Persons Descriptions Reported to Emergency Police Dispatch

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ABSTRACT

Introduction: Identification of persons based on verbal descriptions is one of the key skills of police work. Gathering as much description information as possible immediately following the event—for example, at the point of emergency police dispatch—could substantially improve the accuracy of suspect descriptions, the ability to locate missing persons quickly, and other key outcomes of effective police work.

Objective: The primary objective of this study was to determine what amount and type of persons description information is collected by Emergency Police Dispatchers (EPDs), both overall and by Chief Complaint Protocol.

Methods: This is a retrospective, descriptive study of the Police Priority Dispatch System (PPDS) data from five emergency communication centers in the United States of America, collected between September 2014 and May 2017.

Results: During the study period, a total of 117,160 (58.1%) calls had at least one item from the Description Essentials (DE) Tool: Person's Description recorded. The Chief Complaint Protocols that had the highest frequency of person DE collected were Missing/Runaway/ Found Person (99.0%), Suicidal Person/Attempted Suicide (97.1%), and Domestic Disturbance/ Violence (90.0%). The most commonly recorded person DE elements were the four required measures: gender, race, age, and clothing. Among non-required DE elements, the most common was name (38.7%), and the least common were demeanor and complexion (1.3% each). By far the most common type of person described was "suspect" (78.4% of cases).

Conclusions: Overall, trained and certified EPDs using the PPDS are effective at collecting information about persons and entering it correctly. Different types of events require somewhat different approaches to description gathering. EPDs appear to discriminate among these different event types while (mostly) making sure to collect required information. Additional definitions, small changes to when and how the ProQA DE Tool appears, and possible removal of two seldom-used descriptors have been recommended based on these findings.

INTRODUCTION

Identification of persons based on verbal descriptions is one of the key requirements and skills of police work. Whether identifying a person running by as the reported suspect, differentiating between victims and assailants in mass-casualty events, or locating missing children, many types of police calls require gathering various types of person description information and then applying that information to correctly identify one or more individuals. Correct identification can lead to reduced loss of life, reunions of missing persons with their families, and apprehension of suspects, while incorrect identification can have terrible unintended consequences for both officers and civilians. Unfortunately, accurate and complete descriptions of individuals involved in crimes—especially suspects—can be very difficult to achieve. Many incidents happen quickly, and emotions can be high. Moreover, humans are notoriously poor at describing and identifying strangers, especially in rapidly evolving and stressful situations. In the U.S., for example, witness misidentification has been implicated in more than 75% of wrongful convictions later overturned by DNA evidence.[1]

Years of research indicate that eyewitness identification is poor overall,[2] but it becomes increasingly mistaken as time passes following the initial event.[3] Events that occur between the initial event and the description can "overwrite" the initial memory or implant misinformation that gets incorporated with correct identifying characteristics. For example, one study showed that simply hearing another person describe a neck tattoo on a suspect significantly increased the likelihood that other witnesses would also describe that (nonexistent) tattoo—and as a result, increase the likelihood that the tattooed person

would mistakenly be identified as the suspect.[4] Much of human memory never makes it past the short-term memory stage, so critical identifying information may be completely lost as time passes.[5] Despite considerable changes in procedures for line-ups and photograph identifications, misidentification continues to be a serious problem for police officers attempting to identify suspects.[6]

One potential means for improving identification is to gather description information as early as possible. Some research suggests that misinformation and incorrect memories increase with time following an event, with increased misinformation effects showing up as early as five minutes after the initial experience, and growing over time to potentially even overshadow real information a week later.[4] Gathering as much description information as possible immediately following the event—for example, at the point of emergency police dispatch interrogation—could substantially reduce the accuracy-impairing impacts of forgetting and misinformation in describing suspects. Gathering description information early also makes a difference in other types of police calls, although for different reasons. A missing child or runaway teen, for example, needs to be located as quickly as possible; tragically, more than two-thirds of missing children who are killed, are killed within the first three hours,[7] and all missing persons are easier to find closer to the time of their abduction or disappearance.[8,9]

