDs correctly selected the CC. In these cases, the initial caller statement did not provide enough information to ensure a proper CC selection, so although the EPD did happen to select the correct CC, that became obvious only after later questioning. CC selection was considered inappropriate when another CC would have better fit the spontaneous caller statement or the answer to TMEWH, or when another CC would have gathered critical information that was missed (such as scene safety information) and could have been appropriately determined from the beginning of the call. CC selection was considered “non-compliant” when the EPD did not ask TMEWH and the spontaneous caller statement was also not sufficient for CC selection; in these cases, the EPD followed neither of the accepted methods for obtaining a correct CC.

A clarifier was considered to have been used when the EPD asked a follow-up question to TMEWH (or, in some cases, to the spontaneous caller statement) to elicit additional information for CC selection. Clarifiers may be used on any KQ in the PPDS, but for this study, only CC selection clarifiers were included in the analysis.

Call prioritization time (CPT) was defined as the elapsed time from the launch of dispatch system (ProQA) to when a final dispatch code was assigned.

Total case time was defined as the elapsed time from the launch of the dispatch system (ProQA) to the time when the case is closed/ended.

Study population

Morris County Department of Law and Public Safety is a consolidated primary Public Safety Answering Point (PSAP) in New Jersey that provides services for approximately 499,693 residents in an area of 460 square miles. The Communications

Division provides dispatch services for 20 municipal police departments, Morris County Sheriff’s Office, Morris County Park Police, Morris County Prosecutor’s Office, 44 fire companies, and 21 emergency medical services (EMS) agencies.

Williamson County Emergency Communications (WCEC) is a multi-agency dispatch primary PSAP in Texas that provides services for approximately 545,412 residents in area of 1134 square miles. WCEC provides dispatch services for the local Sheriff’s Department, Constables, and six police departments, as well as EMS dispatch for the entire county and fire department dispatch for fifteen fire departments.

Both agencies use ProQA, the software version of the (PPDS) (version 6.0, ©2001-2017 International Academies of Emergency Dispatch®, Utah, USA).

Data analysis

R statistical software (version 3.5.2) was used for data analysis. Descriptive statistics (such as frequencies and percentages) were used to characterize the status of asking the TMEWH KQ, use of clarifiers, initial CC selection, obvious KQs (or should have been), and spontaneous caller statement. For continuous measures such as CPT and total case time, median and interquartile range were used. Two-sided Fisher’s Exact test was used to determine any independent associations between categorical measures. However, the non-parametric test median test assessed whether two independent study groups differed in their central tendency for CPT, total case time, or total number of obvious KQs (or should have been). A 0.05 level of significance cut-off was used to determine if differences between study groups were statistically significant.

RESULTS

A total of 422 audio files were reviewed (221 from Morris County, New Jersey and 201 from Williamson County, Texas). Median total case time was 2 minutes 38 seconds, and median CPT was 2 minutes 11 seconds. Compliance to the protocol was particularly high in this convenience sample, resulting in only 5.9% of cases being non-compliant.

Overall, TMEWH was asked in almost half (48.9%) of cases. 45% of CCs were observed as being obvious. In roughly 6% of calls, the EPD did not ask TMEWH when the CC was also not obvious. A majority of calls (80.9%) began with a spontaneous caller statement, in which the CC was given immediately following the greeting. Additionally, a majority of calls (94.1%) resulted in the dispatcher appropriately initially identifying the CC. In roughly half of the calls the EPD utilized a clarifier (50.7%). The median number of total obvious (or should have been) KQs per case was two.

The most commonly selected CC Protocols were Traffic Violation/Complaint/Hazard (12.1%), Suspicious/Wanted (10.6%), Animal (8.6%), and Disturbance/Nuisance (8.3%). A majority of CC

categories (62%) were initially selected appropriately. The CC Protocols with the highest proportion of selections identified as inappropriate were Miscellaneous (44.4%), Indecency/Lewdness (33.3%), Mental Disorder (33.3%), and Disturbance/Nuisance (21.2%). All CCs were selected from the PPDS, with the exception of one selected by the EPD from the Medical Priority Dispatch System™ (MPDS™) (Convulsions/Seizures) (Table 2).

