



Electronic Monitoring: Uses, Challenges and Successes



CRIME AND JUSTICE

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The purpose of this paper

This paper reviews the main strengths and weaknesses of electronic monitoring (EM) for offenders based on a review of the findings from a number of international and UK studies. The paper also describes how EM is used in Scotland and in other jurisdictions.

Key Messages

The use of Electronic Monitoring in Scotland and in international jurisdictions:

- In Scotland, Restriction of Liberty Orders (RLOs) and Home Detention Curfews (HDCs) are the two most commonly used forms of electronic monitoring (EM).¹
- In other jurisdictions, EM is used at different and multiple points along the justice pathway – as an alternative to remand, as an alternative to sentencing, as a form of probation following release from prison and as part of provisions for early release.
- The risk assessment process and eligibility criteria for individuals diverted to EM varies across jurisdictions. Some jurisdictions focus on the risk posed by the individual whereas others assess risk based on opportunities for rehabilitation and reintegration.
- The evidence base on the effectiveness of EM is limited in terms of the comparison and transferability of research from other jurisdictions.

¹ G4S (2016) 'Electronic Monitoring to the Criminal and Youth Justice Systems in Scotland: Statistical Bulletin' 1 January 2015 – 31 December 2015, Glasgow: G4S

A review of the evidence on EM

EM technologies

- The effectiveness of EM is affected by technical issues and the type of monitoring system.
- There are differences in outcomes between Radio Frequency (RF) and Global Positioning Systems (GPS) EM technologies. Some studies found GPS EM is more likely to reduce reoffending/non-compliance than RF.

Remote Alcohol Monitoring

- Remote Alcohol Monitoring (RAM) differs from other uses of EM because the main aim is to manage or reduce alcohol consumption.
- There is a limited evidence base on the effectiveness of RAM, however a limited number of empirical studies suggest promising results for the use of RAM.
- A pilot conducted in London in 2014 evidenced a 92% compliance rate with RAM for monitored people on community sentences over 12 months and concluded there were a number of positive opinions and experiences of alcohol abstinence monitoring.²
- One of the recommendations of the 2016 Scottish Government Working Group paper was on legislative change, including the introduction of legislation which would enable the use of RAM.³

² Pepper, M. and Dawson, P. (2016) 'Alcohol Abstinence Monitoring Requirement A process review of the proof of concept pilot' MOPAC Evidence and Insight Unit, available at: https://www.london.gov.uk/sites/default/files/aamr_final.pdf; non-compliance was based solely on the consumption of alcohol or tampering with monitoring equipment and did not include compliance with the conditions of the community sentence, which were often numerous and complex.

³ Scottish Government Working Group 2016 'Electronic Monitoring in Scotland Working Group Report' available at: <https://www.gov.scot/publications/electronic-monitoring-scotland-working-group-report/>, p. 7

Community supervision and support

- A body of evidence suggests EM is more effective when combined with other supervision and support mechanisms within the community.
- In most jurisdictions EM is understood as a tool in a wider network of community support and supervision of monitored people.

EM and reintegration

- The relationship between EM and reintegration of monitored people is a complex one and is dependent on how reintegration is defined.
- EM can be used to encourage a pro-social lifestyle by incentivising compliance with the conditions of release, encouraging engagement with treatment, counselling, positive recreational activities, facilitating an offender's return to their family, reinforcing day-and-night rhythms, and discouraging association with criminal associates.
- EM can be flexibly applied dependent on offence, offender demographic, and the conditions necessary for release,⁴ and its flexible use can be used to incentivise reintegration.
- EM can provide opportunities for the construction of positive social capital, in that it allows family responsibilities and relationships to be maintained and increases the likelihood of the monitored person gaining or maintaining employment.
- However, in some cases EM can have a negative impact upon the monitored person's family, particularly those who reside within the same address.

⁴ Gibbs, A. and King, E. D. (2003) 'Home detention with electronic monitoring: The New Zealand experience' *Criminal Justice* 3:2; Vol. 3(2): 199–211; Graham, H. and McIvor, G. (2015) 'Scottish and International Review of the Uses of Electronic Monitoring' University of Stirling; Gur, O.M., Ibarra, P. R., and Erez E., (2016) 'Specialization and the Use of GPS for Domestic Violence by Pretrial Programs: Findings from a National Survey of U.S. Practitioners', *Journal of Technology in Human Services*, 34:1, 32-62, p.37; International Association of Chiefs of Police (IACP) cf Gies, S. V. (2016) 'The Use of Electronic Monitoring as a Supervision Tool' in Jeglic, E. and Calkins, C. (eds.) *Sexual Violence: Evidence based policy and prevention*, pp. 95-117 Springer International Publishing, pp. 102-3; Payne, B., DeMichele, M., & Button, D. (2008) 'Understanding the Electronic Monitoring of Sex Offenders' *Corrections Compendium* 33(1): 1-5.

The impact of EM on reoffending and reconviction rates

- Caution must be taken when comparing the reconviction rates of those on HDC from those who are released straight from custody, as it is likely that individuals who have been granted HDC pose a lower risk of reoffending, so the results may not be directly comparable. However some reconviction studies have controlled for risk to ensure the results are more comparable.
- There are mixed but promising results regarding reoffending, reconviction and failure/breach rates with use of EM.
- Some evidence suggests EM reconviction rates for monitored people are lower, or similar, compared to matched groups who serve their full sentence in custody.

The cost of EM

- The available evidence suggests EM costs less than imprisonment.
- There is a limited evidence base on the cost incurred by the whole system operational costs of EM.
- EM's cost effectiveness is conditional on a number of factors.

The ethical considerations of EM

- There are a number of ethical concerns and considerations associated with the use of EM related to its impact on the individual and use in the wider justice system.
- In some cases, EM can result in feelings of stress, stigma and shame for the monitored person, and can sometimes negatively affect their family or co-habitants.
- EM can allow net widening or penological drift, whereby individuals who would not be sanctioned otherwise are monitored by EM.

EM and domestic abuse

- In cases of domestic abuse, the purpose of EM is different to that in cases of non-domestic crime. Bilateral Electronic Monitoring (BEM) monitors both an perpetrator's compliance with the conditions of sentence and protects victims of domestic abuse by monitoring the perpetrator's movements in relation to the victim.
- Research on BEM in cases of domestic abuse suggests it makes the justice system more victim-centric and can improve victims' feelings of safety, empowerment and provide space to reassess the relationship and their future circumstances.
- Domestic abuse perpetrators' experience of EM is varied and overall the evidence base relating to the use of EM with domestic perpetrators is limited.

Introduction

Rationale and Methods

This review focuses on issues of particular relevance to Part 1 of the Management of Offenders (MoO) Bill – namely the different ways in which EM could be used along the justice pathway and the strengths and weaknesses of electronic monitoring. The provisions in Part 1 of the MoO Bill are designed to expand and streamline the use of electronic monitoring (EM) in Scotland. The underlying intention of Part 1 of the Bill is to provide one overarching set of principles for the imposition of EM, drawing together the threads of the pre-existing legislation.

This paper builds on a comprehensive review of on EM published in 2015 which highlighted the most relevant and reliable studies on electronic monitoring.⁵ New literature was found via database searches conducted by the research officer and Scottish Government Library service between November 2018 and January 2019.

The review was informed by a range of international studies. In terms of the Scottish literature, the review drew on 5 key reviews on EM in Scotland:

- Armstrong and colleagues' 2011 Scottish Government report on the 'Evaluation of the Use of Home Detention Curfew and the Open Prison Estate';⁶
- Barry and colleagues' 2007 'Evaluation Of The Use Of Electronic Monitoring As A Condition Of Bail';⁷
- Graham and McIvor's 2015 publication on 'Scottish and International Review of the Uses of Electronic Monitoring;
- The Scottish Government Working Group's 2016 report on 'Electronic Monitoring in Scotland';⁸ and

⁵ Graham and McIvor (2015)

⁶ Armstrong, S., Malloch, M., Nellis, M and Norris, P. (2011) 'Evaluation of the Use of Home Detention Curfew and the Open Prison Estate in Scotland' Scottish Government Report available at: http://www.antonioacasella.eu/nume/HDC_armstrong_scotland_2011.pdf

⁷ Barry, M., Malloch, M., Moodie, K., Nellis, M., Romeo, R., and Dhanasiri, S., (2007) 'an Evaluation of the Use Of Electronic Monitoring as a Condition of Bail In Scotland' *Scottish Executive* available at: <https://www.sccjr.ac.uk/publications/an-evaluation-of-the-use-of-electronic-monitoring-as-a-condition-of-bail-in-scotland/>

⁸ Scottish Government Working Group (2016)

- Reports published from the 2014 EMEU project, which examines the use of EM across EU member states to reduce prison populations.⁹

Additional literature on electronic monitoring from other jurisdictions may exist but may have been missed because articles were not written in English and/or because they used different terms for 'electronic monitoring'.¹⁰

Gaps in the evidence base

There is extensive theoretical literature on EM, a review of which is beyond the scope of this paper.¹¹ There are also a number of published systematic reviews which focus on EM but there are fewer empirical studies that employ experimental or quasi-experimental methods that compare the outcomes of EM with other disposals. One of the few was conducted by the Ministry of Justice in 2011 on HDC, which concluded that monitored people released on HDC were no more likely to reoffend than those in a matched sample who were not eligible for release.¹²

There is also a lack of evidence from the perspective of monitored people and on rural, female, minorities and non-compliant offenders. Caution should be exercised when comparing findings across jurisdictions due to different models, intended outcomes and different uses of EM. Comparisons from the US and other non-EU states are difficult due to the different human rights frameworks governing judicial decision-making. For Remote Alcohol Monitoring and drug monitoring, compliance is measured differently making comparisons very difficult.

A note on the interpretation of the evidence

It should be noted that an assessment of whether EM is effective or not will depend entirely on its particular aims and purpose. An overview of the evidence shows that electronic monitoring has been used to achieve a range of different objectives including to reduce reoffending, reduce the risk of breaching an order, reduce the prison population, or reduce costs (and sometimes a combination of these).

⁹ The publications resulting from this project can be accessed at: <http://emeu.leeds.ac.uk/reports/>

¹⁰ Searches were conducted using terms which included "electronic monitoring", "home detention", "home arrest", "tagging", "curfew".

¹¹ Di Tella, R. and Schargrodsky, E. (2013) 'Criminal recidivism after Prison and Electronic monitoring' *Journal of Political Economy* 121:1, highlight the range of available literature and provide an overview on p. 29, footnote 2.

¹² Ministry of Justice (2011) 'The effect of early release of prisoners on Home Detention Curfew (HDC) on recidivism' available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/217378/efect-early-release-hdc-recidivism.pdf

Therefore, the effectiveness of EM can only be determined based on whether it achieved the particular objectives defined within an individual study. For example, EM introduced to release pressure on the prison population may be considered effective because it reduces prison populations. It may not be effective at reducing reoffending however, because it does not combine the tag with support to address the criminogenic needs associated with reoffending.

The use of electronic monitoring along the justice pathway

The current use of EM in Scotland

EM was introduced in Scotland in 1998 for the purpose of monitoring compliance with RLOs and has been used nationally since 2002.¹³

There are three types of technologies used in electronic monitoring: Radio Frequency (RF), Global Positioning System (GPS) and Remote Alcohol Monitoring (RAM).

RF monitoring is the only type of EM currently used in Scotland. In Scotland electronic Monitoring (EM) is used as a unilateral¹⁴ measure, primarily intended to monitor the offender to ensure they adhere to the conditions of order or licence. Offenders may be restricted to a place, from a place, or both to and from places under the conditions of EM.

EM is used most often for a diverse range of offences including theft, assault, sexual offences, fraud, wilful fire-raising and offences under the Criminal Justice and Licensing (Scotland) Act 2010.¹⁵

¹³ Graham and McIvor (2015) p. 20; Scottish Government Working Group (2016) p. 3

¹⁴ The term 'unilateral' is used to describe EM that monitors only the offender; bilateral monitoring is used to describe systems whereby the offender and the victim are involved in the EM process.

¹⁵ McIvor, G. and Graham, H. (2016) 'Electronic Monitoring in Scotland' University of Stirling and the European Commission, p. 3

In Scotland, electronic monitoring can be used for the following order and licence types:

- a) Restriction of Liberty Order (RLO);
- b) Home Detention Curfew, including cross-border releases (HDC);
- c) As a condition of a Parole or a non-Parole License;
- d) A Movement Restriction Condition, applied as part of an Intensive Support and Monitoring Service made by a Children's Panel (MRC);
- e) A Restricted Movement Requirement as part of a Community Payback Order (RMR) or breach of a Community Payback Order;
- f) A Requirement Restricting Movement as part of a Drug Treatment & Testing Order (DTTO);
- g) As a condition of a Sexual Offences Prevention Order (SOPO);
- h) As a condition of a Sexual Harm Prevention Order (SHPO);
- i) As a condition of Temporary Release licence from Prison (which may include Home Leave).
- j) As part of a Supervised Release Order (SRO).¹⁶

Restriction of Liberty Orders

In Scotland, Restriction of Liberty Orders (RLOs) and Home Detention Curfews (HDCs) are the two most commonly used forms of EM.¹⁷

Restriction of Liberty Orders (RLOs) are imposed for periods of up to one year, and involve restricting an individual to a specified place for up to 12 hours per day and/or from a specified place for up to 24 hours per day.

Criminal proceedings data for the period 2017-18 shows that 2,691 people were sentenced to a RLO. This compares with 13,601 sentenced to a community payback order (CPO). 11,973 people were given a custodial sentence and 287 of those were sentenced to a supervised release order. RLOs have been more widely

¹⁶ Conditions 'g' to 'j' will be the new uses under the Management of Offenders Bill, and 'e' is a change in that Community Payback Order use will be at first disposal, rather than only at breach stage. Some of these will therefore not be possible until the legislation, which at the time of writing was before the Scottish Parliament, is passed and commenced.

¹⁷ G4S (2016)

used over the past decade with the numbers more than doubling from 1,143 in 2008-09 to 2,691 in 2017-18.

In the most recently available year (2015-16) the reconviction rate for RLOs was 33.9% and the average number of reconvictions per offender was 0.58. These figures for reconvictions are much lower than they were a decade ago, with the average number of reconvictions for RLOs decreasing by 46% from 1.07 in 2006-07. In comparison to RLOs, in 2015-16 the reconviction rate for short custodial sentences of under 3 months was 58.5% and for sentences under 1 year it was 51.0%.

Appendix 1 contains the table detailing the reconviction rates.

Home Detention Curfews (HDC)

HDCs were introduced in Scotland in 2006. Prisoners serving less than four years imprisonment were eligible to apply for early release on home detention. In 2008 the scheme was expanded to include long term prisoners who were recommended by the Parole Board. The decision to release on HDC and the assessment process for determining eligibility and the recall process are carried out by the Scottish Prison Service.

Other uses of EM in Scotland

EM is also used in Scotland by the Children's Hearing System in the form of Movement Restriction Conditions (MRCs) for young people. These orders are used when young people are at severe risk, as an alternative to secure care, and as a measure to assist the transition from secure care into the community.

The international use of EM

Internationally, electronic monitoring is used at a number of different points along the adult criminal justice pathway. These points include:

- an alternative to pre-trial custodial remand, for the purposes of surveillance, compliance and risk management;¹⁸
- an alternative to short prison sentences;
- part of an early release from prison; and
- other ad hoc purposes, such as prisoners' attendance at hospital.