Amount and type of description information is also important. Organizations involved in the location of missing persons and identification of suspects, such as the National Center for Missing and Exploited Children (NCMEC)[10] and the U.S. Department of Justice,[11] even provide information-gathering guidelines for emergency dispatchers and responding officers to ensure that collected information is complete and relevant to the case type. Emergency police dispatchers (EPDs) using the Police Priority Dispatch System (PPDS) are required to gather four basic pieces of information (race, gender, age, and clothing)[12] whenever prompted by the Key Question, "I need to get the [person's] description" (where "person" is sometimes replaced with a more specific word like "suspect" or "driver" where appropriate)—and they have the ability to collect and record far more. However, very little is known about the amount or type of person description information actually collected by EPDs, or on what types of calls this information is most often collected.

OBJECTIVE

The primary objective of this study was to determine what amount and type of person description information is collected by EPDs, both overall and by Chief Complaint Protocol.

METHODS

Design and setting

This was a retrospective, descriptive study of PPDS person description data. Data were collected from five agencies, all of which are International Academies of Emergency Dispatch (IAED) Accredited Centers of Excellence (ACE), meaning that they must maintain a very high level of compliance to PPDS

protocols and a consistent quality assurance program:[13] Salt Lake City 911 Communications Bureau, Salt Lake City, Utah, USA; Salt Lake Valley Emergency Communications Center, West Valley City, Utah, USA; Boone County, Missouri, USA; Alpharetta County, Georgia, USA; and Harford County, Maryland, USA.

Population

A convenience sample was collected at five emergency communication centers in North America from 25 September 2014 to 01 May 2017, using the PPDS (version 5.0, ©2001 – 2017 International Academies of Emergency Dispatch, Utah, USA). Data were collected using ProQA®, the software version and logic engine of the PPDS. ProQA uses sophisticated internal logic, based on information gathered by EPDs, to assign calls to both Priority Levels and Determinant Descriptors (specific codes). The PPDS uses six Priority Levels, from ECHO (highest-priority incidents) to OMEGA (lowest-priority). Agencies assign tiered or differentiated responses to calls for help based on Priority Level assignment and specific determinant code, according to local policies, but in line with recommendations from the IAED and corresponding to the PPDS Non-linear Response Matrix. All actual response assignments, and emergency modes, are predetermined by local Police and Emergency Service Public Safety Administration.
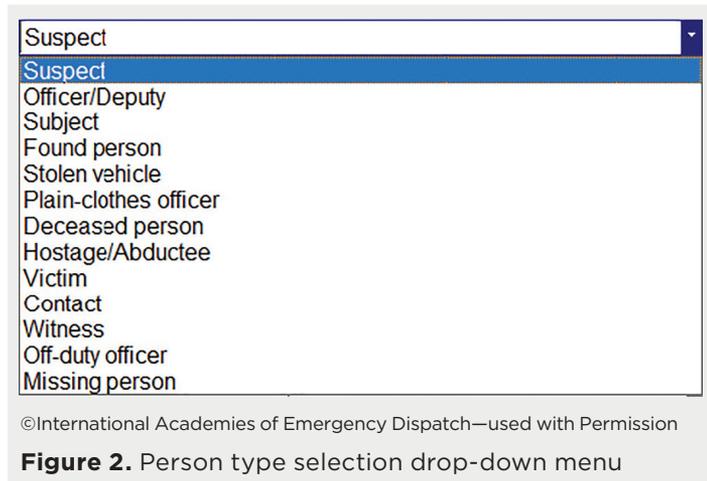
Recorded descriptions