| Measure | (N = 422) n (%) |
|---|--------------------|
| TMEWH Asked | |
| Yes | 207 (48.9) |
| CC Obvious | 191 (45.2) |
| No (non-compliant) | 25 (5.9) |
| Clarifier Used | |
| Yes | 214 (50.7) |
| No | 208 (49.3) |
| Spontaneous Caller Statement | |
| Yes | 338 (80.9) |
| No | 80 (19.1) |
| Initial CC appropriate | |
| Yes | 397 (94.1) |
| No | 25 (5.9) |
| Obvious KQs (or should have been): median (IQR) | 2 (2) |
| Call Prioritization Time: median (IQR)* | 2m11s (1m32s) |
| Total Case Time: median (IQR)* | 2m38s (2m23s) |

IQR: Interquartile Range of the median
TMEWH: “Tell Me Exactly What Happened”
CC: Chief Complaint

Table 1. Case summary statistics

| Chief Complaint (CC) Protocol* | (N=397 ⁺) n (%) | Inappropriate CC (N=25; 6.3%) [‡] n (%) |
|--------------------------------------|--------------------------------|--|
| Burglary / Home invasion (110) | 12 (3.0) | 1 (8.3) |
| Disturbance / Nuisance (113) | 33 (8.3) | 7 (21.2) |
| Domestic Disturbance (114) | 30 (7.6) | 1 (3.3) |
| Harassment / Stalking / Threat (119) | 23 (5.8) | 3 (13.0) |
| Indecency / Lewdness (120) | 3 (0.8) | 1 (33.3) |
| Mental Disorder (121) | 3 (0.8) | 1 (33.3) |
| Miscellaneous (122) | 9 (2.3) | 4 (44.4) |
| Public Service (125) | 11 (2.8) | 1 (9.1) |
| Suspicious / Wanted (129) | 42 (10.6) | 4 (9.5) |
| Theft (130) | 33 (8.3) | 1 (3.0) |
| Trespassing / Unwanted (133) | 18 (4.5) | 1 (5.6) |

*18 CCs had 0% considered not appropriate: Convulsion/Seizures (12), Abduction, Custody Issue etc (101), Administrative (103), Alarms (104), Animal (105), Assault/Sexual Assault (106), Assist Other Agencies (107), Bomb / Suspicious Package (108), Damage/Vandalism/Mischief (111), Driving Under the Influence (115), Drugs (116), Explosion (117), Fraud/Deception (118), Missing/Runaway/Found Person (123), Suicidal Person/Attempted Suicide (127), Traffic/Transportation Incident (131), Traffic Violation/Complaint/Hazard (132), and Weapons/Firearms (135).

⁺25 cases were excluded in which the EPD was non-compliant to the Protocol.

[‡]The percentage is the proportion of the individual CC selected that were inappropriate.

Table 2. Chief Complaints by proportion considered inappropriately selected

Asking the TMEWH KQ did not significantly vary by the presence of a spontaneous caller statement ($p = 0.7578$). However, the occurrence of a spontaneous caller statement was significantly associated with less use of clarifiers ($p < 0.001$). Asking the TMEWH KQ did not have a statistically significant impact on the appropriateness of the initial CC ($p = 0.6682$), nor did using the clarifier ($p = 0.6447$) (Table 3). However, using the clarifier was heavily associated with asking TMEWH ($p < 0.001$). CPT did not differ significantly by whether TMEWH was asked ($p = 0.1568$) nor by whether a clarifier was used ($p = 0.1116$). Total case time differed significantly by whether TMEWH was asked ($p < 0.001$) and also by whether a clarifier was used ($p = 0.001$).

| Measures | TMEWH KQ Asked n (%) | CC was Obvious [¥] n (%) | p-value |
|---|-------------------------|--------------------------------------|---------|
| Initial CC appropriate | | | |
| Yes | 198 (96.1) | 181 (94.8) | 0.6682 |
| No | 8 (3.9) | 10 (5.2) | |
| Spontaneous Caller Statement | | | |
| Yes | 132 (64.7) | 184 (98.9) | 0.7578 |
| No | 72 (35.3) | 2 (1.1) | |
| Clarifier Used* | | | |
| Yes | 204 (98.6) | 5 (2.6) | < 0.001 |
| No | 3 (1.4) | 184 (97.3) | 0.0034 |
| Obvious KQs (or should have been): median (IQR)* | 1 (2) | 2 (2) | 0.1568 |
| Call Prioritization Time: median (IQR) [†] | 2m18s (1m47s) | 2m03s (1m31s) | 0.0008 |
| Total Case Time: median (IQR)** | 2m54s (2m04s) | 2m15s (2m01s) | |

