Specialization and the use of GPS for domestic violence by pretrial programs: Findings from a national survey of U.S. practitioners

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Abstract

Tools that facilitate the electronic monitoring of criminal justice populations are becoming widespread and multifaceted as they are adapted for a range of purposes and offender categories. In the past two decades, justice agencies across the United States have incorporated global positioning systems (GPS) to enforce no-contact orders in cases involving domestic violence (DV) or intimate partner violence (IPV). The current study surveyed a national (U.S.A.) sample of representatives (N=114) from agencies administering pretrial programs that use GPS following DV-related charges. While all respondents are involved in using GPS for DV, analysis shows that some also use a range of other tools and monitor diverse portfolios of offenders; we report on relationships between the number of technologies used, populations monitored, attitudes, and practices. The article discusses the importance of giving due attention to the role of specialization in remotely supervising clients and providing them with services.

Keywords: Specialization, electronic monitoring, global positioning systems, supervision, domestic violence, pretrial, national survey.

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INTRODUCTION

Electronic monitoring (EM) involves having persons wear devices that allow a third party to observe them remotely (i.e., spatially or temporally). EM “ankle bracelets” with radio frequency (RF) or global positioning system (GPS) technologies are increasingly being incorporated into different stages of the criminal justice process—during pre-trial proceedings as a condition of bail or post-conviction as a sentence—to manage populations before or after release from prison. In the U.S., the adoption of EM by criminal justice programs mostly occurs locally, commonly splicing new technologies with pre-existing mechanisms of control, resulting in wide variation in how such tools are used.

Prior research has measured EM’s “effects” (e.g., on recidivism) (Bonta, Wallace-Capretta, & Rooney, 2000; Renzema & Mayo-Wilson, 2005; Padgett, Bales, & Blomberg, 2006; Bales, Mann, Blomberg, Gaes, Barrick, Dhungana, & McManus, 2010), addressed the policy implications of using EM (e.g., for specific groups) (Ball, Huff, & Lilly, 1988; Corbett & Marx, 1991; Robinson, 2007; Buchanan, 2008; Medick, 2008; Satine, 2008), and documented the experiences of offenders (and to a lesser degree victims) with EM (Payne & Gainey, 1998; Erez, Ibarra, & Lurie, 2004; Ibarra & Erez, 2005; Erez & Ibarra, 2007; Staples & Decker, 2008; Hucklesby, 2009; Erez, Ibarra, & Gur, 2013), but has not given commensurate attention to the organization of “justice work” by EM-using institutions (Seiter & West, 2003; Cheliotis, 2006; Bullock, 2011; Hucklesby, 2011; Paterson & Clamp, 2014). Focusing on EM/GPS technology in the context of domestic violence (DV)\(^a\) cases during the pretrial stage, the current study analyzes practitioner views and agency practices as documented by a U.S.-based survey. As practitioners may be tasked with using one or more devices, and supervising specialized or diverse caseloads, examining the application of specific EM technologies to specialized caseloads can offer insights relevant to supervision with other technologies and offender categories. Elsewhere (Ibarra, Gur, & Erez, 2014) we have demonstrated how a DV pretrial program’s “sense of mission” is reflected in the “style” of supervision adopted by officers/caseworkers, and hence how information generated by GPS technologies is used to interact with alleged offenders as “cases” under “surveillance.” This article offers a national snapshot of how EM and GPS are used in U.S. program operations (circa 2009), and examines how “specialization”—which here refers to the number of technologies and technological capabilities used and offender-categories monitored—relates to the perceived value, effectiveness, and organizational use of GPS technologies in supervising DV defendants.

We begin by reviewing the history of EM’s incorporation into community corrections in the U.S. and resultant changes in the nature of supervision work. The research methods for the national survey are then described, including background information on participants and the agencies they represent, followed by analysis of trends in how GPS is used for DV in the U.S., and bivariate comparisons examining differences among and within agencies. Findings show relationships between the numbers of technologies employed, offense-types monitored, and practitioner perspectives on the specific application of GPS for DV, such as satisfaction with the technology and its effect on workload. The article concludes with a discussion of the implications specialization poses for EM practices, the provision of services to defendants and victims by community corrections agencies, and evaluation research on EM.

\(^a\) For brevity, we indicate "DV," but survey questions asked about DV and Intimate Partner Violence (“DV/IPV”).
LITERATURE REVIEW: THE ADOPTION OF ELECTRONIC MONITORING IN COMMUNITY CORRECTIONS

This section places the incorporation of EM in community corrections in historical context. It then reviews why the growth, expansion, and absorption of EM into justice practices has led to specialization in community corrections, with specific reference to its implications for responses to DV, systemic discourse, programmatic strategies regarding community corrections, and practitioners. Lastly, it reviews scholarship on how the incorporation of monitoring technologies can influence caseloads and workload.

History, proliferation, and absorption

Emerging out of bail reform movements in the U.S. during the 1960s and 1970s (Goldkamp, 1983: 1556-8; Goldkamp, 1985), conditional release during pretrial was transformed into supervision regimes structured to provide “probation-like alternatives” (Goldkamp, 1985: 12) centered, first, around concerns for the safety of the general public and, later, specific individuals (e.g., victims and/or witnesses). Concurrent with changes wrought by the victims’ rights movement have been a series of shifts in how U.S. courts organize justice processes, including the emergence of intensive probation supervision (Erwin, 1990; Byrne & Kelly, 1989), evidence-based and victim-centered prosecution (Finn, 2013; Buzawa & Buzawa, 2013), diversion programs, victim impact statements and non-governmental advocates (Erez, Globokar, & Ibarra, 2014), specialty courts, and no-drop and mandatory sentencing policies.

Influenced in part by the women’s and victims’ rights movements’ powerful impact on law and society, U.S. courts—like police (see Scott v. Hart, 1976; Bruno v. Codd, 1978; Sherman & Berk, 1984; cf. Sherman & Harris, 2013)—began to alter their responses to DV (Buzawa & Buzawa, 1990: 110-35; 2013; cf. Erez, 2002). The advent of EM in the early 1980s offered an alternative sanction as well as a mechanism for the court’s monitoring of offenders’ compliance with curfew restrictions and other court orders (Erwin, 1990; cf. Nellis, 2009), including—most germane to the present study—requirements that a defendant “stay away” from a named victim. Historically, the nature of DV relationships—associated with lengthy periods of victimization (Tjaden & Thoennes, 2000a; 2000b), “separation assault” (Mahoney, 1991), and homicide (Block, 2003)—posed a challenge for justice institutions. Even when “stay away” or “protective” orders were in place, the defendant’s knowledge of the victim’s routines and relationships made it difficult to prevent contact attempts (often undertaken to continue patterns of abuse or intimidate the victim) (Erez et al., 2004). Radio frequency (RF)—the “first generation” of EM technology that was used in the 1990s to ascertain compliance with no contact orders—enabled the registration of a defendant’s observance of curfew restrictions and proper distance from a victim’s residence, and made it possible for courts to respond to renewed contact attempts by the defendant.

The emergence of GPS technology has expanded the capacities for remote supervision
and surveillance. Since 2000, roughly half of U.S. states have enacted legislation that mandates or authorizes the use of GPS by justice agencies to monitor defendant compliance with stay away orders during pretrial; others are in the process of passing or considering such legislation (Kelly, 2007; Rosenfeld, 2008; Green, 2009; Santry, 2011; Erez, Ibarra, Bales, & Gur, 2012; Associated Press, 2014; Keller, 2014). In general and with specific reference to cases of DV, GPS offers several advantages over RF. First, GPS allows for continuous, in-real-time tracking across places, whereas RF only measures whether the wearer comes within proximity of an RF-based receiver. Second, GPS is more flexible than RF in that it can be programmed to create an infinite number of “zones” that a client must remain within or stay away from. Third, RF’s “in range” readings are limited (to 500 feet), usually in reference to the offender’s or victim’s home territory, whereas GPS can detect as well as track offenders over far wider expanses. When used during pretrial in cases of DV, there is evidence that GPS is successful in deterring contact attempts in the “short term” (while wearing the GPS device) and arrest for DV in the “long term” (following removal of the device) (see Erez et al., 2012: 85).