Description information was gathered from data entered by EPDs into the Description Essentials (DE) Tool: Person's Description (Fig. 1). The DE Tool automatically opens at the point in the call at which the EPD needs to gather a person's description, or manually by the EPD
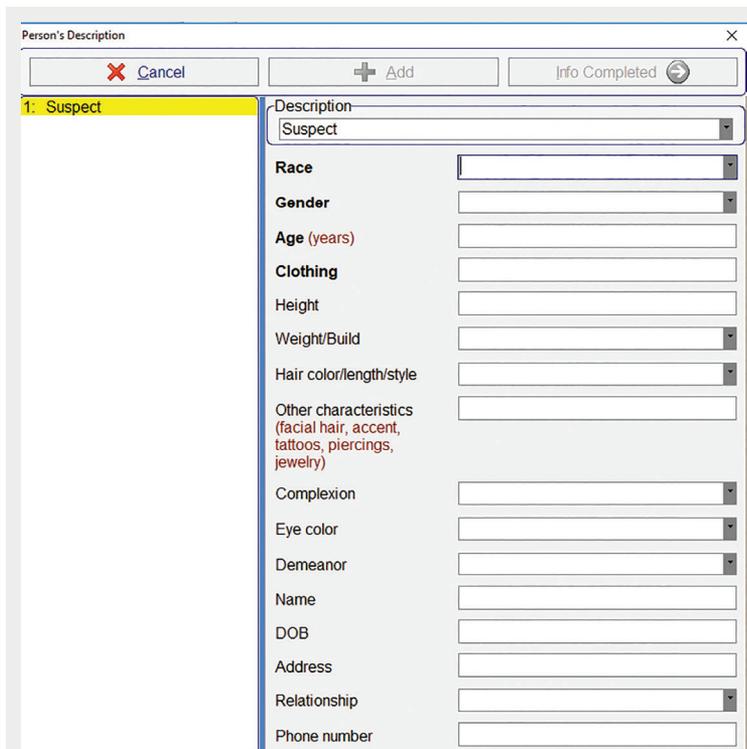
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Figure 1. Description Essentials Tool: Person's Description

at any time while processing the call via the Persons Description icon that appears on the ProQA Toolbar. ProQA logic also selects a likely default person type (such as suspect or missing person) depending on the type of call being handled, but EPDs can also manually select another type if appropriate (Fig. 2). The four required items are bolded on the list so that EPDs are prompted to always gather those items in every case that calls for a description. The only exception is noted in PPDS Rule 12, which states that gathering gender, race, age, and clothing is not necessary if it is obvious that the caller has never seen or does not have any information about the person(s) or vehicles(s). Additional information gathered depends on the caller's relationship to the person being described, and the amount of information they know about the person (for example, a robbery victim will likely not know her assailant's address, but a victim of Domestic Violence will obviously know the name and relationship of the suspect). Some emergency communication centers also institute local, written policies requiring EPDs to gather additional information for certain incident types.

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Figure 2. Person type selection drop-down menu

Data analysis

R-3.3.3 for Windows language and environment for statistical computing was used for data analysis.[7] Descriptive statistics such as frequency and percentages were used to present the distributions of person description information recorded by the EPDs—overall, by Chief Complaint Protocol, and by determinant descriptor (code). The analysis characterized the distributions for the top 10 Chief Complaints Protocols where person descriptions were most commonly recorded. The distributions of DE information for top 10 dispatch determinants, the percentage of each reported DE type, and person types described were also presented.

RESULTS

During the study period, a total of 201,653 emergency police dispatch calls were handled by the EPDs at the five dispatch agencies. Of these, 117,160 (58.1%) calls had at least one item from the Person DE Tool recorded. The most common Chief Complaint Protocols on which any person description information was recorded were *Suspicious/Wanted* (17.3% of all cases with any person DE recorded), *Disturbance/Nuisance* (11.1%), and Domestic *Disturbance/Violence* (10.3%) (Table 1).