EM, as an alternative to custodial remand (pre-sentencing), is used in the US, Australia,¹⁹ Argentina, a number of EU countries (including Belgium, Ireland, the Netherlands, England and Wales), and was previously piloted in Scotland.²⁰ In Spain, Portugal and the USA, electronically monitored restraining orders are used pre-trial in cases of domestic violence. In Ireland, pre-trial EM was used as condition of bail in burglary offences.²¹ In the Netherlands, EM is used for young offenders in place of remand.²² A pilot project in 2005 evaluated EM as a condition of pre-trial bail in Scotland,²³ and found EM was used in less than 5% of eligible cases.²⁴

EM as an alternative to a custodial sentence (primary sentencing) is used in some European jurisdictions in place of short prison sentences. In the Netherlands, EM is used in place of prison sentences of 6 months or less.²⁵ In Germany, Home Detention is used as an alternative to imprisonment for the failure to pay a fine (as

¹⁸ Graham and Mclvor (2015); Mair and Nee (1990) cf. Nellis, M. (2004) 'Electronic Monitoring and the Community Supervision of Offenders' in Bottoms, A., Rex, S., and Robinson, G., (eds.) (2004) *Alternatives to Prison* Devon: Willan Publishing, p. 22; Van Kalmthout, A., Knapen, M., and Morgentern, C., (2009) (eds.) *Pre-trial detention in Europe*, Nijmegen: Wolf Legal Publishers

¹⁹ Black M. and Smith R. (2003) 'Electronic monitoring in the criminal justice system. Trends & issues in crime and criminal justice' 254. Canberra: Australian Institute of Criminology, available at: <https://aic.gov.au/publications/tandi/tandi254>; Cale and Burton (2018) 'Factors Associated with Breaches of Home Detention and Returns to Custody Post-Home Detention in South Australia' *Current Issues in Criminal Justice* 30: 1, pp. 35-56

²⁰ Boone, M. and Herzog-Evans (2013) 'Decision Making and Offender Supervision' in McNeill F. and Beyens, K. (eds.) (2013) *Offender Supervision in Europe* Basingstoke: Palgrave MacMillan

²¹ Moss, B. (2018) 'Electronic monitoring and monitoring probation: The case of Ireland' *European Journal of Probation*, Vol. 10(2) 120– 135; p. 125

²² Boone, M., Van der Kooij, M., Rap, S. (2017) 'The highly reintegrative approach of electronic monitoring in the Netherlands' *European Journal of Probation* , Vol. 9:1, 46– 61

²³ Barry *et al* (2007)

²⁴ Barry *et al*. (2007); Graham and Mclvor (2015) p. 22

²⁵ Graham and Mclvor (2015) p. 22

well as for early release from prison).²⁶ In South Australia, HDC is used in some instances where an individual has their custodial sentence fully suspended and they complete the entire term on home detention.²⁷

EM is used as a form of probation (post imprisonment) following a completed prison sentence. It is used across Europe in a number of jurisdictions, including England and Wales, Belgium, Germany, the Netherlands, Denmark, and Norway. In Germany, probationary EM is used only exceptionally, in very low numbers and for serious violent offenders at high risk of reoffending.²⁸

EM as part of provisions for early release/probation (post imprisonment) is used in a number of jurisdictions including Sweden, Belgium, Australia, New Zealand and the US. In New Zealand, people serving prison sentences of over 2 years for crimes that do not involve serious violence can apply for HDC up to three months earlier than their earliest parole date as a form of parole.²⁹ In Sweden, EM for early release is used for prison sentences of 6 months or longer and is generally reserved for people convicted of crime who are deemed low risk.³⁰ In Belgium, for prison sentences of 3 years or more and based on other specific eligibility criteria, EM is used for prisoners who are 6 months from their conditional release date.³¹ In South Australia, prisoners (except those convicted of serious crimes of violence, sexual crime or terrorism) who have completed at least half of their custodial sentence are eligible for release on HDC.³²

EM is also used for other ad hoc purposes. In Ireland, for example, EM was initially introduced in 2010 for prisoners to attend hospital.³³ EM is also used in Spain for this purpose and for mothers with newborn babies.³⁴ EM was introduced in Argentina for old or terminally ill prisoners to be released and spend their remaining time with family.³⁵ In the Netherlands, EM is used as a condition of a conditional

²⁶ Haverkamp, R., and Woessner, G., (2016) 'The Emergence and Use of GPS Electronic Monitoring in Germany: Current Trends and Findings' *JOURNAL OF TECHNOLOGY IN HUMAN SERVICES* 34: 1, p. 124

²⁷ Cale and Burton (2018) p.38

²⁸ Dünkel, F., Thiele, C. and Treig, J. (2017) "'You'll never stand-alone": Electronic monitoring in Germany' *European Journal of Probation* 9:1 pp. 28–45

²⁹ Gibbs and King (2003) p. 200

³⁰ Graham and McIvor (2015) p.71; Wennerberg, I. (2009) 'Victims' Perspectives on Electronic Monitoring', presented at CEP EM Conference, Egmond aan Zee, The Netherlands;

³¹ Beyens K and Roosen M. (2017) 'Electronic monitoring and reintegration in Belgium' *European Journal of Probation* 9:1, p.14

³² Cale and Burton (2018) p.38

³³ Moss (2018) p.125

³⁴ Otero, P. (2009) 'Electronic monitoring, an alternative way of preventing aggression and helping social rehabilitation' *Journal of Organisational Transformation and Social Change* 6: 2, p. 137

³⁵ Di Tella, R., and Schargrodsky, E. (2013) p. 36

detention under a hospital order; and with the conditional ending of this order.³⁶ Changes to the legislation in Canada in 2013 mean EM can be used to monitor high-risk prisoners on day pass or work release.³⁷ In some US and Canadian state schools electronic tags are used to monitor children with high truancy records.³⁸

Risk Assessment and Eligibility

Risk Assessment and eligibility in Scotland

There are a number of risk assessment processes involved in assessing a person's suitability for EM.

RLO assessments are conducted by Criminal Justice Social Work and involve gathering information on the individual's home circumstances, employment status, and family responsibilities and circumstances.³⁹

Assessment of risk and eligibility for HDC in Scotland is the responsibility of the SPS, drawing on community assessment by criminal justice social work and acting within a legislative framework that sets out a number of statutory exclusions. Research by Armstrong and colleagues (2011) indicated that the majority of prisoners released on HDC were serving sentences of between six months and two years; their offending profile tended to be less serious than that of the Scottish prison population as a whole and proportionately more use was made of HDC with women than with men.⁴⁰

The granting of release on HDC has been declining since August 2018 and then reduced substantially since the end of October 2018. This decline followed a review by Her Majesty's Inspectorate of Prisons for Scotland and Her Majesty's Inspectorate of Constabulary in Scotland. According to SPS reported 'stock'

³⁶ Boone *et al.* (2017)

³⁷ Martinovic M. (2017) 'Expanding Electronic Monitoring in New Zealand' *The Journal of Offender Monitoring*, 29: 2, p. 28

³⁸ Kilgore, J. (2012) 'Would you like an ankle bracelet with that?' *Dissent*, Winter, p. 70; Willoughby, A., and Nellis, M. (2016) "'You Cannot Really Hide": Experiences of Probation Officers and Young Offenders with GPS Tracking in Winnipeg, Canada' *Journal Of Technology In Human Services* 34: 1, p. 77

³⁹ Scottish Government (2016) 'Electronic Monitoring Interim Guidance' available at: <https://www2.gov.scot/Resource/0050/00502012.pdf>

⁴⁰ Armstrong, S., Malloch, M., Nellis, M and Norris, P. (2011) Scottish Government Report 'Evaluation of the Use of Home Detention Curfew and the Open Prison Estate in Scotland', p. 2

figures, HDC has declined from just under 300 in March 2018 to 62 in late-March 2019.

Risk assessment and eligibility in other jurisdictions

In other jurisdictions, the type of person eligible for release on EM varies. In some jurisdictions EM has been piloted in response to a specific issue, such as the recent GPS monitoring pilot for knife crime in London or to tackle joyriding in Manitoba, Canada.⁴¹ In the US, EM is used widely for the monitoring of sex offenders, some high risk and some on lifelong monitoring orders.⁴² In Germany, GPS EM is only used to monitor small numbers of high risk offenders convicted of violent or sexual crime following their complete prison sentence of at least one year, and lifelong GPS monitoring is an available option for people convicted of child sexual abuse.⁴³ By contrast, in Norway and South Australia, EM – specifically HDC – is not available for the most serious/violent offences such as homicide, sexual, or terrorist offences.⁴⁴ Offenders assessed as ‘low-risk’, who would not be eligible for a custodial sanction for their offence, are excluded in some jurisdictions to avoid potential net-widening effects.⁴⁵

Eligibility and risk assessments for EM in other jurisdictions varies considerably, and much depends on the purpose for which EM is intended. Scotland relies on a system of structured professional judgement to assess an individual’s risk, and much of the assessment is based on an individual’s conduct while in custody. Elsewhere, some jurisdictions use actuarial prediction, a model based on an empirically developed risk assessment tool that categorises individuals based on their membership of certain subgroups that are positively associated with risk. This section offers a number of examples to illustrate the variety of different processes related to risk assessment and eligibility.

⁴¹ Willoughby and Nellis (2016)

⁴² Bales, W., Mann, K., Blomberg, T., Gaes, G., Barrick, K., Dhungana, K., McManus, B. (2010) ‘A Quantitative and Qualitative Assessment of Electronic Monitoring’ *Report submitted to the Office of Justice Program, National Institute of Justice, US Department of Justice*, Florida: The Florida State University

⁴³ Dünkel *et al.* (2017) p. 28; Eilzer, S. (2014) ‘Data protection and electronic monitoring in Germany’ *Centre for Crime and Justice Studies* available at: <https://www.crimeandjustice.org.uk/publications/cjm/article/data-protection-and-electronic-monitoring-germany>

⁴⁴ Cale and Burton (2018) p. 36, 38; Graham and McIvor (2015) p. 60

⁴⁵ Cale and Burton (2018) p. 36.

England and Wales

A recent evaluation pilot of GPS EM by the Ministry of Justice found that stakeholders were keen to expand the eligibility criteria for GPS EM. The pilot allowed individuals from two regional police force areas to be considered for GPS EM if they were over 18, had a fixed abode, and where EM could be used to monitor:

- court imposed bail,
- a community sentence,
- HDC,
- a licence variation or
- as a monitoring addition for re-release from prison after recall,
- or for the release of Imprisonment for Public Protection (IPP) prisoners who would otherwise not be considered for release.⁴⁶

This evaluation noted: “HDC boards were able to impose a GPS tag for prisoners eligible for HDC and where it was felt that risks could be managed more effectively by a GPS tag than a Radio Frequency (RF) tag”.⁴⁷ Monitoring field staff were interviewed and communicated that they would support the extension of GPS monitoring for community sentences that would be otherwise unmonitored, young people who would otherwise be in secure accommodation, and for people who were of no fixed abode, as this particular condition was prohibitively restrictive in some cases.⁴⁸

⁴⁶ Ministry of Justice (2019) ‘Process evaluation of the Global Positioning System (GPS) Electronic Monitoring Pilot Qualitative findings’, p. 9 available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779199/gps-location-monitoring-pilot-process-evaluation.pdf

⁴⁷ *ibid*, p. 9

⁴⁸ Ministry of Justice (2019) p. 16

Spain

There is a growing literature on the utility of considering ‘strength factors’ in combination with assessing risk. These are factors associated with resilience, a reduced likelihood of reoffending, and a higher likelihood of pro-social lifestyle, such as effective family support or stable home circumstances.⁴⁹ These factors are specific to each person and so type of risk assessment depends upon an individual analysis of each case.

In Spain, the eligibility assessment for release on EM was amended in 2006. The amendment meant individuals were not excluded from consideration of EM on the type of crime, nor on the point on the justice pathway the conditions were imposed. Instead, EM eligibility was based on three criteria:

1. Being assessed as eligible following the various evaluation processes related to an individual’s treatment programme;
2. The presence of factors in an individual’s life that “favour social and work integration”; and
3. “Existence of good prospects for rehabilitation of the offender.”⁵⁰

The purpose of the amendment was to emphasise (re)integration as an objective of EM, meaning if an individual has the opportunity to integrate via work and social life, they will be released on EM.⁵¹

The Colorado Actuarial Risk Assessment Score (CARAS)

CARAS is a statistical risk assessment prediction tool used in Colorado to assess an individual’s suitability for parole. Colorado use a series of empirically-developed risk assessment tools along the justice pathway. Prior to trial, the Colorado Pretrial Assessment Tool (CPAT) is used for the purposes of assessing pre-trial release to identify an individual’s risk of reoffending and non-attendance at court.⁵² The CPAT tool is based on 12 indicators of risk, including items such as whether their

⁴⁹ Risk Management Authority (2016) Standards and Guidelines for Risk Management, p. available at: https://www.rma.scot/wp-content/uploads/2018/03/Standards_and_Guidelines_for_Risk_Management_2016.pdf

⁵⁰ Otero, 2009, p. 136

⁵¹ *ibid.*

⁵² Colorado Criminal Defense Institute (2015) ‘The Colorado Bail Book’ available at https://www.bja.gov/Publications/Colorado_Bail_Book_Pretrial_Release.pdf

residence is owned or rented, age at first offence and whether the individual owns a phone.⁵³

CARAS is described as a tool similar to systems that predict a candidate's insurance differential, based on their characteristics and which group characteristics are most closely associated with risk.⁵⁴ Rather than assessing each prisoner on an individual basis, CARAS assesses a prisoner based on their membership of certain subgroups. Their risk of recidivism is calculated based on a combined analysis of their subgroup memberships and thus individual behaviour is not included in the assessment.⁵⁵

The tool is based on a points system accumulated across nine categories of risk:

- Number of convictions;
- Number of code of penal discipline violations;
- Age;
- Number of Level of Supervision Inventory items (an additional risk assessment tool, which included consideration of the level of family support);
- Whether the individual was arrested under the age of 16;
- Assessed custody level (e.g. open prison, medium or close custody);
- Prior parole and whether they have been recalled to prison during a parole period;
- Number of times imprisoned;
- Level of substance abuse need (based on an additional risk assessment tool).⁵⁶

⁵³ *ibid.*

⁵⁴ CARAS parole guidelines (2008) available at https://cdpsdocs.state.co.us/ors/docs/Risks/CARAS_BriefDescription_V5.pdf

⁵⁵ *ibid.*

⁵⁶ *ibid.*

The risk assessment tool was also split across crime types. The tool produces a score between 1 and 79 that indicates a person's risk level, the higher the score the higher the risk. Research by the Colorado Division of Criminal Justice studied 611 women and 4769 men to identify the indicators associated with success. Five categories of risk were identified ranging from 'lowest' to 'very high', and individuals' membership of subgroups was correlated with success across the categories.

Argentina

In Argentina, EM is used to monitor individuals on pre-trial bail. Risk assessment is conducted by the presiding judge in court, based on information provided to them by the prosecution and the defendant's criminal history.⁵⁷ If the defendant poses a flight risk or there is a concern they will interfere with witnesses, they will not be granted bail and will be imprisoned until trial. Judges have the opportunity to release some of this cohort on EM following a three-tier assessment process. First, a technical assessment is made on the availability of a phone line and the suitability of the home address for EM; second, an socio-environmental assessment is conducted to assess the suitability of the individual's family circumstances. Pending these assessments, defendants will be imprisoned and are thereafter released on EM when a device becomes available.⁵⁸

Domestic abuse risk assessment

There are slightly different risk assessment procedures for perpetrators of domestic abuse subject to EM. Lethality assessments are used to identify the level of risk a domestic perpetrator poses to their victim.⁵⁹ Research on the use of EM in cases of domestic abuse in the USA outlined the process of risk assessing domestic perpetrators released on EM.⁶⁰ The process for referral to the EM programme in two US jurisdictions excluded consideration of those perpetrators deemed to pose a risk of lethal harm to their victim.⁶¹

⁵⁷ Di Tella and Schargrotsky (2013) pp. 37-8

⁵⁸ *ibid.*, p. 39; there is often a waiting list for equipment in Argentina and defendants must remain in prison until a tag is available.

⁵⁹ These are comparable to the DASH RIC tool used in the UK.