CC: Chief Complaint Protocol
 TMEWH: “Tell Me Exactly What Happened”
[¥]CC was obvious only includes cases in which TMEWH was not asked
 * indicates statistically significant difference at $p = 0.05$ level

Table 3. Call characteristics by Chief Complaint selection method

| Measures | Clarifier Used | | p-value |
|---|----------------|---------------|---------|
| | Yes: n (%) | No: n (%) | |
| Initial CC appropriate | | | |
| Yes | 200 (96.2) | 178 (94.7) | 0.6447 |
| No | 8 (3.8) | 10 (5.3) | |
| Spontaneous Caller Statement* | | | |
| Yes | 133 (64.6) | 184 (99.5) | < 0.001 |
| No | 73 (35.4) | 1 (0.54) | |
| Obvious KQs (or should have been): median (IQR)* | 1 (2) | 2 (2) | 0.0018 |
| Call Prioritization Time: median (IQR) [†] | 2m18s (1m34s) | 2m03s (1m30s) | 0.1116 |
| Total Case Time: median (IQR)** | 2m53s (2m56s) | 2m18s (2m0s) | 0.0017 |

IQR: Interquartile Range of the median
 * indicates statistically significant difference at $p = 0.05$ level

Table 4. Comparison of measures by Chief Complaint clarifier utilization

Additionally, the total number of obvious KQs (or should have been obvious) varied significantly by whether TMEWH was asked ($p = 0.003$) as well as by a clarifier use ($p = 0.001$).

Overall, the use of a clarifier did not have a significant influence on the selection of an appropriate initial CC or on the CPT (Table 4). However, a clarifier was significantly much less used when a caller spontaneously described the problem and when the responses to KQs were obvious—although samples were relatively small for the latter. Additionally, totalelap case time was significantly less for cases in which a clarifier was not used, compared to those in which a clarifier was used.

DISCUSSION

EPDs in this study selected an appropriate CC almost all of the time, whether they based this selection on the spontaneous caller statement or on the answer to TMEWH. EPDs would thus appear to be effective at identifying when the spontaneous caller statement is sufficient to determine an appropriate CC and when TMEWH is needed to gather more information. Asking TMEWH was associated with more appropriate initial CC selection, although the correlation was not statistically significant. TMEWH was not associated with either the total number of KQs asked, nor the number of KQ’s that were obvious (or should have been obvious).

However, this study focused exclusively on whether the CC selection was correct according to the caller’s statement or answer to TMEWH—in other words, whether it was correct according to the information available to the EPD. Determining the true value of spontaneous caller statements (“excited utterances”), as compared to TMEWH, would require an assessment of the situation as officers find it when they arrive on scene. Such a comparison would allow deeper insight into whether spontaneous caller statements provide sufficient and correct information for selecting the CC that best prepares officers for the encounter and identifies what resources to send, both of which better reflect the true purpose of CC selection.

Of note was that asking TMEWH did not have a statistically significant impact on CPT or total case time. In other words, taking the time to elicit a specific problem statement from the caller does not increase overall call time or time to dispatch and provides the opportunity to determine the correct CC when the caller does not spontaneously provide a readily-identifiable CC at the opening of the call.

Limitations

This study was limited in its sample. In particular, both of the participating agencies demonstrate very high compliance to the PPDS, meaning that the numbers of non-compliant cases and incorrect CC selections were overall very low—providing limited opportunity to derive correlations between the variables. Asking TMEWH might show significantly more impact in agencies with lower overall compliance or lower overall correct CC selection. Also, this study focused exclusively on the use of TMEWH in police dispatch calls.

There may be a difference in the likelihood of callers providing a spontaneous statement at the beginning of the call—or one that allows the emergency dispatcher to select the correct CC—in the medical or fire dispatch calls.

CONCLUSION

Asking TMEWH does not significantly increase call times and provides important information when the caller does not present a sufficient problem description spontaneously. When the spontaneous caller statement provided at the opening of a call is sufficient, EPDs appear to be effective at identifying and selecting the appropriate CC. EPDs should err on the side of asking the TMEWH at the beginning of the call when unclear whether the spontaneous caller statement is sufficient to select an appropriate CC.

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