Top Ten Chief Complaint Protocols	n(%) (N=117,160)
Suspicious/Wanted	20,205 (17.3)
Disturbance/Nuisance	13,008 (11.1)
Domestic Disturbance/Violence	12,069 (10.3)
Trespassing/Unwanted	11,517 (9.8)
Public Service	10,519 (9.0)
Theft	9.063 (7.7)
Harassment/Stalking/Threat	5,026 (4.3)
Assault/Sexual Assault	4,812 (4.1)
Missing/Runaway/Found Person	3,722 (3.2)
Traffic Violation/Complaint/Hazard	3,653 (3.1)

Table 1. Chief Complaint Protocols on which person descriptions are most commonly recorded

However, the Chief Complaint Protocols that had the highest frequency of person DE collected (i.e., where at least one person DE item was recorded) were *Missing/Runaway/Found Person* (99.0%), *Suicidal Person/Attempted Suicide* (97.1%), *Domestic Disturbance/Violence* (90.0%), *Abuse/Abandonment/Neglect* (90.0%), and *Robbery/Carjacking* (89.6%) (Table 2). These Chief Complaint Protocols were used less often overall, but had a higher rate of person DE collection.

Chief Complaint Protocol	N	Person Description Provided	n(%)
Missing/Runaway Found Person	3,760	Yes No	3,722 (99.0) 38 (1.0)
Suicidal Person	2,974	Yes No	2,888 (97.1) 86 (2.9)
Domestic Disturbance Violence	13,410	Yes No	12,069 (90.0) 1,341 (10.0)
Abuse/Abandonment Neglect	1,852	Yes No	1,666 (90.0) 186 (10.0)
Robbery/Carjacking	920	Yes No	824 (89.6) 96 (10.4)
Mental Disorder	2,003	Yes No	1,763 (88.0) 240 (12.0)
Assault/Sexual Assault	5,575	Yes No	4,812 (86.3) 763 (13.7)
Indecency/Lewdness	845	Yes No	725 (85.8) 120 (14.2)
Trespassing/Unwanted	13,434	Yes No	11,517 (85.7) 1,917 (14.3)
Abduction/Hostage	617	Yes No	528 (85.6) 89 (14.4)

Table 2. Top ten Chief Complaint Protocols by rate (frequency) of person description recorded

The most common determinant codes for which person DE was recorded were concentrated primarily in the DELTA priority level (Table 3). The most common was an in-progress or just-

Top 10 Dispatch Codes where Description Essentials are captured	n(%) (N=117,160)
133-D-1	10,963 (9.4)
129-C-1	10,363 (8.9)
130-D-1	5,755 (4.9)
114-D-1	5,488 (4.7)
113-D-4	4,901 (4.2)
113-D-2	4,315 (3.7)
125-D-1	4,200 (3.6)
114-D-2	3,882 (3.3)
106-D-4	3,514 (3.0)
129-C-5	3,287 (2.8)

Table 3. Most common dispatch codes with person description recorded

occurred *TRESPASSING/UNWANTED*, coded as 133-DELTA-1, the only DELTA-level code on that protocol. The second most common was an in-progress or just-occurred *SUSPICIOUS* person (129-CHARLIE-1), and the third most common was an in-progress or just-occurred *THEFT (LARCENY)* (130-DELTA-1).

The most commonly recorded person DE elements were the four required measures: gender, race, age, and clothing (Fig.

3). Out of all the cases in which any person DE was recorded (n=117,160), gender was recorded the most often (96.4% of the time), followed by race (95.8%), age (86.6%), and clothing (77.9%). Among non-required DE elements, the number of recorded instances dropped sharply. The most commonly recorded were name (38.7%), hair (26.9%), and height (23.7%). The least-often recorded were demeanor and complexion (1.3% each).