⁶⁰ Ibarra, P. R., and Erez, E., (2005) 'Victim-centric Diversion? The Electronic Monitoring of Domestic Violence Cases' (2005) *Behavioral Sciences and the Law* 23, p. 266

⁶¹ *ibid.*, this was based on a lethality assessment similar to those used in the UK.

Strengths and Weaknesses of EM: A review of the evidence

EM technologies

Few studies highlighted technical problems with the equipment. However, where there are technical issues, this impacts on effectiveness and the type of monitoring can also affect outcomes.

While there were a number of case studies identified in which there were no reported issues with EM technologies, technical issues such as lack of signal/coverage, false alarms, and false or missed readings were observed in a number of empirical studies.⁶² Research from Germany found that on average, there were false alarms every three days for each offender on EM.⁶³ Research from Spain highlights the failures of GPS monitoring in underground metro systems.⁶⁴ Other research found that false alerts could be triggered due to the complex technology of EM devices and systems, and their exposure to “a variety of harsh environmental conditions on a daily basis”.⁶⁵ It should be noted, however, that a number of the empirical studies identified were conducted several years ago, and EM technologies have progressed significantly in recent years.

A number of monitored people interviewed for research in England reported false breaches, whereby the monitoring company had contacted them to investigate a breach when they had been within their address and complying with their conditions.⁶⁶ One respondent reported that his motivation to comply was negatively affected by the faults in the equipment, stating:

⁶² Haverkamp and Woessner (2016) p. 130; Hucklesby, A. (2009) 'Understanding Offenders' Compliance: A Case Study of Electronically Monitored Curfew Orders' *Journal of Law and Society* 36, p. 263; Erez, E., and Ibarra, P. R. (2007) 'Electronic monitoring and victim-re-entry in domestic violence cases. *British Journal of Criminology*' 47: 2, p. 115;

⁶³ Haverkamp and Woessner (2016) p. 130;

⁶⁴ Otero (2009) p. 142, footnote 13

⁶⁵ Martinovic, M. Schluter, P. (2012) 'A Researcher's Experience of Wearing a GPS-EM Device' *Current Issues in Criminal Justice* 23:3, p. 419

⁶⁶ Hucklesby (2009) p. 263

“(it) Makes you think that you can go out for a few minutes and blame the equipment...If (the monitoring company) ever asked me why (I was) late, I blamed the equipment”.⁶⁷

There was also evidence from Germany of bureaucratic/administrative challenges and issues of inter-agency working;⁶⁸ evidence from England and Wales that suggested the quality of the contractor’s installation and maintenance of equipment impacted on effectiveness;⁶⁹ and evidence from Scotland and the USA on a lack of awareness about how the technology works.⁷⁰ A 2019 evaluation of GPS EM by the Ministry of Justice outlined the challenges of inter-agency working related to communicating the specifics of geographical “away from” conditions and issues resulting from mismatched software between agencies.⁷¹

There are differences in outcomes between Radio Frequency (RF) and Global Positioning Systems (GPS)

Some studies from the USA found that GPS EM is more likely to reduce reoffending and non-compliance than RF monitoring.⁷² Research in Florida found that “those monitored with GPS had a 6% lower failure rate than those on radio-frequency monitoring”.⁷³ However a 2017 systematic review by Belur and colleagues found no statistically significant differences in effectiveness between RF and GPS systems.⁷⁴

⁶⁷ *ibid.*

⁶⁸ Dünkel *et al.* (2017) p.40

⁶⁹ National Audit Office (2006) 'The Electronic Monitoring of Offenders' available at <https://www.nao.org.uk/report/the-electronic-monitoring-of-adult-offenders/>

⁷⁰ Mclvor and Graham (2016); Ibarra, P., Gur, O., & Erez, E. (2014) 'Surveillance as Casework: Supervising Domestic Violence Defendants with GPS Technology' *Crime, Law and Social Change* 62, p.428

⁷¹ Ministry of Justice (2019) p. 28

⁷² Bulman, P. (2010) 'Electronic Monitoring Reduces Recidivism' *Corrections Today* 72: 6 pp. 72-73; Graham and Mclvor (2015), p. 8

⁷³ Bales *et al.* (2010)

⁷⁴ Belur, J. Thornton, A., Tompson, L., Manning, M., Sidebottom, A., and Bowers, K., (2017) What Works Crime Reduction Systematic Review Series no. 13: 'A Systematic Review of the Effectiveness of the Electronic Monitoring of Offedners' UCL Department of Security and Crime Science, University College London, UK, p.41

GPS monitoring could be used to develop the evidence base on offending

GPS technology has the capacity to record various types and quantities of information. One researcher has suggested that, over time, the data gathered by the monitoring system could be used to identify patterns of behaviour that pre-empt offending.⁷⁵

As EM technology has advanced, the amount of biometric and movement data recorded by monitoring systems has increased. The research suggests that information recorded by the monitoring system could be used to plan interventions and improve effectiveness.⁷⁶ The author uses the example of monitors that detect sleep patterns, based on measurements of Rapid Eye Movement (REM), and the potential for probation officers to use this information to time an intervention based on the monitored person sleeping poorly (an indicator of stress), to check in and provide support.⁷⁷

Remote Alcohol Monitoring (RAM)

Remote Alcohol Monitoring (RAM) – also known as Transdermal Alcohol Monitoring (TAM or TRAM) or Secure Continuous Remote Alcohol Monitoring (SCRAM) – operates in a similar manner to RF electronic monitoring systems. The technology, in very simple terms, involves the monitored people wearing a bracelet around their ankle that takes routine samples of blood-alcohol levels by measuring the ethanol level of their perspiration. Breathalyser technologies are also used in some instances. The technology has the ability to record whether there are low, medium or high levels of alcohol in a person's system and thus record their compliance with the conditions of their specific programme. The bracelet tends to be slightly bigger than other EM devices and fit is important to ensure accurate readings and comfort.⁷⁸ RAM systems have been widely available since around 2003.

Alcohol monitoring differs from other uses of EM because the main aim is to manage or reduce alcohol consumption. In some cases this relates to the criminal

⁷⁵ Hunkeler, U. (2015) 'New Generation of EM Technology: Soon Too Many Sensors?' *Journal of Offender Monitoring*, p. 6

⁷⁶ *ibid.*, p. 7

⁷⁷ *ibid.*

⁷⁸ Bock, S. (2003) 'Michigan DOC runs BETA test of new remote transdermal alcohol monitoring system' *The Journal of Offender Monitoring*, Winter/Spring, p. 13

justice system however some studies of RAM focus on the use of alcohol from a health perspective rather than in relation to offending behaviour. Studies on RAM in a criminal justice context tend to focus on cohorts of monitored people who have been convicted of drink driving offences, whose offence involved alcohol, and/or who are experiencing alcohol dependence. Comparison between the use of RAM and the general use of EM is therefore problematic.

A limited number of empirical studies suggest promising results for the use of RAM.

Research conducted between 2006 and 2008 in North Carolina compared a matched sample of 114 monitored people subject to RAM with a group of 261 unmonitored people.⁷⁹ The study found reoffending rates for any crime were almost 3% less for the monitored group, despite them having a more extensive offending history.⁸⁰ Considering individuals with at least two prior recorded offences, the difference in rates of reoffending was more significant (15.7% of the monitored group reoffended compared to 28.6% of unmonitored individuals).⁸¹

In 2014 the Mayor of London Office for Policing and Crime (MOPAC) conducted a process evaluation on the use of the Alcohol Abstinence Monitoring Requirement (AAMR).⁸² The research assessed the use of AAMR in four areas of London, and used survey data and qualitative interviews of stakeholders, staff and monitored people. The evaluation found that the majority of alcohol monitoring requirements were given as part of a community sentence for an average length of 75 days. The pilot evidenced a 92% compliance rate with RAM for monitored people on community sentences over 12 months.⁸³ The operational use of AAMR was well understood by practitioners and users, and there was a well-established infrastructure and good levels of inter-agency working, which contributed to the success of the pilot. The option of AAMR was described as “filling a gap in sentencing for alcohol related offences committed by nondependent offenders”.⁸⁴ The authors acknowledge the limits of the research, but conclude that in general there were a number of positive opinions on and experiences of AAMR.⁸⁵

⁷⁹ Flango, V.E., & Cheesman, F. (2007) ‘When should Judges use Alcohol Monitoring as a Sentencing Option in DWI Cases?’ *Drug Court Review* 44: 3

⁸⁰ It was established that judges were more likely to give RAM sentences to more serious offenders, thus the groups were not matched equally on offending history (*ibid*, p. 104)

⁸¹ *ibid*.

⁸² Pepper and Dawson (2016)

⁸³ Pepper and Dawson (2016); non-compliance was based solely on the consumption of alcohol or tampering with monitoring equipment and did not include compliance with the conditions of the community sentence, which were often numerous and complex.

⁸⁴ *ibid*. p. 25

⁸⁵ *ibid*.

Qualitative research from Michigan in 2002 concluded positive reactions from the sample of five practitioners and 19 monitored people in terms of the system's deterrent value and the freedom it allowed in terms of employment and family life.⁸⁶ A study was conducted in Alaska in 2005 which evidenced a 56% compliance rate with the conditions of the RAM order.⁸⁷ This study also noted that despite inclement weather conditions, there were no recorded RAM technology failures.⁸⁸

Qualitative research from Scotland explored the attitude of 12 offenders serving their sentence in HMP Barlinnie towards RAM.⁸⁹ This cohort were individuals whose current offence involved alcohol and had issues with alcohol misuse more generally. Attitudes towards RAM were generally positive although most of the group recognised that monitoring alone would not change their addictive behaviours and considered it as a mechanism aimed at improving compliance.⁹⁰ It was also recognised that the RAM tag could not address other factors related to their offending, such as mental health, criminal associates, socioeconomic status, etc.⁹¹ A number of the group expressed support for RAM as part of an early release scheme, whereby individuals could volunteer to be monitored in exchange for an earlier release date. This type of scheme is supported by literature on incentivising reduced alcohol consumption.⁹²

One of the recommendations of the 2016 Scottish Government Working Group paper was on legislative change, including the introduction of legislation which would enable the use of RAM.⁹³ To date, there have been very few pilots testing the effectiveness of RAM on monitored people released from prison.⁹⁴

⁸⁶ Bock (2003)

⁸⁷ McKelvie, A. R. (2005) 'An implementation of remote alcohol monitoring in Alaska' Alaska Justice Statistical Analysis Center. Justice Center, University of Alaska, Anchorage

⁸⁸ *ibid.*

⁸⁹ Goodall, C.A., Neville, F.G., Williams, D.J. and Donnelly, P. D. (2016) 'Preliminary research informing policy on remote alcohol monitoring in criminal justice: the Scottish experience' *International Journal of Public Health*, p.865.

⁹⁰ *ibid.*, p. 869

⁹¹ *ibid.*

⁹² Goodall *et al.* (2016) p. 869; Barnett, N. P., Celio, M. A., Tidey, J. W., Murphy, J. G., Colby, S., M., and Swift, R. M., (2017) 'A preliminary randomized controlled trial of contingency management for alcohol use reduction using a transdermal alcohol sensor' *Addiction*, 112, pp. 1025-1035 for example uses monetary incentives to encourage abstinence; Dougherty D .M., Karns T. E., Mullen J., Liang Y., Lake S. L., Roache J. D., and Hill-Kapturczak, N. (2015) 'Transdermal alcohol concentration data collected during a contingency management program to reduce at-risk drinking' *Drug Alcohol Depend* 148, pp.77-84

⁹³ Scottish Government Working Group (2016) p. 7

⁹⁴ Goodall *et al.* (2016) p.866

Community supervision and support

In most jurisdictions EM is understood as a tool in a wider network of community support and supervision of monitored people

Scotland is described within the literature as an “outlier” in terms of using EM as a standalone measure.⁹⁵ In other jurisdictions, including the majority of European jurisdictions, EM is used as part of a wider package of support and supervision of offenders within the community.⁹⁶ Argentina was one of the only identified jurisdictions that uses EM as an entirely standalone measure.⁹⁷ The legislation in Germany does not allow for EM to be used as a standalone measure and is combined with a programme intended to provide a daily structure to the monitored person.⁹⁸ In Sweden standalone EM is avoided and is intensively supervised.⁹⁹ The Scottish Government Working Group advised that effective EM use is more likely if used alongside other measures, advising that “where longer term desistance is the ultimate goal, EM should be set within a wider package of support provided by statutory bodies”.¹⁰⁰

In terms of addressing specific offending, EM has been used in other jurisdictions as part of a wider response to an identified social problem. In Northumbria, for example, GPS monitoring was introduced as part of the Multi-Agency Tasking and Coordinating (MATAC) programme for domestic offenders; in London, alcohol monitoring was described as “‘another tool in the box’ of community sentences”;¹⁰¹ and in Manitoba, EM was added as an enhancement to the Winnipeg auto theft suppression strategy.¹⁰² Probation officers in this programme believed EM was “most successful when paired with adequate support”.¹⁰³ Correspondingly, some of the monitored young people in this programme expressed that the support of the probation officers was essential to their compliance.¹⁰⁴

⁹⁵ Scottish Government Working Group (2016) p. 19

⁹⁶ *ibid.*

⁹⁷ Di Tella and Schargrotsky (2013) p. 32

⁹⁸ Düenkel *et al.* (2017) p. 41

⁹⁹ Graham and McIvor (2015) p.69

¹⁰⁰ Scottish Government Working Group (2016) p.8

¹⁰¹ Pepper and Dawson (2016) p. 4

¹⁰² Personal communication with Programme Director Deborah Alderson, 11/02/19; Willoughby and Nellis (2016) p. 69

¹⁰³ Willoughby and Nellis (2016) p. 73

¹⁰⁴ *ibid.* p. 76

DeMichele emphasised that electronic monitoring should be considered as a tool within a wider network of supports and interventions, using an illustrative case study:

“forms of electronic monitoring are only tools that officers can use. So, asking questions such as “does electronic monitoring work?” are illogical. This would be similar to asking whether computers, cars, or other tools that officers use work. These tools are all dependent on humans and only work as well as the infrastructures supporting them and the people operating them... A prime example involves a California case in which Phillip Garrido and his wife kidnapped and held a young girl captive for nearly 18 years. During part of this time, Mr. Garrido was on parole supervision with GPS tracking, but it went undetected that he had a kidnapped girl (and the two young children he fathered with her) in tents in the backyard. His GPS revealed that he was exactly where he was supposed to be—at his home and in his backyard. Parole officers failed to conduct regular in-depth searches of the home or even walk through to the backyard.”¹⁰⁵

EM and Reintegration

The relationship between EM and the reintegration of monitored people is complex and is dependent on how reintegration is defined.

In a Scottish Government review of the use of HDC and open prison, Armstrong and colleagues identified the definition of reintegration as an area for development, noting “the meaning of this should be clearly established to allow for monitoring of effectiveness”¹⁰⁶ and “(i)t cannot be concluded that HDC...cannot serve integration aims of the penal system, but it does suggest that the meaning of ‘reintegration’ and consequently the services and procedures needed for HDC to support this require some attention and explicit specification”.¹⁰⁷ In relation to compliance with the conditions of EM, some literature notes that successful completion of an EM sentence “is not the same as (re)integration – that is, becoming a fully functioning and participating citizen”.¹⁰⁸ Graham and McIvor suggest that the “supports and interventions” that address criminogenic needs (i.e. HDC as a means of confining

¹⁰⁵ DeMichele, M. (2014) ‘Electronic Monitoring: It’s a Tool, Not a Silver Bullet’ *Criminology and Public Policy* 13:3, pp. 393-400.