The proliferation of EM in the U.S., on the one hand, and patterns in how officers work with offenders and victims, on the other, suggest that as new technological capacities emerge, more interpersonal strategies may fall out of favor. For example, according to a series of surveys by the Pretrial Justice Institute (PJI) (Clark & Henry, 2003; PJI, 2009), compared to respondents in 2001, a greater proportion of pretrial programs in 2009 used home confinement with EM (64 percent), alcohol, and drug testing (PJI, 2009: 47-8), and were increasingly reliant on automated functions (p. 62), while fewer required reporting by phone or in person (p. 47-8). In 2001, only 6 percent of programs used GPS (Clark & Henry, 2003), but by 2009 roughly half reported that they could use GPS technology to monitor defendants in the community. The surveys also suggest that along with the proliferation and increased reliance on EM technologies to supervise offenders, other services may have diminished. Of relevance to DV, fewer programs contacted victims regarding the initial appearance of the accused—25 percent in 2001, 20 percent in 2009—or regarding the defendant’s pretrial release—40 percent in 2001, 30 percent in 2009 (PJI, 2009: 44). Only a small fraction of programs (13 percent) used a special risk assessment for DV cases in 2009 (p. 39), down from one quarter of programs in 2001 (Clark & Henry, 2003), and there was no growth between 2001 and 2009 in the percentage of programs employing “special supervision procedures” for DV (25 percent) (PJI, 2009: 48). These patterns in the diminished level of human contacts occur in spite of the fact that, compared to 2001, in 2009 programs were more likely to be open for extended hours during the week and on the weekends (p. 19).

Representing the “second generation” of EM-based technologies, GPS has become more prevalent in North America, Western Europe, Australia and New Zealand (Mainprize, 1996; John Howard Society of Alberta, 2000; 2006; Gibbs & King, 2002; 2003; Nellis, 2014), and is being incorporated elsewhere, including Chile (Peillard, 2013), Argentina (Paterson & Clamp, 2014), and some Eastern European countries (Nellis, 2014).

GPS also has limitations; it is expensive, potentially creates more work for employees, has issues associated with satellite “drift” (cf. Erez et al., 2012; 2013), and cannot detect all contact attempts (e.g., via email, text messages, or if the victim goes to meet the defendant).

More programs use risk assessment for other issues, e.g., “substance use” (42 percent) and mental health (27 percent) (PJI, 2009: p. 36).
Penological drift pertains to transformations in approaches, practices, and discourses regarding the means and ends of control and punishment. It is evident in how EM technologies have been absorbed by the justice system, and may play a role in “function creep” (Curry, Phillips, & Regan, 2004: *passim*) and “net-widening” (Cohen, 1985). Organizational features, legislative initiatives, public policy directives, technological developments, changes in infrastructures, or the allotment of services can drive such drift.

The turn towards a “culture of control” (Garland, 1990), characterized by risk-management and rationalized resource-allocation strategies (Feeley & Simon, 1992; Simon & Feeley, 1995; Erickson & Haggerty, 1997), coincided with the emergence of EM. Hence, EM was marketed as a means for reducing prison overcrowding, saving money, and increasing public safety (Johnson et al., 1989; DeMichele & Payne, 2009); rather than continued investment in bricks and mortar (i.e., prisons), correctional systems could drift towards more “moveable” infrastructure. Like temporary restraining orders and curfew restrictions, EM devices seemingly offered forms of “spatial governance” (Merry, 2001: 17) for populations incapable of self-management, but not “risky” enough to incapacitate.

Given the expressed aims of applying EM—strengthening public safety, enhancing risk management, alleviating overcrowding by diverting lower-grade offenders, and saving money—a question arises as to whether EM’s adoption came at the expense of the kind of casework historically associated with probation. Early prognosticators predicted “the technology could replace the probation officer” (Friel & Vaughn, 1986: 13) or lead to undesirable changes in the day-to-day work of practitioners, and hence the organization of human supervision (cf. Lilly, 1989; Erwin, 1990; Corbett & Marx, 1991), including its focus on the welfare of individuals (Ugwudike, 2011). Reflecting on initial efforts to integrate EM into the day-to-day practice of probation work, Erwin (1990) observed that:

> where electronic devices are used, the officer still has contact [with the monitored party] as frequently as when only human surveillance is used, although there is some change in the content of the contacts. Some of the interaction must center around the functioning of the machinery (p. 65).

The integration of EM into human supervision threatened to impose additional demands on the officer’s time and foster “a fascination with the [new] technologies of enforcement” (Erwin, 1990: 66). The new labor entailed by EM would likely change the daily work routines of probation officers, and, over time, their capacities (Corbett & Marx, 1991). The “Higher-order skills” (Corbett & Marx, 1991: 408) required to practice case assessment and intervention would atrophy; eventually, agencies would be hard-pressed to demand the “complex analysis required of the treatment model” (Corbett & Marx, 1991: 408), and become staffed by workers whose skillsets would cement the “secondary” position of the rehabilitative model in relation to control (Corbett & Marx, 1991: 407, citing Clear et al., 1987). Identifying an alternative possible direction, Friel and Vaughn (1986) suggested “surveillance officers” could be hired for the sole

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<sup>e</sup> Erwin’s (1990) prescient observation came at a time before the desktop computer, internet, smartphones, and criminal justice “gadgets” (e.g., tasers, dashboard and body cameras, console-mounted computers) became prevalent; probation has presumably also been affected by these innovations.
purpose of providing technological support, e.g., installing devices, following up on curfew violations. Such personnel “need not be as highly paid or trained as a probation officer, since their sole function would be to follow up [on] reported violations” (p. 10). The implications are that community corrections officers would not be adept at tailoring their approach to fit individual clients—despite having more information at their disposal—and that increased specialization would decrease the need for collaborative innovation (Clear, 1996), including among those practicing team supervision (Moran & Lindner, 1985).

Addressing the limitations of the classic binary separation of community corrections’ aims in terms of rehabilitation and surveillance/law enforcement (Glaser, 1969; Klockars, 1972; Friel & Vaughn, 1986; Erwin, 1990; Clear & Latessa, 1993; cf. Miller, 2013), Nellis (2005) offers a general model of three interconnected and competing sets of discourses surrounding EM: “punitive-repressive,” “managerial-surveillant,” and “humanistic-rehabilitative,” arguing that although EM most closely aligns with the managerial-surveillant approach, it need not, and can be adapted in different ways. Thus, while EM as a curfew compliance mechanism “resembles Deleuzean (1992) ‘control’ more than Foucauldian ‘discipline’” (Nellis, 2009: 58), or a managerial-surveillant approach, other applications might be more punitive-repressive (e.g., Payne & Gainey, 1998), humanistic-rehabilitative (Nellis, 2005), or reflect the influence of multiple discourses (cf. Cotter & DeLint, 2009). Such ideological indeterminacy underlies penological drift.