The type of person being described also varied from case to case (as selected from the drop-down list by the EPD or pre-selected as the default for that Chief Complaint or Sub-Chief Complaint Protocol by the ProQA logic). The most common by far was "suspect" (78.4% of cases), followed by "subject" (12.2%), "victim" (5.0%), and "missing person" (3.5%). Each of the other person types made up less than 1% of the total each. Different types of persons tended to be described on different Chief Complaint Protocols (Table 4). The most common Chief Complaint Protocols with "suspect" information were *Suspicious/ Wanted* (21.1% of all suspects) and *Disturbance/ Nuisance* (13.2%), for example, while the most common Chief Complaint Protocols with "subject" information were *Public Service* (72.0% of all subjects) and *Suicidal Person/Attempted Suicide* (21.3%). A "missing person" or "found person" description was almost always collected on *Missing/Runaway/Found Person* (99.2% of all missing person descriptions and 97.1% of all found person descriptions), while "victim" descriptions were more dispersed on *Assault/*
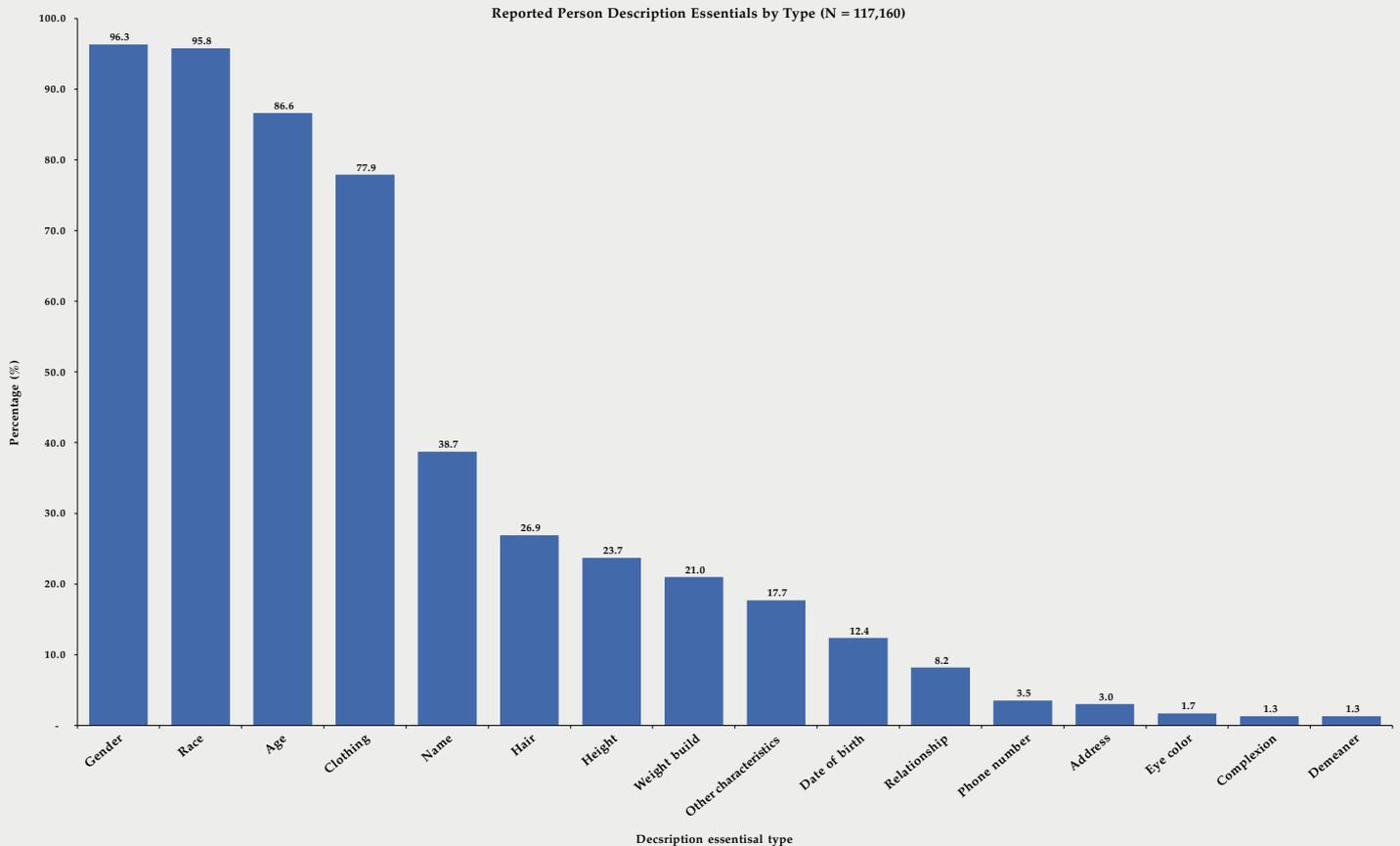