¹⁰⁶ Armstrong *et al.* (2011) p.6

¹⁰⁷ *ibid*, p. 98

¹⁰⁸ Halsey, M., and Deegan, S. (2015) *Young Offenders: Crime, Prison and Struggles for Desistance*, Basingstoke: Palgrave Macmillan, p.3

offenders to their house during the evening/night when they are most likely to engage in antisocial behaviour) may be in conflict with measures which support reintegration, such as opportunities for employment, creation of social networks, and development of positive recreational activities.¹⁰⁹ Research from Belgium¹¹⁰ and Scotland¹¹¹ further suggests that where cost effectiveness and reduction of prison populations are the primary objectives, rehabilitation and management of offenders can be side-lined or ignored.

As well as punitive objectives, EM can have the objective of reintegrating offenders in society.

EM used for the purposes of decarceration in itself may be considered as a form of reintegration based on the logic that being in the community allows offenders to reintegrate better than if they are imprisoned.¹¹² In some literature, HDC is understood as a mechanism to “ease the transition of prisoners from custody to the community”.¹¹³ In terms of social capital, the maintenance of social ties is recognised as an important factor for reintegration of offenders.¹¹⁴ Research from Germany found that offenders favoured home detention on EM (as a mechanism for early release) because it allowed them to be with their families sooner and practitioners observed a reintegrative effect of early release on EM, due to offenders being imprisoned for shorter periods and back with their families.¹¹⁵

¹⁰⁹ Graham and Mclvor (2015) p. 57

¹¹⁰ Beyens and Roosen (2017) p. 24

¹¹¹ Armstrong *et al.* (2011)

¹¹² Armstrong *et al.* (2011) p. 4; Nellis, M. (2015) ‘Standards and Ethics in Electronic Monitoring. Handbook for professionals responsible for the establishment and the use of Electronic Monitoring’ *Council of Europe*, p.15, available at: <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=09000016806ab9b0>

¹¹³ Dodgson, K., Goodwin, P., Howard, P., Llewellyn-Thomas, S., Mortimer, E., Russell, N., *et al.* (2001). *Electronic monitoring of released prisoners: An evaluation of the home detention curfew scheme (Home Office Research Study No. 222)*. London: Home Office Research Development and Statistics Directorate; p. 1, 5; Haverkamp and Woessner (2016) pp. 131-2

¹¹⁴ Cochran, J. C. (2014) ‘Breaches in the wall: Imprisonment, social support, and recidivism’ *Journal of Research in Crime and Delinquency*, 51, 200–229; Scoones, C. D., Willis, G. M., and Grace, R. C. (2012) ‘Beyond static and dynamic risk factors: The incremental validity of release and planning for predicting sex offender recidivism’ *Journal of Interpersonal Violence* 27, pp. 222–238

¹¹⁵ Haverkamp and Woessner (2016) p. 130

The conditions of release can be used as a means of encouraging reintegration.

Within the literature EM is identified as a means of enforcing a prosocial lifestyle.¹¹⁶ In the Netherlands, the number of hours a monitored person may be “off curfew” varies between 2 and 17 hours per day depending on probation assessment.¹¹⁷ This contrasts with Belgium, for example, where EM is sometimes used as a direct alternative to custody in that monitored people are confined to their house for 24 hours a day.¹¹⁸ A systematic review on EM identified a number of conditions attached to GPS EM in Denmark, Norway, the US, and Australia that encouraged reintegration.¹¹⁹ Aside from requirements related to compliance with movement restrictions, monitored people can also be required to engage in employment, community work, treatment or counselling, maintain a diary of their daily routines, attend or host weekly visits with probation officers, and “avoid contact with criminally inclined associates”.¹²⁰ In Denmark and Norway, being engaged in employment or education is treated as a minimum requirement for offenders to be considered for release on EM.¹²¹

EM can provide opportunities for the construction of positive social capital

EM allows individuals to remain in the community, which means family and employment responsibilities are less disrupted than if they were imprisoned.¹²² Imprisonment can have the effect of damaging attachments to employment and positive social networks in the community, while remaining in the community allows these connections to be continued and developed.¹²³ Williams and Weatherburn highlight that “imprisonment may increase reoffending through other channels”, namely the creation of relationship networks with criminal peers.¹²⁴ Remaining in the community decreases the opportunity for anti-social capital to be built through networks of relationships with other offenders in prison.¹²⁵

¹¹⁶ Martinovic M. (2016) 'GPS-EM Sanctions for Serious Sex Offenders: The Application and Outcomes in the United States and Australia' *Journal of Technology in Human Services* 34:1, p. 86

¹¹⁷ Boone *et al.* (2017)

¹¹⁸ Beyens and Roosen (2017)

¹¹⁹ Graham and Mclvor (2015) p. 58; Martinovic (2016) pp. 85-6

¹²⁰ Martinovic (2016) pp. 85-6; Graham and Mclvor (2015) p. 61 on the requirements in Norway

¹²¹ Graham and Mclvor (2015) p. 58

¹²² Hucklesby A (2008) 'Vehicles of desistance? The impact of electronically monitored curfew orders' *Criminology & Criminal Justice* 8:1, pp.51–71; (2009) pp. 264-5

¹²³ Williams, J. and Weatherburn, D. (2019) 'Can Electronic Monitoring Reduce Reoffending?' *IZA Institute of Labour Economics Discussion Paper Series* p. 7, available at <http://ftp.iza.org/dp12122.pdf>

¹²⁴ *Ibid.* p. 7

¹²⁵ *ibid.*

Research from Scotland¹²⁶ and interviews with monitored people on HDC from New Zealand¹²⁷ and Belgium¹²⁸ show that, although the psychological effects of tagging were challenging for offenders and their families, it was still preferred to the separation imposed by imprisonment. Respondents in Belgium expressed that the associates they mixed with while on EM were not equivalent to the associates they engaged with in prison, and this was of benefit.¹²⁹ This result was mirrored in a 2001 study from New Zealand, in which for offenders sentenced to EM “the distress of ‘being inside’ motivated them to make good use of their opportunity to stay at home and stay ‘out of trouble’”.¹³⁰ For younger offenders, EM was perceived as an acceptable reason to avoid association with criminal associates, i.e. individuals stated they could not engage in certain high-risk or criminal activities “because of the tag”.¹³¹ Young people interviewed in research from Winnipeg recalled that many of their friends believed the tag meant the police were nearby and aware of the wearer’s activities, thus they did not want to associate with the monitored person during this period.¹³²

The conditions of EM can affect family responsibilities and relationships.

Research on offender experience from New Zealand¹³³ and Belgium¹³⁴ suggests that parenting roles can be maintained as monitored people are not separated from their children, and other family relationships can be improved by spending more time together. Research from Australia¹³⁵ also supports this finding, suggesting both family and community ties can be maintained via EM. Research on recidivism, that examined data of 457 individuals sentenced to EM in France, concluded that EM was most effective for those who were parents.¹³⁶ The authors conclude this can be explained because “EM is mostly effective for offenders who know what is at stake should they reoffend (most probably incarceration) and do not view EM as a

¹²⁶ Scottish Government Working Group (2016)

¹²⁷ Gibbs and King (2003) p.205

¹²⁸ Vanhaelemeesch, D., and Vander Beker, T. (2012) 'Electronic monitoring: Convict's experiences in Belgium' in Cools, M. (ed.). *Social conflicts, citizens and policing*. Antwerp: Government of Security Research Paper Series (GofS), Series 6.

¹²⁹ *ibid* p.278

¹³⁰ Gibbs and King (2003) p.203

¹³¹ Martinovic and Schluter (2012) pp.423-4; Pearson, A. (2012) 'An Evaluation of Winnipeg's Electronic Monitoring Pilot Project for Youth Auto Offenders' Unpublished Masters Thesis, University of Manitoba, Canada, p. 71; Willoughby and Nellis (2016) p. 75

¹³² Willoughby and Nellis (2016) p. 75-6

¹³³ Gibbs and King (2003)

¹³⁴ Vanhaelemeesch and Vander Beker (2012)

¹³⁵ Bartels and Martinovic (2017) 'Electronic Monitoring: the Experience in Australia' *European Journal of Probation*, 9:1, p.96

¹³⁶ Henneguette, A., Monnery, B. and Kensey A. (2016) 'Better at home than in prison? The effects of EM on recidivism in France' *The Journal of Law and Economics* 59:3, p. 649

lenient, non-deterrent sanction but as a second chance”.¹³⁷ Research from Germany concluded that many prisoners applied for post-imprisonment early-release EM so that they could be with their families sooner.¹³⁸ Interview research with 78 monitored people from England drew similar conclusions.¹³⁹ While the main motivating factor for compliance was the knowledge of their surveillance and that the punishment for failure was imprisonment, respondents also reported that their motivations to comply were directly linked to wishing to remain with their family and maintain employment.¹⁴⁰ This research also concluded that monitored people who were housed outside of their community and/or away from their family, or who lived alone, were less likely to comply than those who remained within their established networks.¹⁴¹

Some research provided qualitative examples of how EM restricted offenders from fulfilling family responsibilities. The practicalities of childcare was cited as a factor that increased the likelihood of breaches in research with people on monitored HDC from England¹⁴² and New Zealand.¹⁴³ In interview, a monitored person in New Zealand recalled that she had witnessed her daughter fall and injure herself outside of her address within curfew hours. She had remained within the address, contacted the monitoring company and they had allowed her to tend to her daughter without recording the breach, however the incident had caused her great distress.¹⁴⁴ Recalling his experience of being tagged, Kilgore discusses his experience when his 96 year old mother called him around 2am to alert him that she believed she was having a heart attack.¹⁴⁵ Rather than attend straight away, Kilgore contacted the monitoring company and was advised that to temporarily amend the restrictions, his parole officer would have to assess the situation. As the incident occurred out-of-hours, the parole officer did not contact him until the following day and he was unable to attend hospital with his mother.¹⁴⁶

Some research found that EM can negatively impact upon a monitored person’s family, particularly those who reside with the person on EM.¹⁴⁷ The 2017 G4S statistical bulletin included feedback from a monitored person, who stated “my

¹³⁷ *Ibid.*

¹³⁸ Haverkamp and Woessner (2016) p. 129

¹³⁹ Hucklesby (2009) p. 256-7

¹⁴⁰ *ibid.* p. 261-2

¹⁴¹ *ibid.* p. 264

¹⁴² *ibid.* p. 265

¹⁴³ Gibbs and King (2003) p. 204

¹⁴⁴ *ibid.*

¹⁴⁵ Kilgore (2012) p. 68

¹⁴⁶ *Ibid.*

¹⁴⁷ Bales *et al.* (2010); Gibbs and King (2003); Scottish Government Working Group (2016)

partner felt like she was also on a tag".¹⁴⁸ Amongst co-residents of monitored people, the Scottish Government Working Group found evidence of anxiety, guilt and stress related to the perception they were responsible for ensuring the monitored person's compliance with EM conditions and inclusion in social events.¹⁴⁹ In response to this concern, the Working Group recommended additional information and support be made available for the families and co-habitants of electronically monitored people.¹⁵⁰ Some of the literature describes a monitored person's familial support as fundamental to their compliance with the conditions of EM.¹⁵¹ The interim guidance on RLO risk assessment also recognises that:

"(t)he most important element is the need to investigate what the likely impact of an RLO would be on the household where the person is to be restricted to. It is very important that those living with the person understand what an RLO involves and that they are prepared to co-operate and support the person if an Order is made".¹⁵²

It should be noted that a monitored person's release to an address on HDC relies on the continued consent of the householder responsible for the property. If consent is withdrawn and no suitable alternative is identified, the individual will be returned to prison. This was identified as a challenge in some of the literature. To prevent householders withdrawing consent, Probation officers in Gwent, Wales revised their process of liaising with the family of monitored people to provide more information and improve engagement.¹⁵³

The flexible use of EM can be used to incentivise reintegration.

EM can be flexibly applied dependent on offence, offender demographic, and the conditions necessary for release.¹⁵⁴ McIvor and Graham's (2016) Scottish review recommended using EM as an incentive for reintegration, and suggested it is currently under-utilised with standardised curfews most common. In the Netherlands, the number of hours an offender may be "off curfew" varies between 2

¹⁴⁸ G4S (2017) '1st January – 31st December 2017 Statistical Bulletin, Electronic Monitoring to the Criminal and Youth Justice systems in Scotland' available at: <https://www2.gov.scot/Resource/0053/00530120.pdf>, p. 4

¹⁴⁹ Scottish Government Working Group (2016) p. 57

¹⁵⁰ Scottish Government Working Group (2016) p. 57

¹⁵¹ Hucklesby (2009) p. 265

¹⁵² Scottish Government (2016) p.20

¹⁵³ Beyens and Roosen (2017) p. 18; National Audit Office (2006) p. 4

¹⁵⁴ Gibbs and King (2003); Graham and McIvor (2015); Gur *et al.* (2016) p.37; International Association of Chiefs of Police (IACP) cf. Gies 2016: 102-3; Payne, DeMichele and Button (2008);

and 17 hours per day depending on their daytime activities.¹⁵⁵ Probation officers can amend orders to allow monitored people to leave the house for more hours per day if it is for employment, training or education; or, if individuals are compliant over time, curfews can be amended to allow for more hours away from the address as an incentive. A study of monitored people's experience on HDC in New Zealand recorded that a single mother had expressed how important it was for her to accompany her children to school. This had been negotiated with the parole board and her curfew amended accordingly.¹⁵⁶ Applied in this way, EM 'may foster reintegration back into society'.¹⁵⁷ There is further supportive evidence of the benefits of flexible EM use from the Netherlands¹⁵⁸ and reviews of international evidence.¹⁵⁹ In Scotland, the majority of curfew restrictions are imposed for the standard period of 7pm to 7am, although guidelines allow for this to be adapted to suit the individual as necessary.¹⁶⁰

EM can provide structure for the monitored person

An offender may be provided structure in terms of their days being more strictly timetabled, the increased responsibilities associated with wearing a tag, maintaining regular sleeping patterns, and reduced opportunity to associate with criminal friends.¹⁶¹ Research also suggests that monitored people have an increased sense of motivation to comply while on tag.¹⁶² Auto-ethnographic research (i.e. the researcher wears a tag) from Australia¹⁶³ and England¹⁶⁴ evidenced that wearing the EM device on one's body served as a physical reminder to comply with the conditions of its use. Further, it forced the wearer to make plans for their day ahead (such as which routes to travel and the advance scheduling of

¹⁵⁵ Boone *et al.* (2017)

¹⁵⁶ Gibbs and King (2003) p.204

¹⁵⁷ Nellis, M. (2013b) 'Surveillance, Stigma and Spatial Constraint: The Ethical Challenges of Electronic Monitoring' in Nellis, M., Beyens, K., & Kaminski, D. (eds.) *Electronically Monitored Punishment: International and Critical Perspectives*, London: Routledge, p. 204

¹⁵⁸ Boone *et al.* (2017)

¹⁵⁹ Graham and Mclvor (2015), although note that the authors caveat this suggestion with "More research on this is needed."

¹⁶⁰ Barry *et al.* (2007) p. iii

¹⁶¹ Boone *et al.* (2017); Durnescu, I., Enengl, C., and Graf, C., (2013) 'Experiencing Supervision' in McNeill F. and Beyens, K. (eds.) (2013) *Offender Supervision in Europe* Basingstoke: Palgrave MacMillan; Gibbs and King (2003) p.205; Ibarra and Erez (2005); Ministry of Justice (2019)

¹⁶² Nellis M (2011) 'The Integration of Probation and Electronic Monitoring – A Continuing Challenge, A Reflective Report for CEP' <http://www.cepprobation.org/uploaded_files/EM%20Literature%20Research.pdf> , p. 4; Nellis M (2010) 'Electronic monitoring of offenders', p. 1 in Herzog-Evans M (ed) *Transnational Criminology Manual*, vol 3, Wolf Legal Publishers, The Netherlands,; Payne B and Gainey R (2004) 'The electronic monitoring of offenders released from jail or prison: Safety, control, and comparisons to the incarceration experience', *The Prison Journal* 84(4), pp. 426–31

¹⁶³ Martinovic and Schluter (2012) pp.423-4

¹⁶⁴ Martinovic and Schluter (2012) interviewed two UK Home Office investigators who had spent periods wearing an electronic tag for the purposes of research.

appointments) in order to comply with conditions. The three researchers separately concluded that, although being subject to an EM tag was psychologically and physically burdensome, the punitive impact of wearing a device lessened over time.¹⁶⁵ Monitored people in the alcohol monitoring pilot conducted in London also had concerns about the ‘wearability’ of the tag, in terms of comfort and its bulky size.¹⁶⁶ Monitored people interviewed in research from Belgium noted that the conditions of the tag forced them to be far more aware of time.¹⁶⁷

EM can increase the likelihood of a monitored person gaining or maintaining employment.