Penological discourse and practice have drifted over the years in regards to pretrial supervision with EM. The drift is apparent across systemic, programmatic, and individual levels. Systemically, tools that were originally applied in the context of sentencing (e.g., probation and parole) have come to be used in non-sentencing settings, specifically pretrial. Discourses geared toward offender management may be adapted to, but not exhaustive of, approaches to community supervision of non-convicted persons. Programmatically, in the U.S., local characteristics dictate the role EM plays in supervision, such as the organization’s history and its “sense of mission” (Wilson, 1978; 1989), its resources and basis for funding, characteristic practitioner skillsets, and the categories of offenders processed, all of which can influence how officers approach interaction with supervisees (Ibarra et al., 2014). As individual efforts tend to emphasize and align with overarching agency objectives specific to the type of program and local context (Ibarra et al., 2014; cf. Brown, 2007: 12), officers and departments are likely to experience drift, role conflict (Moran & Lindner, 1985; Allard, Wortley, & Stewart, 2003), or function “synthetically” (Klockars, 1972; Miller, 2013) when working with different types of technologies and offenders requires a mix of discourses or “styles” (Ibarra et al., 2014). For example, officers capable of pursuing a traditional casework approach may find their program is not amenable to such if they are tasked primarily with rule enforcement (cf. Fulton, Stichman, Travis, & Latessa, 1997; Caplan, 2006), and those adept at offender rehabilitation might be limited by the focus on victim protection found in some pretrial DV programs. The ability to pursue practices aligned with an officer’s professional orientation is constrained by an agency’s specific applications of EM, e.g., type of technology and offender, whether used during pretrial, probation, or parole, discourses pertaining to EM, and the unit’s sense of mission.

Subsequent research on how officers use EM to surveil offenders has found that EM-based supervision always involves some mix of “hard” and “soft” technologies (Dron, 2013), i.e., a combination of machine- and human-based systems of information gathering and processing. Directives, resources, and traditions (e.g., public policy and ideology; funding-basis and staff-client ratio; and type of training and professional orientation, respectively) commonly
inform the relative emphasis on hard or soft technologies. For example, in England and Wales, there is very little overlap or coordination between EM and probation (Mair & Nellis, 2013), and “Field Monitoring Officers” (FMOs), as depicted by Jones (2005), Paterson (2007), and Hucklesby (2011), resemble those posited by Friel and Vaughn (1986). Research conducted there demonstrates that EM officers do not utilize the information that they acquire to engage in the kind of case supervision associated with probation, in either a “treatment” or “crime control” sense: they do not have the requisite training or direction, but are instead evaluated relative to profit-driven benchmarks that limit the time officers can spend on a given case and hence result in cursory follow-up in the field (Jones, 2005; Paterson, 2007; Hucklesby, 2011). By contrast, research in the U.S.—where EM has been adopted by probation and community corrections—has found that officers who use EM in DV pretrial programs have greater latitude to mix hard and soft technologies (Ibarra, 2005; Ibarra et al., 2014), approximating the case assessment and intervention model more fully. Trained as specialists in DV cases, officers use insights gleaned from hard technologies (e.g., monitoring logs, urine screens, text messages) to pursue leads and gather additional information that can organize the “working of the case” in particular directions (e.g., assistance, law enforcement), as set by the agency (Ibarra, 2005; Ibarra et al., 2014).

The studies of how officers in the U.S., England and Wales incorporate EM into supervision highlight issues regarding the shifting division of labor in organizations that use EM; while not settled definitively, certain patterns are emerging. This scholarship suggests that EM data streams can be (1) the primary basis for surveillance, or tightly bound to diagnostic casework and intervention; (2) organized in the context of a specialized caseload, or utilized by programs and personnel who monitor a cross-section of offenders; (3) accessed by officers with multiple roles, or narrowly defined responsibilities, relative to the offender; and (4) put in service of a particular penological emphasis, or processed without correctional thrust.

Caseload and workload

Developments in justice practice, including community corrections, are often discussed, *inter alia*, with reference to changes in workloads and caseloads among agencies and personnel (cf. Burrell, 2006). Whereas caseload refers to the number of clients each officer supervises—a long-standing issue in probation (cf. President’s Commission on Law Enforcement and Administration of Justice, 1967; American Probation and Parole Association [APPA], 1991; Petersilia, 1995: 484; DiMichele, 2007; DiMichele, Payne, & Matz, 2011)—workload pertains to the amount of time required to complete tasks associated with each assigned case (APPA, 1991; Burrell, 2006; DeMichele, 2007; DeMichele et al., 2011). Research conducted in the U.S. has documented a series of trends, including (1) increases in cases assigned per officer, particularly in metropolitan areas (Seiter & West, 2003; Barnes, Ahlman, Gill, Sherman, Kurtz, &

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Writing from a U.S.-based perspective, Burrell (2006) argues:

Offender supervision is a human capital intensive activity. There is no technological or automated solution to this problem. While technological innovations have certainly transformed the work of the PPO [probation and parole officer], they primarily have improved the monitoring capability of the officers and their access to information, but have done little to change the core correctional practices that comprise case management. People, in the form of PPOs[...], are the core correctional resource (Burrell 2006: p. 2).
Malvestuto, 2010), (2) growing reliance on technologies to automate parts of the workload (Mainprize, 1996; Wilson, Naro, & Austin, 2007), and (3) the use of risk assessment and other diagnostic procedures to generate client caseloads differentiated on the basis of “risks” and “needs,” with caseload sizes varying based on the “level” or “category” of offenders assigned to an officer (Gill, 2010; Bales et al., 2010; Barnes et al., 2010; DeMichele et al., 2011).

The emergence of EM has led to investigations of the caseload and workload patterns associated with the adoption of the technology. A study of U.S.-based program managers in select jurisdictions that use GPS (Cotter, 2005; Cotter & DeLint, 2009) found that some programs function as specialized units, monitoring specific groups, such as sex offenders, “high-risk pre-trial offenders,” and DV offenders, while others monitor offenders drawn broadly from the general caseload (Cotter & DeLint, 2009: 82-83). The average ratio of offenders to officer was 21:1, with a range between 3:1 and 38:1 (Cotter, 2005), which are lower caseload sizes than those reported elsewhere for programs not using EM, and resemble ratios associated with intensive supervision (e.g., Burrell, 2006; DeMichele et al., 2011). Bales and colleagues (2010) observed that probation officers in Florida monitor mixed caseloads of EM and non-EM clients (both convicted and on conditional release); while there is one EM case for every six non-EM cases (or 14 percent of the overall caseload), one fifth of the officers monitor three times as many EM clients as their colleagues. Regarding workload, overall, the average time officers should spend with each supervisee per month varies depending on level of risk: 6.04 hours for intensive, 2.44 for moderate-to-high, .64 for low, and .12 for administrative (DeMichele et al., 2011). Bales et al. (2010) found that respondents spent most of their time on non-EM issues and cases; a small group of officers (11 percent) had a daily workload that was about one-third EM related, a smaller proportion than might be expected given the caseload distribution. Such findings may explain why, according to DeMichele and colleagues (2011), practitioners using GPS/EM generally have reduced workloads compared to those supervising other populations (e.g., DV, pretrial diversion), including spending less time “communicating” and “monitoring” clients each month (p. 32); across all tasks, high-risk GPS/EM cases are said to require less time than high-risk pretrial or DV cases.

The preceding review indicates that the incorporation of EM into community corrections may have resulted in a tendency toward officer specialization with respect to the technology itself, or the types of offenders assigned to technologically-mediated supervision. Some technologies and offense types may require more work for personnel (DeMichele et al., 2011: 18), and presumably such specialization improves the efficacy of using EM tools, as those given a particular type of case or technology are likely to develop skills and experience in handling their assignment and be better positioned to exert control over their supervisees. While, for example, Burrell (2006) reports adult caseloads standards for the APPA: intensive caseload, 20:1; moderate-to-high risk, 50:1; and low risk, 200:1. DeMichele and colleagues (2011) report the same figures, adding 1,000:1 or “No limit?” for administrative cases (p. 17). Compared to earlier guidelines (APPA, 1991), more recent distributions allocate fewer cases to those responsible for high and medium priority cases, and more to those tasked with low-priority cases.