Figure 3. Distribution of recorded person Description Essentials information

Person Type	Chief Complaint Protocol (top 5, if 5 exist)	n (%)
Suspect (n=93,951)	Suspicious/Wanted Disturbance/Nuisance Trespassing/Unwanted Domestic Disturbance/Violence Theft	19,798 (21.1) 12,374 (13.2) 11,437 (12.2) 10,951 (11.7) 8,778 (9.3)
Subject (n=13,210)	Public Service Suicidal Person Unknown Domestic Disturbance/Violence Suspicious/Wanted	9,515 (72.0) 2,818 (21.3) 220 (1.7) 122 (0.92) 120 (0.91)
Victim (5,512)	Assault/Sexual Assault Abuse/Abandonment/Neglect Domestic Disturbance/Violence Disturbance/Nuisance Public Service	1,517 (27.5) 948 (17.2) 939 (17.0) 506 (9.2) 323 (5.9)
Missing Person (3,322)	Missing/Runaway/Found Person Abduction/Hostage Public Service Suspicious/Wanted Disturbance/Nuisance	3,294 (99.2) 5 (0.15) 5 (0.15) 5 (0.15) 3 (0.09)
Contact (n=679)	Public Service Alarms Theft Suspicious/Wanted Domestic Disturbance/Violence	147 (21.7) 89 (13.1) 58 (8.5) 46 (6.8) 39 (5.7)
Found person (n=339)	Missing/Runaway/Found Person Abuse/Abandonment/Neglect Domestic Disturbance/Violence Public Service Administrative	329 (97.1) 5 (1.5) 2 (0.6) 2 (0.6) 1 (0.3)
Witness (n=135)	Suspicious/Wanted Theft Domestic Disturbance/Violence Disturbance/Nuisance Traffic Incident	19 (14.1) 17 (12.6) 14 (10.4) 10 (7.4) 9 (6.7)
Officer/Deputy(n=5)	Officer Needs Assistance Assist Other Agencies Harassment/Stalking/Threat	3 (60.0) 1 (20.0) 1 (20.0)
Hostage/Abductee (n=4)	Abduction/Hostage Assist Other Agencies	3 (75.0) 1 (25.0)
Deceased (N=2)	Abuse/Abandonment/Neglect Suspicious/Wanted	1 (50.0) 1 (50.0)
Stolen Vehicle (n=1)	Miscellaneous	1 (100.0)

Table 4. Distribution of person description information by person type and Chief Complaint Protocol

Sexual Assault (27.5% of victim descriptions), *Abuse/Abandonment/Neglect* (17.2%), and *Domestic Disturbance/Violence* (17.0%). (Type of description information collected also varied by Chief Complaint Protocol; that information can be viewed online in Appendix A).

DISCUSSION

Gathering description information about the people involved in a reported incident is one of the most important elements of an EPD's job. From helping to reunite missing children with their families to providing the details needed to apprehend a carjacking suspect, EPD-gathered person DE can be critical to the positive outcome of a case. Moreover, because the EPD interacts with a reporting person early in the case—often just after an event has occurred, or while it is in progress—details may be accurately collected by the EPD that might be forgotten or misremembered by the time officers arrive or a suspect is available for identification.