Research from Denmark¹⁶⁸ examined the impact of EM compared to imprisonment on social welfare dependence (which is described in the paper as synonymous with unemployment). The study found that monitored people decreased their social welfare dependence by an extra 15 to 30 days within the first year after release, though this trend only applied for those under 25, there was no effect on older offenders. Studies from Sweden¹⁶⁹ and the Netherlands¹⁷⁰ also found EM enabled monitored people to maintain employment, mainly due to remaining in the community but also because EM conditions could be amended to accommodate their hours of employment. In terms of EM’s effectiveness, research from France evidenced recidivism reduced by 9% for EM offenders whose sentence conditions obliged them to engage in employment.¹⁷¹

EM can decrease probation officers’ face-to-face contact with people serving community sentences

Qualitative interviews with probation officers in Winnipeg, Canada suggested that GPS EM worked to reduce the amount of time spent in direct contact with a monitored person.¹⁷² Prior to the use of GPS EM, officers tended to have daily contact with their clients, either face-to-face or by phone. Following the introduction of EM, some probation officers felt that, rather than make contact with an individual,

¹⁶⁵ *Ibid.*

¹⁶⁶ Pepper and Dawson (2016) p. 26

¹⁶⁷ Vanhaelemeesch, D., Vander Beker, T., and Vandeveld, S. (2014). Punishment at home: Offenders’ experiences with electronic monitoring. *European Journal of Criminology* 11(3): 273–287.

¹⁶⁸ Andersen, L. and Andersen, S. (2014) ‘Effect of Electronic Monitoring on Social Welfare Dependence’ *Criminology and Public Policy* 13: 3, pp. 349-379.

¹⁶⁹ Wennerberg (2009)

¹⁷⁰ Boone *et al.* (2017)

¹⁷¹ Henneguette *et al.* (2016) p. 649

¹⁷² Willoughby and Nellis (2016) p. 72

staff were checking the person's whereabouts using the GPS mapping system.¹⁷³ Some of the staff felt that the level of human contact required by the supervision programme was sufficient and GPS EM was an unnecessary and ineffective addition.¹⁷⁴

Dependent on home circumstances, EM may not contribute to reintegration as intended.

Some of the literature highlights that a monitored person's home circumstances and community network may affect their reintegration. If an individual's conditions of release confine them to a place, it might mean they cannot avoid criminal associates attending their address, and the likelihood of breaching could be increased. In research from England, qualitative interviews with monitored people suggested that some breaches of curfew resulted from monitored people being targeted with threats and harassment while on curfew in their home.¹⁷⁵ Some of those interviewed described how they felt like "sitting ducks" because their exact whereabouts were known.¹⁷⁶ This resulted in a number of them choosing not to answer the door during curfew hours, which is when many monitoring checks are conducted and their failure to appear would result in a recorded breach.¹⁷⁷ James Kilgore is an academic who spent 6 and a half years in prison in the US and wrote about his experience on electronic monitoring. On being released, Kilgore stated "(i)f you want people to avoid getting re-involved in criminal activity, you have to give them the opportunity to change their life, not keep them chained to their living room."¹⁷⁸ Kilgore suggested that for some offenders a move away from the community is beneficial.¹⁷⁹

EM can have a negative impact on securing and/or maintaining employment.

By contrast to research that suggested release on EM allowed monitored people to secure or maintain their employment, some of the literature suggested EM can damage employment opportunities. The stigma of wearing a tag – particularly as it

¹⁷³ *Ibid.*

¹⁷⁴ *Ibid.*

¹⁷⁵ Hucklesby (2009) p. 264

¹⁷⁶ *Ibid.*

¹⁷⁷ *Ibid.*

¹⁷⁸ Kilgore (2012) pp.66-71

¹⁷⁹ *Ibid.*

is negatively portrayed in the media – is perceived by some to reduce their ability to secure or maintain employment while tagged.¹⁸⁰ Anecdotal evidence of monitored people losing their job after informing their employer of their EM conditions¹⁸¹ or finding it difficult to work because of the tag¹⁸² are provided in the literature.

The impact of EM on reoffending

When considering research on reoffending, there may be differences between people released on EM and those released following a prison sentence.

It should be noted that research design is of particular importance in assessing the effectiveness of EM. In some studies on reoffending, people sentenced to EM are compared with a matched sample in prison. There are a number of important differences between offenders released on EM and those released following a prison sentence. First, while both groups may have an equal opportunity to reoffend, there is a higher level of deterrence for those monitored by EM, first because detection is considered more likely while monitored and second because reoffending is a breach of EM conditions which is likely to result in revocation and imprisonment.¹⁸³ In addition, a process of risk assessment is used by the judiciary, prison and probation authorities to evaluate the risk of reoffending posed by an offender and in most cases it is only lower risk offenders who are released into the community.¹⁸⁴ On this difference, Di Tella and Schargrotsky contend that “low post release recidivism of a group of offenders treated with electronic monitoring could simply reflect the success of the legal system at the selection stage.”¹⁸⁵ Other factors such as the individual’s level of remorse will also influence the decision for them to be released on EM.¹⁸⁶ Taken together, a lower risk of reoffending and higher level of remorse may mean in practice that monitored people are, in general,

¹⁸⁰ Nellis, M. (2016) 'Electronic Monitoring and Probation Practice' in F. McNeill Durnescu, I. and Butter, R. (eds.), *Probation* Basingstoke: Palgrave MacMillan, p. 235; Bales *et al.* (2010); Ibarra and Erez (2005)

¹⁸¹ Kilgore (2012) p. 67

¹⁸² Souza, K. A., Lösel, F., Markson, L., and Lanskey, C., (2015) 'Pre-release expectations and post-release experience of prisoners and their ex-partners' *Legal and Criminological Psychology* 20, p. 317

¹⁸³ Williams and Weatherburn 2019, p. 10; Research from New South Wales attempted to control for this difference by measuring reoffending from the time the EM sentence ended, however, of the 73 individuals studied, 36 were excluded from the sample for reoffending and being re-imprisoned, thus the sample size was reduced to 37 individuals, making it difficult to draw robust conclusions (*Ibid*, p. 20, footnote 20)

¹⁸⁴ Di Tella, and Schargrotsky (2013) p.30; Otero (2009) p. 137; in any case those released on a community sentence are in general deemed at lower risk of offending than those sentenced to prison. A Home Affairs note specifically notes that the HDC scheme in England and Wales “is aimed at low risk prisoners” (House of Commons’ Library (2013) ‘Early release from prison in England and Wales: an overview’, p.5 available at: <http://researchbriefings.files.parliament.uk/documents/SN05199/SN05199.pdf>)

¹⁸⁵ Di Tella and Schargrotsky (2013) p. 30

¹⁸⁶ Williams and Weatherburn (2019) p. 8

already at a lower risk of reoffending,¹⁸⁷ particularly when compared to those released from prison who were not deemed eligible for EM. Comparisons between groups of monitored and unmonitored people on community sentences can be difficult for similar reasons.¹⁸⁸

There are mixed but promising results regarding reoffending, reconviction and failure/breach rates.

A literature review found that there are a number of studies which evidence reduced reoffending on EM, a number that have produced inconclusive findings, and a number that concluded that EM has no significant impact on reoffending.¹⁸⁹

Ministry of Justice research from 2011 concluded that monitored people released on HDC were no more likely to reoffend than those in a matched sample who were not eligible for release.¹⁹⁰ In a review on RAM this finding is reinforced by the authors who write “(e)lectronic monitoring is as effective as incarceration, and less expensive”.¹⁹¹

A separate meta-analysis of 17 studies, which examined quantitative data on reoffending, also concluded that “EM of offenders does not have a statistically significant effect on reducing re-offending”.¹⁹² This research did highlight, however, that three of the studies examined evidenced reductions in reoffending when compared to the alternative of imprisonment. Research from New South Wales, Australia found that, conditional on reoffending, there was very little difference in the likelihood of committing serious crime for monitored people compared to those who served their sentence in prison.¹⁹³

¹⁸⁷ Di Tella and Schargrodsy (2013) p. 30

¹⁸⁸ Pepper and Dawson (2016) p. 14 note that “direct ‘like-for-like’ comparisons between compliance rates of different orders should be treated with caution due to varying offence types, offender characteristics, processes of dealing with breach, and lengths of orders.”

¹⁸⁹ See Avdija, A. S., and Lee, J. (2014) ‘Does Electronic Monitoring Home Detention Program Work? Evaluating Program Suitability Based on Offenders’ Post-Program Recidivism Status’ *Justice Policy Journal*, 11:2, pp. 3-4 who provides an overview of the available evidence on recidivism outcomes. Di Tella, and Schargrodsy (2013) p. 32-3 also highlight this.

¹⁹⁰ Ministry of Justice (2011) p. 1

¹⁹¹ Flango and Cheesman (2008) p. 103

¹⁹² Belur et al. (2017)

¹⁹³ Williams and Weatherburn (2019) p. 23

In Australia, Argentina, the US and elsewhere in Europe research has evidenced that EM reduces reoffending. Research of 16,475 cases from Sydney, Australia compared individuals released on EM with those released after prison over 24 months.¹⁹⁴ The research found monitored people serving their sentence on EM were associated with a 25% reduction in reoffending compared to the prison sample.¹⁹⁵ In Sweden, research compared 260 electronically monitored people as part of an early release with a control group who served the full term of their prison sentence.¹⁹⁶ Over three years, reoffending rates amongst the early release cohort were significantly lower than in the comparison group. In Spain, research in 2001 followed 53 individuals released from prison on EM (compared with a random sample of 307 individuals sentenced at the same time who remained imprisoned and 251 others released without EM). The reoffending rate of the EM group was 0%, compared to 9% of those on community sentences and just under 38% of the imprisoned group.¹⁹⁷

A study of 2,827 offenders in France, of whom 457 were sentenced to EM as an alternative to custody, found a 9–11% reduction in reoffending after 5 years compared to a matched comparison group who were imprisoned.¹⁹⁸ This research suggested that EM reduced the probability of being imprisoned after 5 years by 18%, compared to a matched prison population.¹⁹⁹ In this group, reoffending was least likely among electronically monitored people “who received control visits at home from correctional officers, were obliged to work while under EM, and had already experienced prison before”.²⁰⁰

Evidence from the US and Denmark shows that EM can reduce breach/failure rates. Bales *et al.* (2010) conducted the largest comparative analysis of 270,000 monitored people on RF EM in Florida and concluded that, compared to unmonitored individuals on community supervision, RF EM reduced failure rates by approximately 30%.²⁰¹ Breach rates decreased by a further 6% in cases where GPS EM was used. The same research (comparing 5034 electronically monitored people to data on 266,991 individuals not placed on EM) found that, over a period of 6 years, monitored people were 31% less likely to breach the conditions of their sentence than comparable groups not on electronic supervision.²⁰² In terms of

¹⁹⁴ *ibid.*

¹⁹⁵ *ibid.*, p. 17

¹⁹⁶ Marklund, F. and Holmberg, S. (2009), ‘Effects of Early Release from Prison Using Electronic Tagging in Sweden’, *Journal of Experimental Criminology* vol. 5, pp. 41–61

¹⁹⁷ Capdevila, M., Parés, R., Ferrer, M., Luque, E. and Torrecillas, M. (2006), La clasificació inicial en règim obert dels condemnats a presó, *Justidata*, 43, pp. 2, 12 cf. Otara (2009) p. 137

¹⁹⁸ Henneguette *et al.* (2016)

¹⁹⁹ *ibid.* p. 649

²⁰⁰ *ibid.*

²⁰¹ Bales *et al.* (2010)

²⁰² *ibid.*

breach rates, research from England and Wales that examined 217 files of individuals sentenced to EM found that only two had no breaches recorded and over half had over 50 breaches recorded on file.²⁰³ Most of the breaches were minor violations, the majority relating to time violations (i.e. being away from the curfew address within curfew hours) and the majority were not recorded as formal breaches.²⁰⁴

Research from Indiana, USA, studied 293 monitored people released on EM home detention, comparing those who successfully completed the programme and those who did not, i.e. who breached conditions, were re-arrested and/or imprisoned.²⁰⁵ 112 people successfully completed the programme and in contrast to other studies it was concluded that those who completed the programme were more likely to reoffend than those who did not complete.²⁰⁶ The authors note the limitations of research design, including that reducing reoffending was only one aim of the programme, and successes were concluded in other evaluation outcomes.²⁰⁷

Much of the research focuses on GPS (rather than RF) and emphasises that EM must be monitored and supported in the community for a reduction in reoffending.²⁰⁸ There are also differences in outcomes for different demographics of monitored people. Research from New South Wales, Australia associated reduced rates of reoffending with individuals aged under 30 and for those who had not been imprisoned before.²⁰⁹ This research evidenced that the benefit of EM, in terms of reducing reoffending, persisted for 8 years for younger offenders compared to a matched sample serving their sentence in prison.²¹⁰ It is important to note that the system in New South Wales provides monitored people with “tailored rehabilitation programmes along with intense supervision” and this may further explain improved outcomes.²¹¹

²⁰³ Hucklesby (2009) p. 12

²⁰⁴ *Ibid.*

²⁰⁵ Avdija and Lee (2014)

²⁰⁶ *ibid* pp. 11-12

²⁰⁷ *ibid*, p. 12

²⁰⁸ Bales *et al.* (2010); Brown T., McCabe S., and Wellford C. (2007) 'Global Positioning System (GPS) Technology for Community Supervision: Lessons Learned' *National Institute of Justice, US Department of Justice*, Noblis Technical Report, US; Losel and Schmucker 2005; New Jersey State Parole Board (2007) 'Report on New Jersey's GPS Monitoring of Sex Offenders' p. 4; Padgett K., Bales W., and Blomberg T., (2006) 'Under Surveillance: An Empirical Test of the Effectiveness and Consequences of Electronic Monitoring', *Criminology and Public Policy* 5:1, p. 84

²⁰⁹ Williams and Weatherburn (2019)

²¹⁰ Williams and Weatherburn (2019) p. 25

²¹¹ *Ibid.*

GPS EM can increase the compliance and reduce reoffending rates of sex offenders.

In an empirical study of 270,000 people with convictions in Florida, Bales *et al.* (2010) found that sex offenders were the most compliant cohort on EM. Data from New Jersey on 225 sex offenders monitored over 3 years found that those on GPS EM were significantly less likely to commit sexual offences than the US average on sex offenders released from prison (0.04% reoffended compared to the national average of 5.3%).²¹² In a study of 516 sex offenders in California, Gies and colleagues evidenced similar empirical findings, concluding that, compared to a matched group on non-monitored parole, those on GPS EM had significantly higher rates of compliance and lower rates of reoffending.²¹³ In this sample, breaches were almost three times as likely for those on traditional parole compared to those on EM.²¹⁴

Evidence suggests community supervision can reduce reoffending of offenders managed by EM.