While 7 of 36 officers monitor more than 62 EM cases between them (roughly 8.9 cases each), 29 of 36 officers are responsible for only 78 EM cases (2.7 each) (Bales et al., 2010: 84). DeMichele and colleagues (2011) do not explore workload dynamics for those who use GPS/EM with pretrial clients facing DV charges.
“Intuitively, it makes sense that the beliefs individuals hold about their jobs will influence the way they commit to the bulk of the tasks that are a part of their occupational routine” (DeMichele et al., 2011: 19), how line staff view the impact of EM on their work and the overall organization’s functioning is another question that requires examination, as changes over time in practitioner attitudes regarding a strategy or technology can influence its rate of adoption, longevity, and how it is used in their work (cf. Harris, Clear, & Baird, 1989).\(^j\)

THE PRESENT STUDY

The current study addresses (1) how the adoption of EM influences the services that clients or offenders receive (i.e., the problem of mechanization in supervision), (2) patterns in the organization of supervision around technology and offense category (i.e., the problem of specialization and distribution of effort), and (3) personnel responses to the adoption of technological innovations (i.e., the question of worker attitudes toward EM, including satisfaction with GPS). In analyzing survey responses from a national sample of practitioners knowledgeable about their EM program, we respond to the following questions:

1. What trends are observed in GPS for DV programs that pertain to the services being offered to offenders (and victims), and what distinguishes the approaches taken by agencies?
2. What are some of the factors that influence practitioner satisfaction with technology overall, and specifically with GPS for DV?
3. What is the relationship between using EM technology and the size and characteristics of officer caseloads and the overall agency workload?
4. What is the relationship between agency operations and the number of technologies and capabilities used?

Research Methods and Design

Data for the present analysis are drawn from a national web-based survey of pretrial agencies that operate GPS for DV programs.\(^k\) Respondents were recruited from a list of organizations

\(^j\) Few studies have explored practitioner attitudes toward EM (cf. Clear & Latessa, 1993: 461-2; Seiter & West, 2003: 75; Erez et al., 2012: 51). One early effort (Johnson et al., 1989) portrays local sentiments in a single jurisdiction, though the questions asked of practitioners were not geared towards documenting officers’ perceptions of EM’s impact on their performance. More recently, Bales and colleagues (2010; p. 109) report that only 2.9% of practitioners in one state thought EM was most effective for supervising DV offenders; this may be related to the early passage of sex offender legislation in that local context.

\(^k\) The survey represents one prong of a multi-method study of GPS for DV during pretrial (Erez et al., 2012); the other prongs consisted of, first, a quasi-experimental design across three U.S.-based sites measuring the impact of GPS on offender behavior in the short- and long-term, and, second, an in-depth interview component with participants—victims, defendants, justice
provided by an EM consultant and supplemented with information from the PJII, state public information officers, and departments of corrections. Trained doctoral students placed phone calls to agencies beginning in late July 2008 to collect more specific contact information. Following an IRB-approved script, agencies were contacted to solicit responses from practitioners in managerial positions who could answer questions regarding the agency’s GPS for DV program. Using contact information provided by these program representatives, a link to a survey administered through the web-based SurveyMonkey® data collection site was provided, inviting practitioners to participate in the study. In addition, the PJII and the APPA sent messages to their members announcing the web-based survey. The survey was available to respondents from February 2009 through November 2009, and reminders were periodically sent to potential participants who had been contacted by email but had yet to respond.

The web-based survey reached 616 individuals representing agencies in 43 states, the District of Columbia, and Puerto Rico; it included Likert scale, mutually exclusive, and open-ended items regarding program attributes, technology issues, vendors and training, respondents’ attitudes, victim services, and defendant-related measures (see Erez et al., 2012). The results were downloaded from SurveyMonkey® in Microsoft Excel (.xls) and used to create an SPSS (PASWStatistics 18.0) database, a process that resulted in over 200 variables. Descriptive and bivariate analyses were conducted following data processing and cleaning. Of the 616 respondents, 393 (63.9 percent) indicated that their program uses EM to supervise defendants, of which a subset use GPS to supervise pretrial DV defendants. The following analysis focuses on respondents from agencies administering pretrial programs that use GPS in relation to DV-related charges (N=114).

Characteristics of the Sample

Among respondents (N=114) who provided demographic and agency information, two thirds were men, and nearly nine in ten white. Seventy percent of the respondents were forty years old, or older; over half had obtained a college bachelor’s degree, while one third had masters or advanced degrees (e.g., J.D., Ph.D.). More than half of respondents indicated their agency’s location, representing 24 states and communities of various sizes, including the following: a quarter worked in jurisdictions serving populations of fewer than 100,000, a third between 100,001 and 500,000, a fifth between 500,001 and 1,000,000, and another fifth served populations of more than 1,000,000. More than four in five respondents operated in local jurisdictions (i.e., county or city), with 12.6 percent in jurisdictions spanning more than one county, and 4.6 percent at the state level. Administratively, 37.9 percent worked in a county-level probation department, 14.9 percent for a sheriff or jail, with the rest in state courts (9.2 percent), county or municipal courts (6.9 percent), state probation departments (5.7 percent), private non-profit (6.9 percent) or other organizations (18.4 percent).

FINDINGS

GPS for DV Programs in the United States: A national snapshot personnel, and social service providers (N=201)—drawn from programs at the three impact sites, and three additional U.S. locations.
Specialization and Electronic Monitoring

Programmatic Considerations Underlying Agency Adoption and Use of GPS for DV

Practitioners indicated that a number of reasons played a role in their agencies’ decision to adopt GPS for DV. The majority noted the following were either “very important” or “important” in the decision to employ GPS: most important were the desire to provide enhanced supervision (96%), and to keep victims safer (94%). Of lesser importance were reducing jail overcrowding (75%), or responding to a high profile case or incident (72%). Other influential factors included positive experiences with other EM technologies (65%) or GPS for other types of defendants (61%), and information about positive experiences with technology in other jurisdictions (63%). Additional considerations included practical concerns such as cost savings (64%), a good relationship with a vendor (64%), and the existence of legislation mandating the use of the technology in DV cases (53%).

After GPS had been adopted for DV, a number of factors were rated as “very important” or “important” for its continued use. Overwhelmingly, respondents agreed that ensuring client accountability was important (99%), along with more effectively protecting the public (96%), deterring additional crimes (95%), and providing a “better method” for ensuring victim safety (93%). The vast majority indicated using GPS for DV was important because it allowed defendants to continue living in the community while awaiting trial (86%), while still offering programs the capacity to monitor compliance with terms of treatment, community service, or other programming (85%), gather evidence regarding violations of no contact orders (77%), and sanction offenders (69%). The majority of respondents also endorsed relieving jail overcrowding (79%) and mitigating pretrial absconding (72%) as important; those who use GPS think it is important for a range of purposes.

Practitioner Views Regarding the Use of GPS in DV Cases

Generally, the vast majority of respondents (N=114) report being satisfied with GPS, and positive about its impact on their work. Two fifths (38%) were “very satisfied” with using GPS to monitor pretrial defendants, and nearly half were “somewhat satisfied.” More than merely monitoring, however, practitioners felt GPS improved their capacity to supervise: over half (51%) “strongly agreed” and almost half (46%) “agreed” that GPS data provides an opportunity to better supervise their clients, and not just "monitor" them. The positive impact or usefulness of GPS in assisting with defendant supervision was noted by the vast majority (90%) of respondents, who agreed that GPS information could be used proactively with clients to facilitate asking “hard questions” (92%), and help in guiding clients’ decision making (90%). In their experiences, three fifths (61%) felt defendants on GPS violate less than those not tethered to

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1 While such high-profile events can be the impetus for the creation of such programs, only a minority of agencies (8.6%) had changed policies about the use of GPS because of a high profile incident reported in the media (e.g., newspaper, TV, local news), suggesting that once the programs are in place and become embedded in local agencies and practices, they become more difficult to change. Therefore, proper planning before establishment is key, including a pilot program or feasibility study (cf. John Howard Society of Alberta, 2006; Court Services and Offender Supervision Agency for the District of Columbia, n.d.: 53; Lemke, 2009).
SPECIALIZATION AND ELECTRONIC MONITORING

the technology; only a minority (9%) thought they violated more, and one fifth (21%) that they violate about the same. Taken together, these findings may inform the positive views and satisfaction of the practitioners who use GPS in DV.