The results of this study suggest that EPDs are gathering person DE effectively and in line with best practices, as outlined by the International Academies of Emergency Dispatch as well as by other standards-setting organizations such as NCMEC and the Department of Justice. Person DE is most often being collected for DELTA- (and some CHARLIE-) level codes, which is appropriate given that these tend to be in-progress or just-occurred events. These are the events in which an immediate dissemination of suspect, subject, missing person, or victim description can have the most impact in identifying the person being sought. EPDs are also gathering information most reliably in cases for which the stakes are highest and the importance of a description most obvious. For example, although the largest number of person DE entries were recorded on the *Suspicious/Wanted* and *Disturbance/Nuisance* Protocols, these large numbers reflect the overall large number of these types of calls that are handled by EPDs. The more important finding is that the highest *rates* of person DE collection are on high-stakes incident types such as *Missing/Runaway/Found Person, Suicidal Person, Abuse/Abandonment/Neglect, Domestic Disturbance/Violence*, and *Robbery-Carjacking*. For each of these call types, person DE information was recorded 90% of the time or more—up to 99% of the time for *Missing/Runaway/Found Person*. Although the person DE Tool does automatically open for these cases, previous studies have found that emergency dispatchers sometimes use "work-arounds" to avoid entering information when they feel it is not important. The fact that EPDs enter information almost all the time on these critical calls indicates that they understand the value of accurate information for officers in these incidents.

One intriguing finding of this study is the distinction between a "suspect" and a "subject." In policing, these terms tend to be used interchangeably, although officers may differentiate between someone who is suspected of a specific crime ("suspect") and someone who is merely being looked for ("subject").[14-16] The person who is reported to have just robbed a gas station is a suspect, while a person who needs assistance, and whom the responding officer

needs to be able to identify in order to help them, is a subject. Prior to this study, it was unclear whether the PPDS should differentiate between these two terms. Based on expert opinion, each Chief Complaint or Sub-Chief Complaint Protocol is set to default to one of the person types automatically; for example, someone reported on *Suspicious/Wanted* is identified as a "suspect" by default, whereas someone who is threatening suicide is identified as a "subject." Similarly, the *Missing/Runaway/Found Person* Protocol defaults to "missing person." The other person types must be selected manually from the drop-down list, and EPDs can change the automatic selection if they choose.

The findings of this study indicate that EPDs accept the default selection most of the time—but not always. For example, when the Sub-Chief Complaint Protocol (based on answers to Key Questions) is FOUND PERSON, the drop-down list defaults to "found person." In the same way, when the Sub-Chief Complaint Protocol is MISSING PERSON, the default is "missing person." As a result, more than 99% of all "missing person" identifications and more than 97% of all "found person" identifications were on the *Missing/Runaway/Found Person* Protocol. The same occurs with the "subject" person type, which is the default selection for *Public Service* and *Suicidal Person* calls. Some Chief Complaint Protocols are more complex; for example, in assault and sexual assault cases, the person DE Tool may actually be launched twice—once to get suspect information and again to get information about the victim. When this happens, the default changes depending on which Key Question is currently being answered. The ProQA logic responds to the nature of the incident as it occurs, reflecting the information required at that moment in the call. However, in some cases, EPDs did override the default selection. For example, in some public service calls, the EPD gathered contact information rather than (or in addition to) subject information. Similarly, some recorded information on a "witness" rather than a suspect in a few theft calls. In most of these cases, the EPD likely either could not gather suspect/subject information, needed to gather information about contacts or witnesses in addition to suspect/subject information, or used the "stay-on-the-line" opportunity to gather further information from the caller. However, future studies will need to investigate exactly when and why EPDs override the default—and perhaps improve the ProQA logic to incorporate these incident types or special circumstances. In particular, future studies should evaluate when EPDs decide to manually select "subject," as they did in some cases even when "suspect" was the default. A more explicit definition of the difference between "subject" and "suspect" might also help EPDs determine which is most appropriate in a given case.