Research on the use of EM for sex offenders from New Jersey found reduced reoffending of electronically monitored people, and this was in part explained by the ‘containment approach’ adopted by the federal authorities, which involved “intensive parole supervision, offender-specific treatment and polygraph examinations” which resulted in offenders perceiving that their movements were constantly observed and thus encouraged compliance.²¹⁵

Research from France offered similar conclusions - compared to individuals serving prison sentences, EM reduced reoffending, and was further reduced for those who were visited at least once by supervising staff during their curfew hours.²¹⁶ In terms of reoffending, EM was also found to be more effective for individuals who were supervised for longer (above the median period of 2 months).²¹⁷ The authors suggest that the “difference in outcomes suggests that control visits act as a strong deterrent” and highlight that this correlates with qualitative research conducted with offenders in England.²¹⁸ The research from England examined information from case files on 217 individuals sentenced to standalone curfew orders and interviews

²¹² New Jersey State Parole Board (2007)

²¹³ Gies *et al.* (2012)

²¹⁴ *Ibid.*

²¹⁵ New Jersey State Parole Board (2007)

²¹⁶ Henneguette *et al.* (2016) p. 649;

²¹⁷ *ibid.*

²¹⁸ Henneguette *et al.* (2016) p. 649; Hucklesby (2009)

with 78 of those monitored.²¹⁹ The study evidenced a positive correlation with compliance for monitored people who had a good relationship with monitoring agency staff or probation officers.²²⁰

If a monitored person commits a crime, GPS EM can improve the process of evidence-gathering.

GPS EM has the capacity to monitor an individual's whereabouts at all times. As technology has developed, it is possible to overlay data on the monitored person's movements with data on crime loci and incidents, to identify correlations or to eliminate an individual from a criminal investigation.²²¹ Additionally, in the event of a crime, a monitored person's location data can be used to identify other potential sources of evidence such as CCTV and eye witnesses.²²²

The effectiveness of EM is undermined if there are delays in responses to breaches.

Some research has found that delays in responses to failures, due to technological issues or slow responses by monitoring agencies, can negatively impact upon EM's deterrent effect for monitored people.²²³

²¹⁹ Hucklesby (2009) p. 256-7

²²⁰ *ibid*, p. 262

²²¹ Hunkeler, (2015) p. 6

²²² *ibid*.

²²³ Belur *et al.* (2017); National Audit Office (2006); House of Commons Committee of Public Accounts (2006) 'The EM of Adult Offenders: 62nd Report of Session 2005-2006, House of Commons' The Stationary Office Limited: London; Hucklesby 2013; Shute, S. (2007) Satellite Tracking of Offenders. A study of the Pilots in England and Wales, Ministry of Justice Research Summary 4.

The cost of EM

Based on research, the cost of HDC is less than imprisonment.²²⁴

Scottish Government research conducted in 2009/10 found the weekly cost of imprisonment was £610 compared to £126 per week for a person managed on HDC.²²⁵ In 2013, the average cost per EM order per day in Scotland was estimated at £10.17 (approximately £3712 per year). The average cost per prisoner place for a year was £37,059.²²⁶ Taking into account the costs of HDC/release assessment and preparation, there is still a cost saving, particularly over longer periods: the cost of assessment/preparation was estimated at £602 per prisoner, and the weekly cost of imprisonment was £610. This equates to a saving of £1234 over a 4 week period and £10,914 over a period of 24 weeks HDC.²²⁷

On cost, Professor Mike Nellis suggests that a presumption towards release on EM is defensible particularly if the saving is used to support monitored people in the community.²²⁸ In a separate publication, Nellis notes that once monitoring centres and practices are established, the cost of upscaling HDC (in terms of thousands monitored increased to tens of thousands) is relatively low.²²⁹

There is evidence from other jurisdictions that supports the cost benefit of EM.

Research from England in 2016 found that, over 90 days, the cost of monitoring a prisoner in custody was £6500 compared to £1300 for an individual released on HDC over the same period.²³⁰ Research from Spain calculates that the cost of one

²²⁴ See for example Armstrong *et al.* (2011) (on HDC); Bartels and Martinovic (2017) pp.95-6; Dodgson, K., Mortimer, E. and Sugg, D.(2000) *Assessing Prisoners for Home Detention Curfew: A Guide for Practitioners*. UK: Home Office available at: <http://library.college.police.uk/docs/homisc/pg1homedetention.pdf>; Dodgson *et al.* (2001); Heggie, K. (1999) *Review of the NSW Home Detention Scheme*. NSW: Department of Corrective Services; Esdorf, A., and Sandlie, J. (2014) 'Executing Prison Sentences at Home with Electronic Monitoring – Advantages and Disadvantages of the Scandinavian Model' Presentation at Confederation of European Probation (CEP) 9th Electronic Monitoring Conference: Frankfurt, Germany; Gies (2016) p.113; Graham and Mclvor (2015); Ministry of Justice (2011) on HDC only; Moss 2018; National Audit Office (2006) for 90 day curfew period; Padgett *et al.* (2006) p. 84; Wagner (2008) p.8; Yeh's (2010) research from the US concludes that EM reduces reoffending, which reduces cost.

²²⁵ Armstrong *et al.* (2011) p. 5

²²⁶ Graham and Mclvor (2015) p. 37

²²⁷ Armstrong *et al.* (2011) p. 93

²²⁸ Nellis (2015) p. 15

²²⁹ Nellis (2016) p. 224

²³⁰ National Audit Office (2016)

meal in Spanish prisons costs more than an electronic monitoring bracelet does per day.²³¹ Based on average length of sentence and number of court appearances, research from New South Wales, Australia estimated the average cost saving per person diverted to EM instead of being imprisoned was \$25,200.²³² Controlling for the cost of staff time (though not overtime), equipment and administrative overheads, empirical research by the US National Institute of Justice in 2007 found that the median cost of managing an individual using GPS was \$5475 and the median cost of incarceration was \$30,000.²³³ In California between 2008-9 EM was estimated to cost \$36.00 per day per parolee, while imprisonment was estimated at \$129.00 per day.²³⁴ In Florida EM is used as a condition of bond for a person's release from prison and in 2010, the use of EM freed 19,680 man/days from Seminole county jail, saving the state in excess of \$1.7 million per annum.²³⁵

An additional cost saving was identified in the Seminole County study, related to accused person's appearance at court. The research found less than 1% of offenders failed to appear at court, concluding that "(t)hey know that they are being watched 24/7, and that they will be found very quickly if they do not keep scheduled court appearances".²³⁶

EM's cost effectiveness is conditional on a number of factors

The available literature highlights that some of the cost savings are conditional on the presence of a number of factors. It is suggested, for example, that GPS EM is more costly than RF.²³⁷ One researcher highlights that, in the case of GPS monitoring, the more data that is collected, the larger the resources required to sort and analyse the data set.²³⁸

²³¹ "the electronic wristlet costs €4.20 per inmate per day, compared to the €52.51 that it costs the State for each inmate each day...Dinner alone in the penitentiary centre of the inmate is more expensive." Otero (2009) p. 138; On this, The BBC recently published an article reporting that the daily cost of the recently introduced GPS tags was £9 per day (BBC 16th February 2019 'Electronic GPS tags to track thousands of criminals in England and Wales)

²³² Williams and Weatherburn (2019) p. 24

²³³ Brown *et al.* (2017)

²³⁴ State of California Legislative Analyst's Office (2007) 'Analysis of the 2007–08 Budget Bill (Judicial and Criminal Justice)' Sacramento, Available at: http://www.lao.ca.gov/analysis_2007/crim_justice/cj_05_an107.aspx; It is important to note that in the USA, a number of federal authorities charge the offender for their use of EM and thus comparison to the Scottish context can be difficult.

²³⁵ Bacigalupi, J. (2012) 'Seminole County Florida fights domestic violence with EMPACT' *Journal of Offender Monitoring*, 24: 1, p. 17-8

²³⁶ *Ibid*, p. 18

²³⁷ Belur *et al.* (2017) p.41

²³⁸ Hunkeler (2015) p. 7

Research from Scotland found that surveillance and immediate response obligations can keep costs up.²³⁹ A separate Scottish Government research publication concluded that costs are only reduced if “the sentences they replaced were relatively long”.²⁴⁰ The same study found that EM pre-trial bail is more expensive than custodial remand in Scotland.²⁴¹ Further evidence from California on sex offenders evidenced increased cost of EM monitoring (in comparison to other forms of community monitoring).²⁴² The literature highlights that staff time and resources should also be considered. A parole agent with a GPS caseload can take a considerable amount of time, with estimates of 40% of an officer’s workday being taken up with a standard caseload of 25 parolees.²⁴³

There is a limited evidence base on the cost incurred by the whole system operational cost of EM.

The literature notes that assessing the whole system cost of EM is difficult because there are a number of different criminal justice agencies involved in a monitored person’s management, all with separate budgets and patterns of collaborative working.²⁴⁴

Additional costs, associated with investigating failures, lost connections, or false alerts of GPS technologies and staff overtime for EM, and construction of new prison property for those incarcerated, are not considered in the available research.²⁴⁵ Research from Spain, for example, found that for a BEM project aimed at monitoring perpetrators of domestic abuse, each system unit – for the offender and victim - costs €600.²⁴⁶ It should also be noted that in some states of the US, monitored people are obliged to pay the daily cost of their monitoring equipment, which would be covered by the state in other jurisdictions, and this therefore impacts on cost calculations.

²³⁹ Smith, D. (2001) 'Electronic Monitoring of Offenders: the Scottish Experience' *Criminal Justice* 1:2, p. 201

²⁴⁰ Barry *et al.* (2007) p.2

²⁴¹ Barry *et al.* (2007)

²⁴² Osmori, M., and Turner, S. (2012) 'Assessing the Cost of Electronically Monitoring High-Risk Sex Offenders' *Crime & Delinquency* XX, p. 12

²⁴³ Tennessee Board of Probation and Parole. (2007). Monitoring Tennessee’s sex offenders using global positioning systems: A project evaluation. Tennessee Board of Probation and Parole.

²⁴⁴ Fransson, A. (2005) 'Reinforcing Restraining Orders Using Electronic Monitoring' Sweden: Swedish National Council for Crime Prevention; Martinovic (2016) p. 93

²⁴⁵ Martinovic (2016) p. 93

²⁴⁶ Otero (2009) p. 143

The 2019 Ministry of Justice evaluation of GPS monitoring highlighted the need to establish a robust infrastructure to support the introduction of GPS EM, and this required time and resources.²⁴⁷ Respondents in the evaluation also highlighted the perceived additional costs in terms of court time and administration.²⁴⁸ In particular, the time required for decision-making processes associated with GPS EM were prohibitive for courts setting bail conditions. One respondent reported:

“The courts are saying, ‘We want to deal with this today, I’m not giving you another 15 minutes to sort a map out.’ They’ll just say, ‘It doesn’t matter, we’ll go for a restraining order instead.’”²⁴⁹

In terms of cost effectiveness for Scotland, little is documented regarding the cost of EM breaches. To fully evaluate cost savings, further data on the rates and costs of breaches would be required.

The ethical considerations of EM

Up-tariffing and net-widening are a risk

EM can allow net widening or penological drift, whereby offenders who would not be sanctioned otherwise are monitored by EM. Evidence from international reviews²⁵⁰ and from research conducted in specific locations, such as Scotland²⁵¹; Belgium²⁵²; Germany²⁵³; and the USA²⁵⁴ highlighted this issue, particularly when EM is used as an alternative to pre-trial remand.²⁵⁵ Net-widening may also result in an increase in breach rates due to more stringently monitored conditions.²⁵⁶

²⁴⁷ Ministry of Justice (2019) p. 1

²⁴⁸ Ministry of Justice (2019) p. 26; this may only be a perceived cost: there has not yet been a longitudinal study to evaluate whether the use of GPS EM might reduce court time on a long-term basis.

²⁴⁹ *Ibid.*

²⁵⁰ Gibbs and King (2003); Belur *et al.* (2017)

²⁵¹ Smith (2001)

²⁵² Beyens and Roosen (2017)

²⁵³ Dünkel *et al.* (2017) p. 40

²⁵⁴ Gur *et al.* (2016) p. 37; Ibarra and Erez (2005)

²⁵⁵ Dünkel *et al.* (2017) p. 41

²⁵⁶ Belur *et al.* (2017) p. 9

In research from Winnipeg, probation officers found that GPS EM meant practitioners had no discretion with regard to non-compliance and minor violations, even in instances where there was no intent to commit crime (such as being late for curfew), must be recorded as an offence.²⁵⁷ Some of the young people in the Winnipeg programme cut their tag off and were charged with theft (of the monitoring device and phone) and mischief, despite otherwise complying with the conditions of their release.²⁵⁸ Correspondingly, some of the young people felt that the tag was setting them up for failure due to the rigid conditions and lack of leeway regarding non-compliance.²⁵⁹ One respondent also reported that he perceived his probation officer was more “harsh” when he was electronically monitored and felt that the message of the programme was “one mess up equals gone”.²⁶⁰

In addition, literature on the monitoring of sex offenders highlights that for some monitored sex offenders, the conditions imposed by EM may be disproportionate because a subset of this group are very unlikely to offend again.²⁶¹

EM can cause stigma, distress and shame for the monitored person

There are a number of debates within the theoretical literature comparing the use of EM as surveillance with its use for confinement and how this impacts upon an individual’s psychological wellbeing.²⁶² The literature on EM highlights that GPS monitoring systems in particular can infringe upon on an individual’s privacy.²⁶³

The physical act and visibility of wearing an electronic tag may have distressing effects on a monitored person.²⁶⁴ This can relate to a monitored person’s need to disclose to friends and family why they cannot leave the house; perceiving that friends and family know their every move; and the embarrassment associated with

²⁵⁷ Willoughby and Nellis (2016) p. 74

²⁵⁸ *Ibid.*

²⁵⁹ *Ibid*, p. 76-7

²⁶⁰ *Ibid*,p. 77

²⁶¹ Michael K., McNamee A., and Michael M. (2006) ‘The emerging ethics of humancentric GPS tracking and monitoring’, University of Wollongong — Research Online, Australia, p. 7; The Reconviction rates in Scotland for the 2015-2016 offender cohort shows that the percentage of sex offenders reconvicted in one year for any crime was lower than that of any other crime group, and this has held constant over a number of years.

²⁶² Hudson K. and Jones, T. (2016) ‘Satellite Tracking of Offenders and Integrated Offender Management: A Local Case Study’ *The Howard Journal of Crime and Justice* 55: 1-2, p. 188

²⁶³ Martinovic and Schluter (2012) p. 415

²⁶⁴ Nellis (2016) p. 235; Pepper and Dawson (2016) p. 30; Willoughby and Nellis (2016) p. 77

wearing a physical and visible tag or carry a monitoring box on their person at all times.²⁶⁵ Qualitative research of monitored people in Pennsylvania and Winnipeg found that some monitored people experiences shame and embarrassment and this was exacerbated by having to explain why they were wearing the tag to friends and family.²⁶⁶ Kilgore, the American academic who had served time in prison and on EM, highlighted that the inflexible application of EM meant accidental breaches, due to a late bus or flat tyre during one's commute, meant the reality of living with a tag could be very stressful.²⁶⁷ Other research respondents – particularly females – reported they felt they had to be mindful of what clothes they wore to ensure the tag was hidden.²⁶⁸

Other monitored people highlighted the strain EM caused on their relationship with their family. Monitored people reported that the sharing of domestic responsibilities was sometimes curbed by EM and caused conflict.²⁶⁹ Tensions within intimate partnerships have also been reported across a number of studies.²⁷⁰ Respondents in research from Belgium discussed how EM could make them feel powerless as they were unable to participate in family life as normal.²⁷¹ One respondent recalled how their children took advantage of the curfew, staying out late with their friends knowing that their parents could not venture out the house.²⁷²

Survey data of monitored people found that almost a third would prefer one month in jail compared to 6 months on EM and the authors attributed this finding to the shame and embarrassment associated with wearing a tag.²⁷³ Overall however,

²⁶⁵ Martin, J. S., Hanrahan, K., and Bowers Jr. J. H. (2009) 'Offenders' Perceptions of House Arrest and Electronic Monitoring', *Journal of Offender Rehabilitation*, 48, p.556

²⁶⁶ *ibid.* p.562; Willougby and Nellis (2016) p. 77

²⁶⁷ Kilgore (2012) p. 68

²⁶⁸ Holdsworth, E. and Hucklesby, A. (2014) 'Designed for Men but also worn by women' *Criminal Justice Matters* 14:1, p. 15; Richardson F. (2002) 'A Personal Experience of Tagging' *Prison Service Journal*, 142, p. 41

²⁶⁹ Vanhaelemeesch et al. (2014) p. 278

²⁷⁰ Gibbs and King (2003); Robert, L. and Stassart, E. (2009) 'Onder elektronisch toezicht gestelden aan het woord: Krachtlijnen uit het eerste Belgische onderzoek [Experiences of electronically monitored offenders: main findings from the first Belgian research]', in: T. Daems, S. DeDecker, L. Robert and F. Verbruggen (eds.) *Elektronisch toezicht: De virtuele gevangenis als reële oplossing? Onderzoek en beleid 1998–2008 [Electronic Monitoring: The Virtual Prison as a Real Solution? Research and Policy 1998–2008]* (reeks Samenleving, Criminaliteit & Strafrechtspleging [Society, Criminality & Criminal Justice Series], no. 33), Leuven, Belgium: Universitaire Pers Leuven; Staples, W. G. (2005) 'The everyday world of house arrest: Collateral consequences for families and others' in C. Mele & T. Miller (eds.) *Civil penalties, social consequences* New York: Routledge; Vanhaelemeesch et al. (2014)

²⁷¹ Vanhaelemeesch et al. (2014)

²⁷² Respondent 10 cf. Vanhaelemeesch et al. (2014) p. 278

²⁷³ Martin et al. (2009) p. 566

research which focuses on offender experience concludes that offenders still prefer to serve a sentence of EM than to be imprisoned.²⁷⁴

EM is not always appropriate for people with additional vulnerabilities.