WORKLOAD AND CASELOAD

Practitioners exhibited mixed views about the impact of GPS on agency workload; half thought using GPS had a positive impact on workload (15% “very positive” and one third “positive”), yet more than one third felt GPS had no overall impact (“neutral”), and 17% felt it was “negative” or “very negative.” The data show that the average caseload for officers who monitor defendants on GPS was 45.1 clients (SD=41.09, median=35 clients), less than half the average caseload size of officers who do not monitor defendants on GPS (Mean+/SD=95.9+/65.23 clients, median=75 clients). The distribution of offenders across various risk levels was not consistently considered in assigning cases, as less than two in five respondents indicated their program had “implemented any special procedures to assess the risks of pretrial misconduct of people charged with DV or IPV offenses”—such risk assessments were mostly used by programs operating at county and municipal levels. Relevant to EM agencies’ workload, responses to items about hours (or schedule) of operation (N=68) revealed that the majority of programs were open five days a week, while about 40% were open seven days a week; half of the latter remained open 24 hours a day. Overall, programs were open for an average of 79.3 hours per week. The mode was eight hours per day (n=17), with only a single agency open for fewer hours per day.

TECHNOLOGICAL CAPABILITIES

EM tools have a range of capabilities that practitioners may work with. Respondents (N=114)\(^n\) were asked to indicate which of seven GPS-related capabilities their programs utilize. There is a clear preference for active or hybrid versions of GPS: All who answered definitively (i.e., “Yes” or “No”) indicated that their programs map the defendants’ movements in the community over time (i.e., active, passive, hybrid), and 97% indicated that they track the offender in real time (i.e., active and hybrid). Programming of exclusion and inclusion zones is almost universal (97% and 93% respectively), as are defendant alerts (87%)—issued, for example, when there is an exclusion zone incursion or low battery reading. Less commonly, only two-thirds of programs receive acknowledgment that a defendant has received an alert, and just over half dispatch law enforcement in response to defendant violations. Table 1 shows how many programs use each total number of capabilities; those pertaining to victims are discussed in an upcoming section.

[Table 1 about here]

DEFENDANTS

Various aspects of the defendant’s experience were captured through the survey. Defendants

\(^n\) Not all respondents answered each item.
were monitored with GPS for an average duration of 97.7 days (Std. Dev.=55.2). For programs that charged a fee, defendants paid a daily average of $10.01 (Std. Dev.=3.69); 14 agencies did not charge a per diem fee, including fee waivers for the indigent, and some used sliding scales tailored to the defendants’ income. Respondents indicated that, in conjunction with GPS monitoring, the majority of defendants at most sites have regular office visits, are subjected to field visits (see Figure 1), and undergo alcohol or drug testing (see Figure 2). For example, nearly 70% of programs require that at least three of four defendants come in for office visits, while less than half go into the field to visit 75% or more of defendants. Various treatment, employment, and residential options are also reportedly offered, though relatively few pretrial defendants receive these services. For example, most programs provide services involving SCRAM, placement in a residential treatment center, or half-way houses to less than one in four clients.

[Figure 1 about here]

[Figure 2 about here]

VICTIMS

The issue of victim safety in relation to the use of technology is complex, with seeming inconsistencies regarding the technology’s capacity to “protect” victims or offer safety. While the overwhelming majority (94%) agreed that “exclusion zones deter” defendants from “associations” with victims, and 75% agree that “GPS tracking makes victims safer,” two thirds also felt that “GPS tracking cannot protect victims” (65%). Though EM may facilitate contact with the DV survivor and their involvement in the criminal justice process for a number of reasons (see Ibarra & Erez, 2005), practitioners also believe that victims “misunderstand the capabilities of GPS tracking” (77%), which can lead them to develop a “false sense of security” (59%). The results of several survey items are relevant for considering how GPS programs incorporate victims in the process: the majority (80%) contact victims regarding defendant participation in the program. Otherwise, most programs have minimal interactions with victims: one third (33%) send victims text message notification when the defendant violates, fewer than 20% require victims to sign a form acknowledging the capabilities and limitations of the GPS program, one in eight (roughly 12%) provide victims with any training, and one in nine (roughly 11%) require “victim participation” for the defendant to be placed in the GPS monitoring program. Nevertheless, victim requests that a defendant be placed on GPS were considered important by the majority (75%) of respondents, two thirds indicated that GPS tracking of offenders empowers victims, and over half of the practitioners (58%) agreed that victims are more engaged with the criminal justice system when the defendant is placed on GPS tracking. Almost half (45%) did not think that GPS is stressful for victims (about a quarter thought it was stressful, 29% “don’t know”), though almost a third (30%) indicated that, on occasion, the technology is not employed in specific cases due to victim lack of cooperation.

\[n\] Only definitive responses (i.e., “Yes” or “No”) to items regarding victims were included in this analysis. On average, less than 10% of respondents did not know whether their program used these various features with victims.
Specialization among programs and personnel using GPS for DV

The distinction between specialist and generalist approaches, although previously understudied (cf. DeMichele et al., 2011: 10), is important to address when considering aspects of justice agency initiatives that involve offender supervision. There is observable variation in how GPS for DV pretrial supervision programs are organized, the kinds of supplemental technologies that they use, and the GPS-related capabilities that they employ. For example, GPS for DV can be administered by stand-alone programs, or integrated into a given agency’s pretrial supervision or EM units. In the former case, GPS for DV personnel are likely to focus on a specific offender caseload, whereas in the latter circumstances they are likely to have a more wide-ranging offender caseload. Dynamics related to degrees of specialization—whether practitioners and programs take advantage of more or fewer GPS capabilities, use only GPS or also other tools, and for unique or multiple offense types—imbue GPS for DV programs, and differences along these dimensions may have ramifications for how agencies and practitioners operate. To explore these issues we examine how specialization relates to evaluations of respective toolkits and caseloads, and consider the relevance of agency hours of operation, the workload associated with a typical case, and the caseloads of officers who supervise DV with GPS.

Sub-groups of specialists are distinguished here in two ways: according to (a) the type(s) of defendant(s) that programs have officers monitor, and (b) the EM technologies that programs have officers use (see Figure 3 and Table 2). Expressly, all officers in the sample use GPS for DV, but while some specialize in doing so, others use additional technologies, or supervise a more diverse offender portfolio. Thus, the number of respondents using each of several technologies for various offender categories is shown in Table 2, offering a composite of officers’ relative degree of specialization with respect to both technologies and offense category portfolios. For example, the table shows that EM officers using GPS for DV are far more likely to also have sexual or other violent offenders in their GPS portfolio, and less likely to use GPS to supervise cases involving DWI/DUI, other alcohol/drug, juveniles, or gang members; they are also nearly three times more likely to use RF than equipment-free monitoring in cases of DV.

[Figure 3 about here]

[Table 2 about here]

While, overall, there were similarities across the sample, closer inspection reveals differences between sub-groups of respondents based on how they apply EM. Analysis proceeded as follows: Responses to the survey question shown in Figure 2 were tabulated vertically to count the number of technologies used by each respondent for each offense category (see Table 3), and horizontally to tally the number of offense categories respondents monitor.

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* The question choices for type of defendant were: domestic violence or intimate partner violence, other violence offense (not DV/IPV), sexual offense, DWI/DUI, other alcohol/drug offense, juveniles, gang members, and other.