The most pronounced finding of this study was the powerful influence of the bolded items on the person DE Tool. The least-commonly recorded of the bolded (required) items was recorded more than twice as often as the most-commonly recorded non-bolded item and approximately 75 times as often as the least-recorded items (demeanor and complexion). Future studies should attempt to identify why there is a disparity within the bolded items themselves, with race and gender above 95% and clothing below 80%. Most likely, this simply reflects the fact that race and gender are the items most callers can identify, but

more research needs to be done to evaluate that assumption and to determine whether specific prompts or phrasings could help EPDs gather more of the bolded information. This could be of particular importance in light of recent calls to reduce the influence of race on suspect identification,[17,18] given recent politically-charged incidents of police use of force. Getting information beyond just race and gender can help reduce incorrect suspect identification—and help officers both identify the correct person and defend their identifications.

Interestingly, prior to the version of the PPDS studied here, demeanor was one of the required items; in response to complaints that it was rarely understood by callers and did not add information of relevance to responding officers, it was removed from the required list. This study indicates that EPDs essentially never voluntarily ask for this item. It is very likely that demeanor—and "complexion," which was recorded just as seldom—is a term that callers don't actually understand, or that EPDs assume they won't understand. Unless responders begin asking for these pieces of information, it is reasonable to keep them off the required list, or even eliminate them from the list altogether.

Some other very rarely-asked items, however, do appear to be relevant to specific call types, if not to the majority of incidents. Name and relationship, for example, are not appropriate to ask for events like robberies because the caller almost certainly does not know them—but in the cases where they do apply, they can be life-critical. For example, a man living in the same household with a child who is not his own is much more likely to kill the child during a violent incident than a man who is the child's father.[19] Gathering the relationship information at the dispatch point can alert officers to respond with increased concern for their own and the child's safety. The group of descriptors that falls into this less-used but relevant category appears to be date of birth, relationship, phone number, address, and eye color. In general, EPDs seem to be asking for these types of descriptors on the most appropriate Sub-Chief Complaint Protocols, particularly calls about missing persons, domestic disturbances, harassments, suicidal persons, and public assistance. Future PPDS ProQA assessments might evaluate whether different person DE Tools, with different numbers and groupings of items, should be used for different event types, to help ensure that EPDs get the descriptors most relevant for each case. In addition, EPDs should be provided with training about which types of cases require additional descriptors beyond the bolded items, as well as methods and rules for returning to the person DE Tool at the end of a case to fill in missing items. It may be reasonable to further evaluate whether different items should be bolded (required) based on the Chief Complaint or Sub-Chief Complaint in use.

Given the personal and political ramifications of misidentifications of suspects, the absolutely critical importance of fast response to cases involving missing children or vulnerable adults, and the potential harm to victims or responding officers if suspects or victims are misidentified, gathering accurate and complete person description information is one of the most important roles of the EPD. When done correctly, it is part of what makes the EPD a lynchpin in the safety of his or her agency and community.

Limitations

The available sample for this study from each respective agency was relatively small, and the use of a convenience sample may affect the generalizability of the results. In addition, one agency made up 59% of the sample because of its larger call volume; this could have skewed the findings. However, the distribution of person DE items reported were roughly homogeneous for each agency across all agencies, regardless of their respective study period or sample size. Also, different agencies using the PPDS may employ different local policies, including having different CADs and sending different information to MDTs. In some cases, agencies may decide that certain incident types (particularly those that are purely administrative or do not require a responding officer) will not be handled using the PPDS, so the overall number of cases in this study may not reflect the total number of cases handled by these agencies during the study period—only those handled using the PPDS.

CONCLUSION

Correctly identifying individuals based on verbal descriptions is one of the cornerstones of police work. Overall, trained and certified EPDs using the PPDS are effective at collecting information about persons and entering it correctly, providing officers with the information they need to identify suspects, victims, missing persons, and other individuals. Different types of events—and different types of persons—require somewhat different approaches to description gathering, with some events involving well-known intimates and others involving strangers glimpsed only briefly. EPDs appear to discriminate among these different event types while (mostly) making sure to collect required information. Additional definitions, small changes to when and how the ProQA DE Tool appears, and possible removal of two seldom-used descriptors have been recommended based on these findings.

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