EM is not considered appropriate for offenders with mental health issues or severe substance addictions²⁷⁵. The recent Ministry of Justice GPS pilot excluded those who were assessed to have “serious identified mental health or learning disabilities” from consideration from GPS EM.²⁷⁶ Evidence from Norway evidenced higher reoffending rates for offenders of drug-related crimes.²⁷⁷ In the Netherlands “EM is less likely to be imposed where people have serious substance addictions, serious mental illness and/or strongly impaired intellectual capabilities”.²⁷⁸ Ministry of Justice research also identified challenges of monitoring people with “mental health conditions, learning disabilities and chaotic lifestyle” who may have been incorrectly assessed as eligible²⁷⁹ for EM.

EM can negatively impact minority groups.

Some of the available literature, particularly from the USA, highlights the disproportionate use of EM on minority ethnic populations.²⁸⁰ Kilgore discusses the net widening surveillance of certain groups, namely black and Hispanic communities and school truants in the US, and Buchanan contends that GPS EM can heighten offenders’ senses of powerlessness.²⁸¹

²⁷⁴ Martin *et al.* (2009) p. 563; Nellis (2016) p. 235

²⁷⁵ Boone *et al.* (2017) p.56

²⁷⁶ Ministry of Justice (2019) p. 16

²⁷⁷ Rokkan, T. (2012) *Straffgjennomføring med elektronisk kontroll: Evalueringsrapport 2: Hva er innhold i straffgjennomføring med elektronisk kontroll?* [Serving Sentence with Electronic Monitoring. Evaluation Report 2: What Is the Content in the Serving of Sentences with Electronic Monitoring?] Oslo: Kriminalomsorgens Utdanningssenter [KRUS]. Available at: <http://brage.bibsys.no/xmlui/bitstream/handle/11250/160608/KRUS-rapport-3-2012.pdf?sequence=1&isAllowed=y>, p.17

²⁷⁸ Boone *et al.* (2016) executive summary section

²⁷⁹ Ministry of Justice (2019) p. 27

²⁸⁰ Buchanan, A. (2008) 'A Racial Justice Perspective on Monitoring Domestic Violence Offenders Using GPS Systems' *Harvard Civil Rights-Civil Liberties Law Review* 43; Kilgore (2012) pp. 69-70; in Williams and Weatherburn's (2019, p. 11) research, conducted in Australia, aboriginal offenders are purposefully excluded from their sample because Aboriginals “have a distinctly different relationship with the criminal justice system.”

²⁸¹ Buchanan (2008); Kilgore (2012)

EM can negatively impact people living in poverty

In the US, many offenders are obligated to pay the cost of their monitoring equipment and this necessarily excludes those from lower socioeconomic groups from being released on EM.²⁸² In interview, a monitored person in Belgium recalled that they lived alone and had very few resources, no television, at times no food and had very few prospects of employment.²⁸³ As a result, the monitored person intentionally relinquished their release on EM to return to prison.²⁸⁴ In the Winnipeg auto theft suppression strategy, the young people were issued with mobile phones as part of the GPS monitoring programme. If the phone was lost or the police were unable to locate it, the young person was charged with theft and required to repay the cost of the device. One of the probation officers interviewed in research emphasised that this would be a debilitating cost for many of those involved in the programme because of their socioeconomic status.²⁸⁵

Offenders on EM bail can be disadvantaged

According to the 2007 Scottish EM bail pilot – offenders on EM bail were given longer custodial sentences (121 days versus 93 days for the comparison group) and longer bail periods²⁸⁶. It should be noted that backdating of custodial sentences was not possible when this pilot was set up, and this also affects cost.²⁸⁷

EM is not fully standardised

The Scottish reviews by Graham and Mclvor found differences in how EM orders and breach thresholds are managed and imposed.²⁸⁸ There were also differences in how breaches were monitored and reported. It was identified that some “special sheriffs” agree specific arrangements with G4S for breach proceedings as part of a problem-solving court approach.²⁸⁹

Evidence from Argentina and New Zealand highlighted the different propensities of

²⁸² Conway, no date, cf. Kilgore (2012) pp. 70-1

²⁸³ Vanhaelemeesch et al. (2014) p. 277

²⁸⁴ *ibid.*

²⁸⁵ Willoughby and Nellis (2016) p. 74

²⁸⁶ Barry *et al.* (2007) p. 4

²⁸⁷ Barry *et al.* (2007) p. 5

²⁸⁸ Graham and Mclvor (2015) p. 29

²⁸⁹ Mclvor and Graham (2016) p. 1

judges to utilise EM as a sentencing option.²⁹⁰ Efforts were made in these studies to control for the differences in judicial decision-making, which were significant.²⁹¹

Negative incidents related to EM can be scandalised by the media and there is poor public understanding of its use.

Evidence from Scotland, Germany, the USA and a systematic review suggests that there is a poor public understanding of EM and there is the potential for negative incidents to be disproportionately criticised and/or scandalised by the media, with a lack of positive reports of EM.²⁹²

Nellis has documented the negative and sometimes sensationalist media response to EM in a number of his publications.²⁹³ In general the British press has reacted negatively to the use of EM for individuals serving community sentences.²⁹⁴ In Winnipeg, the GPS EM pilot for young offenders convicted of theft of motor vehicles received attention from the press, which was mainly negative and which politicised the use of EM and blurred the distinction between GPS and EM in its reporting.²⁹⁵

EM and domestic abuse

The final section examines the use of electronic monitoring in relation to domestic abuse perpetrators. In cases of domestic abuse, the purpose of EM is different to that in cases of non-domestic crime. Bilateral Electronic Monitoring (BEM) monitors

²⁹⁰ Di Tella and Schargrodsy (2013) p. 31; Williams and Weatherburn (2019) p. 2 respectively.

²⁹¹ Di Tella and Schargrodsy (2013); Williams and Weatherburn (2019)

²⁹² Barry *et al.* (2007) p. 5; Dünkel *et al.* (2017) p. 41; Graham and McIvor (2015); Levenson J., Brannon Y., Fortney T., and Baker, J. (2007) 'Public Perceptions about Sex Offenders and Community Protection Policies' *Analyses of Social Issues and Public Policy* 7:1 pp.137-161; Martinovic and Schlutter (2012) p. 415 describe the "moral panic" within the media after it was announced serious sex offenders were to be released and demands were made for this group to be more robustly monitored.

²⁹³ See for example; Nellis, M. (2007) 'Press Coverage of Electronic Monitoring and Bail in Scotland', in M. Barry, M. Malloch, K. Moodie, M. Nellis, M. Knapp, R. Romeo, & S. Dhanasiri (2007) *An Evaluation of the Use of Electronic Monitoring as a Condition of Bail in Scotland*, Edinburgh: Scottish Executive Social Research; Nellis, M. (2003) 'News Media, Popular Culture and the Electronic Monitoring of Offenders in England and Wales' *The Howard Journal* 42(1): 1-31; and Willoughby and Nellis (2016).

²⁹⁴ Finn, R., and McCahill, M. (2010) 'Representing the Surveilled: Media Representation and Political Discourse in Three UK Newspapers', Paper presented at *60th Political Studies Association Annual Conference*, 29 March – 1 April 2010, Edinburgh.

cf. Graham and McIvor (2015) p. 83

²⁹⁵ Willoughby and Nellis (2016) p. 71

both an offender's compliance with the conditions of sentence and protects victims of domestic abuse by monitoring the offender's movements in relation to the victim.

In relation to domestic abuse, the primary purposes of using EM are:

- To reinforce and ensure compliance with protective orders²⁹⁶
- To record evidence of breaches of no contact orders;²⁹⁷
- To enhance supervision of offenders;²⁹⁸ and
- To improve victim safety.²⁹⁹

EM can be used for those with a domestic abuse conviction in Scotland provided they are not excluded from consideration due to their offending history or following risk assessment, however Bilateral EM is not part of the current service in Scotland.³⁰⁰

Unilateral and Bilateral Electronic Monitoring (BEM)

Radio Frequency (RF) monitoring is the only type of EM currently used in Scotland. The RF system is used for the monitoring of people convicted of a domestic crime or offence in Scotland, and the same system is used in other jurisdictions for this purpose.³⁰¹ A 2013 Scottish Government Report further concluded that, both technically and legally, bilateral EM would be possible in Scotland with the combined use of GPS monitoring devices alongside the existing RF system.

²⁹⁶ Ibarra and Erez (2005)

²⁹⁷ Gur *et al.* (2016) p. 42

²⁹⁸ *ibid.*

²⁹⁹ Erez, E., Ibarra, P., Bales, W., and Gur, O. (2012) *GPS Monitoring Technologies and Domestic Violence: An Evaluation Study* [A report submitted to the National Institute of Justice], Chicago: University of Illinois, p. 94; Gur *et al.* (2016) p. 42

³⁰⁰ Offenders are deemed ineligible for EM, regardless of offence, if they are convicted of violent and/or sexual offences or are deemed at high risk of reoffending following a process of risk assessment conducted by the SPS.

³⁰¹ Scottish Government (2013a) 'Development of Electronic Monitoring in Scotland: A Consultation on the Future Direction of the Electronic Monitoring Service', Edinburgh: Scottish Government, p.30, available at: <https://www2.gov.scot/Publications/2013/09/7937>

In the majority of cases in Scotland EM is used as a unilateral measure,³⁰² primarily focussing on the monitored person's compliance with the conditions of their sentence.³⁰³ Offenders may be restricted to a place, from a place, or both to and from places under the conditions of EM.

Bilateral Electronic Monitoring (BEM), which is currently used in the USA, Spain and Portugal, is generally used to enforce protective orders and establish 'exclusion zones' around the victim's home. If an offender enters the exclusion zone, the EM system can give advance warning of the breach to the victim and monitoring authorities.³⁰⁴

BEM combines the use of RF and GPS technologies. As in cases of unilateral EM, the offender wears a tamper-proof transmitter, usually around their ankle. Bilateral approaches involve a receiver being placed within both the offender and the victim's home. The receiver in the offender's home detects and confirms the presence of the offender within the address during the permitted curfew hours. The receiver in the victim's house detects the presence of the offender's transmitter when it is within a defined geographical radius of the house (radii distances cited in studies from the US varied from 500 feet to 2 miles).

The victim may also be provided with a pager device, which allows the monitoring centre to alert them of the offender's proximity, and a field-monitoring device that alerts them to the offender's proximity to the house when they are away from the area.³⁰⁵ Victims can also be given monitoring devices, to carry on their person, or to be tagged in the same way as an offender via a transmitter round their ankle.³⁰⁶ GPS EM is then used to track the victim's movements and can report breaches by the offender in real time.³⁰⁷

³⁰² The term 'unilateral' is used to describe EM that monitors only the offender; bilateral monitoring is used to describe systems whereby the offender and the victim are involved in the EM process.

³⁰³ Erez, E. and Ibarra, P. R. and Lurie, N. A. (2004) 'Electronic Monitoring of Domestic Violence Cases: A Study of Two Bilateral Programmes' *Federal probation Journal* 68: 1; Ibarra and Erez (2005) p. 260

³⁰⁴ Graham and Mclvor (2015) p. 10

³⁰⁵ Erez *et al.* (2004)

³⁰⁶ Graham and Mclvor (2015) p. 81

³⁰⁷ *Ibid.*

Victim experience

Considering evidence on the experience of victims is particularly salient when evaluating the monitoring of domestic perpetrators. Domestic abuse, by its nature, is a hidden crime. 88% of incidents of domestic abuse take place in the home³⁰⁸ and in many cases it is difficult to establish sufficient corroborative evidence. Quantitative evidence on reoffending and reconviction may not provide an accurate picture of the reality of offending and is likely to underestimate the prevalence of domestic abuse. It is unclear what lessons can be learned from considering quantitative outcomes on reconviction rates for perpetrators on EM and other qualitative evaluation outcomes should also be considered.

Evidence suggests the use of EM is victim-centric and improves victim engagement with the justice system. In addition, evidence of breaches are more easily evidenced by EM technologies and victims may feel more supported to report. These factors may result in an increase of reoffending and reconviction in cases of EM for perpetrators of domestic abuse. In terms of measuring the efficacy of EM in domestic abuse cases, analysis of reoffending and reconviction statistics may not provide a clear picture of the reality of offending. It is therefore important to consider the experience of victims, as this provides additional evidence on EM and its impact.

There is some consistent and robust evidence on the impact of EM on victims. Several publications found that victims and EM practitioners were positive about EM. Evidence from the US suggests that one of the main strengths of EM in cases of domestic abuse is that it is victim-centric, improves the victim's perceptions of safety and allows them to feel better-informed and better-engaged with the justice system. The following section summarises the key findings of this body of evidence.

Research on BEM in cases of domestic abuse suggests its use can improve victim safety, empowerment and provide space to reassess the relationship and their future circumstances

Evidence from research interviews in the USA found that victims felt BEM granted them the space required to safety plan, reassess their relationship and their options

³⁰⁸ Scottish Government (2018) 'Domestic abuse in Scotland: 2017 - 2018 statistics' available at: <https://www.gov.scot/publications/domestic-abuse-recorded-police-scotland-2017-18/>

for the future.³⁰⁹ In a number of US states, EM is used as a mechanism to enforce protection orders. Exclusion zones are established to mirror the zones within the protective order. A national survey of practitioners from the USA provided that 75% of criminal justice professionals working with EM methods felt that victims were empowered by EM systems³¹⁰ and victims interviewed in Erez and colleagues' (2012) comprehensive USA study also reported improved feelings of empowerment.

Victims interviewed in Erez *et al.*'s research also showed that, prior to the use of EM, the perpetrator was able to continue his abuse of them more or less undetected and with impunity.³¹¹ Once the perpetrator was subject to EM, victims reported feelings of increased safety and freedom and a reduction in levels of harassment and stalking.