* The question choices for type of technology were: GPS, radio frequency, SCRAM, remote alcohol monitoring (not SCRAM), equipment-free monitoring, and other.
with each technology (see Table 4). Results indicate that, overall, practitioners who use GPS for DV also use other technologies for this particular offense, and monitor other offense categories as well, both with GPS and other technologies, to varying degrees. As per Table 3, 37.7% use only one technology—GPS—for DV, while 32.5% use GPS and a second technology, 15.8% use GPS and two additional technologies, and so forth. Table 4 indicates that practitioners tend to use GPS and RF for multiple offense types, and they may be supplemented with other technologies for some populations.\(^4\)

The identification of more specialized roles among participants provides the basis for the comparative analysis of practitioner attitudes toward using GPS for DV. There was a statistically significant inverse relationship between practitioners’ use of more technologies for DV and satisfaction with using GPS for DV, such that those using GPS as the sole technology for monitoring DV defendants were significantly likelier to feel their organization was “very satisfied” with it, while those using multiple technologies were likelier to report being “other than very satisfied” with GPS for DV per se (see Table 5).\(^6\) Specifically, among practitioners who rely solely on GPS technology, 57.5% of respondents felt their organization was very satisfied and 42.5% other than very satisfied; among those using 2 technologies (i.e., GPS and a second technology), 36.1% of respondents indicated very satisfied and 63.9% other than very satisfied; and of those using 3 or more technologies, 21.2% of respondents were very satisfied and 78.8% other than very satisfied. The relationship held using variations of this analysis, indicating a negative correlation between numbers of technologies used in addition to GPS and degree of satisfaction with GPS.

\(^4\) Considering how technologies were used across offense categories, on average, respondents monitored 4.9 of a possible 7 offense categories with some technology. In this sample of respondents who all use GPS for DV, those using GPS apply it to an average of 4.4 offense types, SCRAM users average 3.3 offense types, yet some also use equipment-free monitoring with 5.1 offense categories. These averages show that respondents tend to have experience using technologies with multiple offense types; some technologies, like SCRAM and GPS, are used by some practitioners with fewer offense categories, while others are used with a broader range.

\(^6\) This group (n=43) contains a subset of respondents (n=5) who restrict use of GPS to the DV offense category. The others in the large group also rely only on GPS in cases of DV, but in addition use GPS for other offense categories.

\(^6\) Over 86% of respondents (N=114) were either “very satisfied” or “somewhat satisfied,” so this analysis seeks to distinguish between the former and any other attitudes. “Other than very satisfied” respondents include those who were “somewhat satisfied,” “somewhat dissatisfied,” and “very dissatisfied”; 5 respondents indicated they “don’t know,” and were excluded from the analysis.

\(^1\) Available upon request.
Similarly, practitioners who use GPS for a range of offense categories may have different attitudes regarding what it means for agency workload. Findings suggest a statistically significant positive relationship between the number of offense categories monitored with GPS, and practitioners’ views on the impact of GPS on agency workload (see Table 6). Specifically, among practitioners using only GPS for 1 or 2 offense types, 16.7% felt GPS had a “positive” overall impact on agency workload, whereas 83.3% deemed it “neutral” or “negative”; among those using GPS for 3 offense types, 45.4% felt GPS had a positive overall impact on the agency, 54.5% felt it was neutral or negative; and among those using GPS for 4 or more offense types, 55.2% felt it was positive, while 44.8% indicated neutral or negative. In sum, practitioners who use GPS for fewer offenses are likelier to report a negative or at best neutral impact on workload; by contrast, practitioners who use GPS for more offense types are likelier to report a positive impact on workload.

[Table 6 about here]

Specialized work roles are also important in relation to officers’ average caseloads. Compared with other officers in their programs, officers using GPS for DV have smaller caseloads. Respondents indicate that, on average, officers who are assigned GPS for DV cases (N=86) handle smaller caseloads (Mean+/−SD=45.1+/−41.09 clients) than do officers without such assignments (N=72), whose caseloads are more than twice as large (Mean+/−SD=95.9+/−65.23 clients), a significant difference (t[115.4]=5.716, p<.0001). In addition, officers specializing in using only GPS for DV cases have smaller caseloads overall than officers making use of a broader range of technologies for DV, with a trend towards having more cases as more technologies for DV are added (see Figure 4). Officers supervising DV defendants using GPS alone had the smallest caseloads (Mean+/−SD=38.9+/−26.05 clients, median=35 clients), and in these programs the average caseload size for officers not using GPS was the highest (Mean+/−SD=117.1+/−85.91 clients, median=82.5 clients), a significant difference (t[23.85]=4.129, p<.0001).

[Figure 4 about here]

The application of technology may also be informed by agency-level practices, such as hours of operation. Programs’ reported number of hours per week with supervision staff on hand enables identification of programs open for 45 hours a week or fewer—i.e., during

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Footnotes:

^ For this calculation, “neutral” responses were combined with “negative” responses. These results do not hold if “neutral” responses are instead counted as “positive” responses. Given that the majority of respondents were positive in regards to EM throughout the survey, recoding neutral as negative was helpful in noticing small attitudinal or experiential differences.

^ Satterthwaite correction was used because of unequal variances. A parallel listwise analysis (N=71) shows similar patterns, but is not reported here because it would omit smaller highly-specialized programs that do not report non-GPS caseloads because they monitor all defendants with GPS.

^ Satterthwaite correction was used because of unequal variances.

^ The measure is based on responses to the question: “What is your program’s schedule of operation for the interviewing staff? (e.g., 24 hours/day, Monday to Friday during court hours, 7
“business hours” (e.g., Monday through Friday, 9am-6pm)—and those open for more than 45 hours per week, i.e., for “extended hours.” Programs responsible for handling DV cases that rely on just one technology—GPS—are likelier to be open only during business hours (65.2%), with the rest (34.8%) open for extended hours. By contrast, programs that rely on more than one technology in relation to DV are likelier to be open for extended hours (68.9%), rather than only business hours (31.1%) (see Table 7). Similarly, programs only open for business hours are likelier to use fewer GPS capabilities (61.3%) than are those that are open for extended hours (38.7%). Meanwhile, programs open for extended hours are likelier to use more extensive GPS capabilities (71.4%) than those only open during business hours (28.6%) (see Table 8).

[Table 7 about here]

[Table 8 about here]

DISCUSSION

The use of electronic monitoring, including GPS, has proliferated in recent years across U.S. jurisdictions, both large and small, becoming institutionalized in justice organizations. These developments are evident in the diverse circumstances through which respondents are exposed to GPS and incorporate it into their work routines. Indeed, a close inspection of the data reveals that impressions of GPS are affected by how officers’ working situations are organized. In particular, the present analysis highlights the important but hitherto underexplored dimension of degree of specialization, as evidenced in the relatively specialist and generalist contexts in which GPS for DV personnel work. However, the survey also suggests that the value of GPS for DV stems from its ability to enhance the supervision of arrestees and manage the risks they pose for victims, most important in the volatile pretrial and predisposition period.

As part of the country’s federal system, criminal justice agencies in the U.S. are not centrally directed, and hence divergent purposes and strategies might be expected to emerge from the national snapshot of EM-using pretrial programs. The survey identifies, however, major commonalities regarding its application, indicating the value of second-generation EM (GPS) technology in crafting responses to DV. For example, nearly all respondents reported officers having at their disposal GPS capabilities that allowed for tracking of the offender in real time, and programming of inclusion and exclusion zones. The overwhelming majority were also positive about GPS as a tool, and agreed that it enhances officers’ ability to supervise clients, hold them accountable, and ask “hard” questions; it was also deemed effective at deterring clients from initiating in-person contact with the victim in areas from which the former were excluded. There was no unanimity, however, regarding whether GPS-tethered defendants were less inclined to violate the conditions of their release, relative to other defendants. Furthermore, while more programs in this sample used special procedures to assess risk than in earlier surveys (PJI, 2009), the majority did not. Nevertheless, response patterns show that, for most DV defendants who were monitored with GPS, human contact between practitioners and clients was regularly pursued—in contrast to early fears (Friel & Vaughn, 1986;
Corbett & Marx, 1991) and findings reported by the PJI (2009) that indicated a general trend towards automation and less interpersonal contact in pretrial supervision.

As noted above, the extent of specialization appears to be directly correlated with officers’ overall satisfaction with GPS for DV. The fact that satisfaction with using GPS for DV becomes attenuated as more monitoring technologies are employed (see Table 5) suggests that exposure to varied additional monitoring capabilities reveals the sense in which GPS cannot stand alone; the additional information streams generated via diverse technologies are preferred and may increase the effectiveness of monitoring. For example, officers accustomed to accessing information derived from a range of technological devices will be likelier to appreciate that GPS alone is insufficient for addressing particular DV subtypes (e.g., a DV defendant who is also an alcoholic: without SCRAM, there is no way to constantly have a reading of alcohol intake). Namely, the more diverse an officer’s technological infrastructure, the more supervision-related tasks and opportunities can be pursued; consequently, the role of GPS in the overall mix diminishes in importance.

Extent of specialization is also related to variations in respondents’ impressions of whether GPS has a positive impact on the agency’s workload, whereby those using GPS to monitor more categories of offenders are likelier to have a positive view of its impact on agency workload (see Table 6). Being other than positive (i.e., neutral or negative) about GPS technology’s impact on agency workload may reflect the repercussions that the creation of specialized units within agencies has on the overall distribution of cases and tasks among personnel. Specialized staff may be more isolated, whether physically or professionally, unintegrated into the agency’s collective efforts, and hard-pressed to assist colleagues whose caseloads encompass types of offenders with whom they are relatively inexperienced. Conversely, respondents in organizations that have incorporated EM across offender categories may be likelier to be situated in environments that facilitate teamwork approaches; officers can cover for one another at a moment’s notice, help troubleshoot technical problems with the technology, or assist in interpreting data streams with which they, too, are familiar. In the latter scenario, GPS has become a tool in a shared toolbox, rather than the province of specialists. This interpretation of the impact of GPS specialization on an agency’s workload is consistent with the findings regarding caseload size (see Figure 4): officers who use GPS for DV have caseloads less than half the size of those who do not monitor offenders using GPS; those supervising DV defendants with GPS alone (i.e., specialize by offense type and technology) have the smallest average caseloads, leaving officers in those same departments who do not monitor GPS defendants with the highest average caseloads.

Both caseload and workload pertain to the concept of carrying capacity—defined as an institution’s wherewithal at processing information and handling clients. An agency’s carrying capacity is tested by its adoption of technological types and capabilities, and by the depth of focus given to various offender categories; each generates volumes of work that the agency and its personnel have to contend with—to which they are held accountable. The dimension of carrying capacity is reflected in the study’s findings at two levels: first, at the individual level, agencies make determinations about what officers can reasonably be expected to achieve, a plausible measure of which is the average caseload size assigned to different sub-groups of personnel (e.g., EM officers with DV cases versus EM officers without DV cases, as previously referenced). Second, hours of operations offer an indicator of carrying capacity at the agency level, whereby agencies’ hours contract or expand to accommodate a lesser or greater workload (e.g., volume of cases, differing approaches to varying offender categories, the effort entailed in
processing and acting upon information streams generated by technologies). Survey results indicate that programs adopting only one technology—namely, GPS—in reference to supervising DV offenders, and using fewer GPS capabilities, are likelier to be located in agencies that are limited to “business hours” (see Table 7), as opposed to programs that use additional technologies and more GPS capabilities when supervising DV cases, which are likelier to be open for extended hours (see Table 8).

While carrying capacity at the agency level seems straightforward—more work to handle entails being open for longer hours—at the individual level, there appears to be a discrepancy in the finding related to officer caseload. GPS officers specializing in DV cases have the smallest caseloads, presumably reflecting the additional work that these cases’ characteristic contingencies (e.g., involvement of a victim) and enhanced stream of GPS-based information generate for officers. Given this finding, one might expect that as officers are tasked with using additional technologies, their caseloads will diminish due to the higher volume of information generated, but here the opposite pattern emerges: relative to those using only GPS for DV, officers who use supplementary technologies for cases of DV have larger average caseloads. The discrepancy is explicable, however, if one takes into account that officers in the latter scenario probably are assigned few DV cases while handling a variety of offender categories, for whom different technologies are more commonly employed (e.g., SCRAM for client with alcohol-related violations). Because DV cases may constitute a relatively small percentage of their overall portfolio, their complexity is not something with which officers are overly burdened. Reflecting current views about the importance of deterring contact by abusers, attempts to limit the number of DV cases assigned to individual officers may also allow for closer supervision of such cases.

CONCLUSION

Despite the increased emphasis given to the idea of “specializing” in criminal justice practice, evidenced in the development of “specialty courts,” or the institutionalization of different kinds of policing within municipal police departments (e.g., Special Weapons and Tactics), the differentiating role that specialization plays in community corrections agencies that integrate EM into their operations is unclear (cf. Moran & Lindner, 1985). Using data drawn from a national survey of GPS-using pretrial agencies in the U.S., the present article has highlighted the importance of specialization for how EM is assessed and incorporated by practitioners. Specifically, three quantitative measures indicate whether agencies have officers use few or many technologies and GPS capabilities, and monitor few or many types of offenders. The distinction between specialists and generalists may best be considered as points on a continuum of degrees of specialization. A specialist in one agency may be classified as a generalist in another (and vice versa), because of how the work of remote supervision is organized across the two settings.

The present study focused on the importance of specialization in EM work; future research might expand on the current analysis by incorporating other dimensions, such as demographic characteristics of supervisees, factors relevant to corrections such as risk level, or victim centricity, an important aspect of pretrial programs designed to handle DV cases. Accounting for specialization by such characteristics may further inform the patterns discerned in the present analysis. The kinds of tasks and time commitments entailed by these and other
kinds of case assignments, and the concomitant technologies mobilized to assist in meeting those work requirements, remain to be explored as well (cf. DeMichele et al., 2011). It is also important to consider how approaches to using GPS for DV cases have been influenced by legislation such that they are relatively specialized in one or more respects.

The study has some methodological limitations. For some questions, there is ambiguity as to whether respondents were representing their own or the agency’s experiences, or whether other employees shared their perspective. Furthermore, the survey elicited responses from a specialized group of personnel; use of GPS for DV was inclusion criteria for participation in the extended portion of the survey, and therefore the results may not be replicated with another group of officers, e.g., those performing less-specialized roles.

The present findings, however, represent an initial step in addressing specialization in community corrections, highlighting the ways it is correlated with work patterns, carrying capacity, and employee attitudes. Future research should continue to address this heretofore neglected area encompassing pretrial, probation, and parole, including which tools programs and practitioners are using and how, and the cumulative “effects” of specialization. The context examined in this paper—using EM during pretrial to improve the welfare of battered women—merits particular attention, as survivors of DV often experience lengthy periods of abuse and must overcome deep hesitation before reporting it to authorities and appealing to the criminal justice system for help and protection. EM and GPS technologies are being used more frequently because of their potential to enhance the safety of special populations, but questions remain regarding how they can best complement fundamental approaches to human supervision, including the provision of services and exchange of information.

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[http://www.spunk.org/texts/misc/sp000962.txt](http://www.spunk.org/texts/misc/sp000962.txt)


SPECIALIZATION AND ELECTRONIC MONITORING


SPECIALIZATION AND ELECTRONIC MONITORING


### Table 1. Number of GPS-related capabilities utilized by programs (N=95).

<table>
<thead>
<tr>
<th>Total # of Capabilities Utilized</th>
<th>% of Programs (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>2</td>
<td>3.2% (3)</td>
</tr>
<tr>
<td>3</td>
<td>5.3% (5)</td>
</tr>
<tr>
<td>4</td>
<td>13.7% (13)</td>
</tr>
<tr>
<td>5</td>
<td>23.2% (22)</td>
</tr>
<tr>
<td>6</td>
<td>31.6% (30)</td>
</tr>
<tr>
<td>7</td>
<td>23.2% (22)</td>
</tr>
</tbody>
</table>

*Percentages do not add up to 100%, as some responses are not shown (e.g., "not available in jurisdiction," "don't know").

#### Figure 1. Percentage of GPS for DV defendants receiving field and office visits while being monitored.

*Percentage of programs offering each level of service*
**Figure 2.** Percentage of GPS for DV defendants receiving each service while being monitored.

- Alcohol and/or drug testing
- Substance abuse treatment
- Anger management treatment
- Employment assistance
- Cognitive intervention
- Mental health counseling
- SCRAM monitoring
- Residential treatment center placement
- Half-way house

*Percentages do not add up to 100%, as some responses are not shown (e.g., "not available in jurisdiction," "don't know").

**Figure 3.** Survey item on EM technologies and offense types: Example.
Table 2. Percentage and number of respondents (N=114) using each technology for each offense type.

<table>
<thead>
<tr>
<th>Offense type</th>
<th>GPS</th>
<th>RF</th>
<th>Continuous Alcohol Monitoring*</th>
<th>Other Alcohol Monitoring</th>
<th>Equipment-Free EM</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV/IPV</td>
<td>100%</td>
<td>43.9%</td>
<td>24.6%</td>
<td>16.7%</td>
<td>14.9%</td>
<td>10.5%</td>
</tr>
<tr>
<td></td>
<td>114</td>
<td>50</td>
<td>28</td>
<td>19</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>Other violent</td>
<td>82.5%</td>
<td>44.7%</td>
<td>18.4%</td>
<td>15.8%</td>
<td>15.8%</td>
<td>9.6%</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>51</td>
<td>21</td>
<td>18</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Sexual</td>
<td>89.5%</td>
<td>37.7%</td>
<td>7.9%</td>
<td>15.8%</td>
<td>13.2%</td>
<td>7.9%</td>
</tr>
<tr>
<td></td>
<td>102</td>
<td>43</td>
<td>9</td>
<td>18</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>DWI/DUI</td>
<td>42.1%</td>
<td>39.5%</td>
<td>36.8%</td>
<td>28.9%</td>
<td>14.0%</td>
<td>9.6%</td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>45</td>
<td>42</td>
<td>33</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Other alcohol/drug</td>
<td>45.6%</td>
<td>39.5%</td>
<td>28.9%</td>
<td>21.9%</td>
<td>14.9%</td>
<td>11.4%</td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>45</td>
<td>33</td>
<td>25</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Juveniles</td>
<td>35.1%</td>
<td>28.9%</td>
<td>6.1%</td>
<td>7.9%</td>
<td>9.6%</td>
<td>6.1%</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>33</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Gang member</td>
<td>43.9%</td>
<td>28.9%</td>
<td>8.8%</td>
<td>8.8%</td>
<td>10.5%</td>
<td>6.1%</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>33</td>
<td>10</td>
<td>10</td>
<td>12</td>
<td>7</td>
</tr>
</tbody>
</table>

*i.e., Secure Continuous Remote Alcohol Monitoring (SCRAM).

Table 3. Respondents’ (N=114) use of technologies, by number and offense type.

<table>
<thead>
<tr>
<th>Offense type</th>
<th>Number of technologies used*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>DV/IPV</td>
<td>0%</td>
</tr>
<tr>
<td>Other violent</td>
<td>11.4%</td>
</tr>
<tr>
<td>Sexual</td>
<td>7.02%</td>
</tr>
<tr>
<td>DWI/DUI</td>
<td>14.0%</td>
</tr>
<tr>
<td>Other alcohol/drug</td>
<td>17.5%</td>
</tr>
<tr>
<td>Juveniles</td>
<td>49.1%</td>
</tr>
<tr>
<td>Gang member</td>
<td>45.6%</td>
</tr>
</tbody>
</table>

*Technologies include: GPS, RF, SCRAM, Non-SCRAM alcohol monitor, Equipment-free EM, and Other.

Table 4. Respondents’ (N=114) offense category coverage, by number and technology used.

<table>
<thead>
<tr>
<th>Type of technology</th>
<th>Number of offense types*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>GPS</td>
<td>0%</td>
</tr>
<tr>
<td>RF</td>
<td>44.7%</td>
</tr>
<tr>
<td>SCRAM</td>
<td>59.7%</td>
</tr>
<tr>
<td>Non-SCRAM alcohol monitor</td>
<td>70.2%</td>
</tr>
<tr>
<td>No Equipment EM</td>
<td>81.6%</td>
</tr>
<tr>
<td>Other</td>
<td>83.3%</td>
</tr>
</tbody>
</table>

*Offense types include: DV/IPV, Other violent, Sexual, DWI/DUI, Other alcohol/drug, Juveniles, Gang Member.
Table 5. Relationship between using multiple technologies for DV/IPV and satisfaction with using GPS for pretrial.

<table>
<thead>
<tr>
<th># of Technologies for DV/IPV</th>
<th>Number of programs</th>
<th>% Very satisfied</th>
<th>% Somewhat satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40</td>
<td>57.5%</td>
<td>42.5%</td>
</tr>
<tr>
<td>2</td>
<td>36</td>
<td>36.1%</td>
<td>63.9%</td>
</tr>
<tr>
<td>3+</td>
<td>33</td>
<td>21.2%</td>
<td>78.8%</td>
</tr>
</tbody>
</table>

χ²=10.219, d=2, p<.01

Table 6. Relationship between monitoring different numbers of offense categories with GPS and view of impact of GPS on agency workload (N=101).

<table>
<thead>
<tr>
<th># of Offense categories with GPS</th>
<th>Number of programs</th>
<th>% Positive</th>
<th>% Neutral or Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>12</td>
<td>16.7%</td>
<td>83.3%</td>
</tr>
<tr>
<td>3</td>
<td>22</td>
<td>45.5%</td>
<td>54.5%</td>
</tr>
<tr>
<td>4+</td>
<td>67</td>
<td>55.2%</td>
<td>44.8%</td>
</tr>
</tbody>
</table>

χ²=6.163, d=2, p<.05

Figure 4. Trend showing increase in caseload as more technologies are used for DV/IPV.

Average caseload for officers who monitor defendants on GPS

Average caseload for officers who do not monitor defendants on GPS

*** p<.0001, ** p<.005, * p<.01; Dotted lines indicate the mean caseload sizes for those monitoring defendants on GPS (red), and those who do not (blue).
Table 7. Relationship between program hours of operation and number of GPS technologies used for DV/IPV.

<table>
<thead>
<tr>
<th># of technologies used for DV/IPV</th>
<th>Program hours of operation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Business Hours</td>
</tr>
<tr>
<td>1</td>
<td>(N=29)</td>
</tr>
<tr>
<td>1</td>
<td>15 (65.2%)</td>
</tr>
<tr>
<td>2 or more</td>
<td>14 (31.1%)</td>
</tr>
<tr>
<td>(\chi^2=7.239, d=1, p&lt;.01)</td>
<td></td>
</tr>
</tbody>
</table>

Table 8. Relationship between program hours of operation and number of GPS capabilities used.

<table>
<thead>
<tr>
<th># of GPS capabilities used</th>
<th>Program hours of operation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Business Hours</td>
</tr>
<tr>
<td></td>
<td>(N=29)</td>
</tr>
<tr>
<td>2 to 5</td>
<td>19 (61.3%)</td>
</tr>
<tr>
<td>6 or 7</td>
<td>10 (28.6%)</td>
</tr>
<tr>
<td>(\chi^2=7.144, d=1, p&lt;.01)</td>
<td></td>
</tr>
</tbody>
</table>