There are also anecdotal examples that suggest BEM can improve victim safety. In Florida, an exclusion zone was established around a victim's home address. The perpetrator in this case approached the address, allegedly to retrieve his belongings. The victim was alerted of his approach by the monitoring system in advance and had time to lock the doors and windows and turn off all lights and the television. The perpetrator tried to force entry to the house via several windows and the front door, and was then arrested by police who were also alerted to the breach.³¹² While this incident was a recognised breach, without the EM system the perpetrator would likely have gained entry to the property and perpetrated further abuse on the victim.³¹³

EM can improve victims' engagement with the justice system

A 2007 study by Erez and Ibarra³¹⁴ interviewed 30 victims and 22 justice professionals who worked with victims in two Midwest jurisdictions of the USA. The article offers useful insights into the perspective of the victim, with a number of excerpts from victim interviews included as primary sources of data. The article concludes that the use of EM in domestic abuse cases is victim-centric: it can restore victims' faith in the justice system; make victims more visible within the

³⁰⁹ Erez *et al.* (2004) p. 6; Erez *et al.*, (2012)

³¹⁰ Gur *et al.* (2016) p. 46

³¹¹ Erez *et al.* (2012) p. 95

³¹² Bacigalupi, J. (2012) 'Seminole County Florida fights domestic violence with EMPACT' *Journal of Perpetrator Monitoring*, 24: 1, p. 18

³¹³ *ibid.*

³¹⁴ Erez and Ibarra (2007)

judicial decision-making process; improve their engagement with justice professionals; and allow them respite from fear and harassment.

Other research notes that, at court, domestic abuse cases have higher levels of dismissals than other crime types due to the unique dynamics of domestic abuse and associated pressures on the victim.³¹⁵ Empirical research from the USA evidenced increased levels of victim attendance at court and a decreased likelihood of dismissal for cases that were continued over longer periods of time (as compared to cases where the perpetrator was released on bail without EM).³¹⁶

Research from the US found victims in domestic abuse cases are often not provided information regarding a perpetrator's sentence, imprisonment and date of release, and/or the conditions of their bail.³¹⁷ BEM had the effect of making women more 'visible' by including the victim's perspective in judicial decision-making, and providing victims with more information on the perpetrator's sentence.³¹⁸

Guidance and education on EM's capacity and limitations was lacking in some cases

Gur and colleagues³¹⁹ reported that, of the 616 EM practitioners surveyed: "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."

BEM has a victim-centric emphasis

Research interviews of 30 victims and 42 criminal justice/victim support professionals across two years in two courts in the USA found that BEM had the potential to mitigate victims' feelings of fear. BEM mitigated victims' fear of the perpetrator contacting them directly or through other means such as letters,

³¹⁵ Erez, E., Ibarra, P., Bales, W., & Gur, O. (2012) *GPS Monitoring Technologies and Domestic Violence: An Evaluation Study* [A report submitted to the National Institute of Justice], Chicago: University of Illinois. Available online at: <https://www.ncjrs.gov/pdffiles1/nij/grants/238910.pdf> p. 65.

³¹⁶ Ibarra and Erez (2005)

³¹⁷ Erez and Ibarra (2007) p. 112

³¹⁸ *ibid.*

³¹⁹ Gur *et al.* (2016) pp. 45-6

telephone calls or breaking and entering their home.³²⁰ A victim interviewed in one publication provided that:

*“I always felt like he was just gonna come out of nowhere and cut my throat or shoot me. Before he was put on (BEM), I went down to 96 pounds from my pancreas and my ulcers. I couldn’t eat from nerves worrying if he was going to break into my home, (or) where he’s going to show up. He would stalk me, he would drive down (to) my home, he would show up in places—if I would go out he would show”.*³²¹

The knowledge that a perpetrator’s movements were being tracked in real time increased victims’ perception of safety.

However, some victims did not feel EM of the perpetrator reduced their risk.

Some victims interviewed in Erez *et al.*’s (2012) US study felt that pre-trial use of EM for the perpetrator would mean he was “even more crazy and [likely to] retaliate”.³²² A number of victims believed the perpetrator would have the capacity to somehow deceive the technology and be able to continue the abuse. Some victims interviewed in research by Erez and colleagues were unsure of the extent of their protection and thus ‘tested’ the equipment by activating alerts to authorities to assess the speed and quality of police response.³²³

One case included in qualitative research from Spain found that repeated alerts by the monitoring system could cause distress to victims.³²⁴ An exclusion zone was set for 500 metres around the victim’s home address but the perpetrator required to go within 400 metres of the address to attend his work. The repeated alerts of the system caused the victim such distress that she withdrew from the programme. The judge in this case was able to modify the exclusion zone to resolve the issue.³²⁵

³²⁰ Ibarra and Erez (2007) p. 106

³²¹ *ibid.*

³²² Erez *et al.* (2012) p. 101

³²³ Erez *et al.* (2004)

³²⁴ Otero (2009) p. 144

³²⁵ *ibid.*

Perpetrator experience

There is also a limited body of qualitative evidence examining perpetrator and practitioner experience of EM in cases of domestic abuse.

The way in which a monitoring system is operationalised and its objective aims influence how perpetrators and practitioners experience EM.

Erez and colleagues noted that “an agency’s overarching philosophy of supervision and sense of mission, rather than the technology employed, set the tone and direction that casework takes, shaping how officers practice surveillance”.³²⁶

Research from the US found that the way in which monitoring systems are managed can have a significant effect on perpetrator experience.³²⁷ The 2014 study conducted interviews with 50 criminal justice practitioners across three separate jurisdictions over three years. The approaches to monitoring varied between a collaborative, transparent approach based on treatment and rehabilitation, to another area where EM was intended to control risk based on surveillance and enforcement. In the former, practitioners wanted to “create a relationship of trust” with the clients and support them to make positive life choices.³²⁸ In the latter, perpetrators were not provided information regarding the capabilities of the GPS EM system, an intentional strategy designed to “keep defendants in the dark” and “weed out” those who were non-compliant.³²⁹

Perpetrator experience of EM can be both positive and negative.

One practitioner interviewed in the above study perceived that – because perpetrators are obliged to pay for their monitoring equipment in the US – compliance was higher.³³⁰ The cost of a unit varied between \$10 and \$16 per day and the practitioner felt that due to the daily cost, perpetrators tended to pay more attention to their conditions.³³¹

³²⁶ Erez *et al.* (2014) p. 440

³²⁷ Ibarra, *et al.* (2014)

³²⁸ *ibid.*, p. 433

³²⁹ *ibid.*, p. 428

³³⁰ *ibid.*, p. 439

³³¹ *ibid.*

Being subject to a home detention curfew (HDC) and no contact order with the victim means many perpetrators are forced to reside with their parents. Research from the US interviewed 27 convicted perpetrators of domestic abuse, and found that residing with parents was emasculating and infantilising for them and it was difficult to maintain a 'normal' social life.³³²

A report by Erez and colleagues (2012) identified some benefits for perpetrators of domestic abuse subject to EM, as "providing added structure to their lives, and enabling them to envision futures for themselves without the victim".³³³ Some research highlighted that GPS EM is a fairer system because it protects perpetrators from false allegations by the victim³³⁴ and allows the perpetrator to avoid accidental contact with the victim through early warning systems.³³⁵

Practitioner perception

Three police respondents, interviewed for the 2007 Scottish Government review on EM as a condition of bail, expressed frustration regarding whether EM would necessarily increase compliance of perpetrators who already routinely breached bail, especially in relation to domestic abuse.³³⁶ A majority of (judicial, SCTS, COPFS, bail officers, advocacy service and EM staff) respondents also stated they did not believe EM as a condition of bail would prevent perpetrators intimidating witnesses.

By contrast, the recent Ministry of Justice evaluation on GPS EM found there was support amongst stakeholders for the use of GPS to monitor domestic perpetrators.³³⁷ It was noted, however, that responses to breaches would need to be very efficient to ensure victim safety, as the tag did not prevent breaches only monitored them.³³⁸

³³² Ibarra and Erez (2005) p. 271

³³³ Erez *et al.* (2012) p. iii

³³⁴ Erez *et al.* (2012) p. 141, Erez *et al.* (2014) p. 437

³³⁵ Ortano (2009) p. 142

³³⁶ Barry *et al.* (2007) p. 67

³³⁷ Ministry of Justice (2019) p. 24

³³⁸ *ibid.*

The evidence base on EM and Domestic Abuse

Compliance and reconviction are the focus of studies on EM and domestic abuse.

Discussions on compliance and reconviction are the focus of a small number of empirical studies on EM and perpetrators of domestic abuse. As noted, the results of quantitative research of this type must be evaluated with some caution, as reduced reconviction may not necessarily be a measure of the effectiveness of EM.

As there are only a few studies on compliance and reoffending in relation to EM in domestic abuse cases, the following section offers a brief review and highlights the key findings of each of these publications.

GPS Monitoring Technologies and Domestic Violence: An Evaluation Study, Erez *et al.* 2012

Key finding: Domestic abuse perpetrators were less likely to breach if they were monitored using GPS rather than RF technology, and less likely to reoffend during the period of monitoring.

A study by Erez *et al.* (2012) is the most comprehensive study on the use of EM in domestic abuse cases. Using a quasi-experimental design, it examines the use of pre-trial EM in three jurisdictions in the USA, examining data on 2052 perpetrators of domestic abuse over two years, 1000 perpetrators over 6 years and 604 over one year; a web survey of 616 practitioners; and 210 qualitative interviews with victims, perpetrators and criminal justice/social services practitioners.

Erez *et al.*'s (2012) research found that perpetrators subject to GPS monitoring violated the conditions of their EM less than those perpetrators on RF EM. Practitioners also reported that less than 7% of perpetrators breached the conditions of pre-trial EM by entering exclusion zones.

Whilst there was a lack of consistency in re-arrest rates across different localities,³³⁹ overall there was a higher rate of re-arrest in the long-term compared with the

³³⁹ Rates varied from 7.7% in the South to 59.3% in the MidWest in the one year follow up period.

period of monitoring for both RF and GPS perpetrators, suggesting that perpetrators are less likely to commit crime during the period of monitoring. In terms of preventing failures (i.e. breaches of EM conditions), GPS EM was found to be more effective than RF.³⁴⁰

The likelihood of reconviction was higher for perpetrators who were subject to GPS monitoring, however the authors suggest this may be due to increased reporting by victims, as they are better engaged in the criminal justice process via GPS EM methods.³⁴¹ Qualitative evidence provided that victims whose abuser was on RF EM also felt an increased willingness to report (as compared with prior instances of abuse when the perpetrator was unmonitored) due to being supported by the technology.³⁴²

Specialization and the Use of GPS for Domestic Violence by Pretrial Programs: Findings from a National Survey of U.S. Practitioners, Gur *et al.* (2016)

Key Finding: The majority of practitioners in the study were positive about the use of EM in domestic abuse cases and felt it can restore victims' faith in the justice system.

A report by Gur and colleagues³⁴³ further analysed part of the data set from Erez *et al.*'s (2012) study. They looked at the survey responses of 616 EM practitioners which provides further insights into practitioners' understandings and motivations for use of EM in domestic abuse cases. The majority of EM practitioners were positive about EM use in domestic cases, stating that it improved their ability to sufficiently monitor perpetrators and hold them accountable, and the majority believed EM effectively deterred perpetrators from initiating 'in-person' contact with their victim.

An Evaluation of the Use of Electronic Monitoring as a Condition of Bail in Scotland, Barry *et al.* 2007

Key finding: The use of EM as a condition of pre-trial bail is under-used in Scotland.

A 2007 Scottish Executive report³⁴⁴ on the use of EM as a condition of bail evaluated the effectiveness of EM as a condition of bail for 63 accused people

³⁴⁰ See Erez *et al.* (2012), p. 70

³⁴¹ *ibid.*, p. ii

³⁴² *ibid.* p. 212, footnote 14

³⁴³ Gur *et al.* (2016)

³⁴⁴ Barry *et al.* (2007) p. 40

across three Scottish courts. Of the 63, only 6 perpetrators of domestic abuse were included in the sample, therefore it is difficult to draw any meaningful conclusions. The report noted that very few “restricted from” conditions were used in EM bail, rather perpetrators tended to be “restricted to” an address. Of note, two of these perpetrators breached their conditions by entering an exclusion zone, one was arrested but neither were convicted of the breach.³⁴⁵ Data is not recorded by offence type and thus very few conclusions can be drawn regarding perpetrators of domestic abuse.

Scottish and International Review of the Uses of Electronic Monitoring, Graham and Mclvor, 2015

Key finding: the evidence base on the use of EM in Scotland is limited.

Graham and Mclvor dedicate a section of their report to reviewing the evidence on EM and domestic abuse. Their review is based on a systematic review of existing literature rather than new empirical evidence on DA and EM. The review takes account of the studies identified above and notes that there is limited available research in this field. The authors highlight that in other jurisdictions EM is integrated with other community supervisions.³⁴⁶

The only identified instance of a BEM pilot scheme for perpetrators of domestic abuse in the UK is a trial between 2014 and 2017 by Northumbria Police.³⁴⁷

This pilot was part of a wider Home Office-funded MATAC process implemented in Northumbria between 2014 and 2017. The original intention of the pilot was to use GPS EM to monitor bail conditions, Domestic Violence Protection orders (DVPOs) and prison release conditions. Use of EM for these purposes required authorisation from the Ministry of Justice and this was not granted.³⁴⁸ The scheme was therefore conducted on a voluntary basis and the cohort of users was self-selecting.

³⁴⁵ *ibid.* pp. 45-6

³⁴⁶ Graham and Mclvor (2015) pp. 43-4

³⁴⁷ Vera Baird Police and Crime Commissioner Northumbria (2015) <http://www.northumbria-pcc.gov.uk/gps-proximity-device-launch/>; there has recently been a new pilot implemented in London for violent offenders but due to the small time elapsed there is no evaluation of this pilot.

³⁴⁸ Personal communication with Programme Director Deborah Alderson, 11/02/19

Victims were given a handheld GPS device and perpetrators were subject to a GPS tag to monitor their movements and any contact. Fixed exclusion zones were defined around the victims' houses and places of work, and mobile exclusion zones set up around the victim to prevent unwanted contact outside of the static zones.

Programme director of the pilot, Superintendent Deborah Alderson, provided that where the devices were deployed, they “worked effectively and gave the victim peace of mind and feelings of safety”.³⁴⁹ Superintendent Alderson identified that there were several technical issues related to loss of coverage but believed that new technologies would be able to address the issue. On EM technology, she stated “I have found that technology changes so quickly, if I were to consider use of these again in the future I would consider lease of the units rather than purchase, so that units are kept up to date as part of the contract as technology advances.”³⁵⁰ She also highlighted hidden costs relating to training police to respond to breaches and the costs incurred by the monitoring company.

To further explore the use of community sentences in Scotland, statisticians at the Scottish Government have analysed the reconviction rates of perpetrators of domestic abuse by sentence type.

For the period 2017/18, 2691 people were sentenced to RLOs, 332 (12%) of which had a domestic abuse marker.³⁵¹

One year reconviction rates for domestic and non-domestic abuse crimes and offences for the 2015/16 offender cohort were examined. The cohort includes those that were either released from a custodial sentence, or given a non-custodial sentence, in a Scottish court in 2015-16. The earliest occurrence of either a release from a custodial sentence or being given a non-custodial in the financial year is counted as the index conviction of an offender. Subsequent convictions in a year period after the index conviction are counted as reconviction. See [Annex A](#) in *Reconviction Rates in Scotland: 2015-16 Offender Cohort* for further detail on the methodology for counting reconvictions.

The cohort of 44,036 perpetrators was separated into those who had an index crime with a domestic abuse marker and those that did not, and reconviction rates were calculated both for both groups. These results were split by disposal type,

³⁴⁹ *ibid.*

³⁵⁰ *ibid.*

³⁵¹ Criminal proceedings statistics 2017/18

including RLOs and custodial sentences. Appendix 1 contains the table detailing the reconviction rates.

In Scotland, there is a lower reconviction rate for domestic crimes/offences for perpetrators sentenced to RLOs than to short prison sentences.

The analysis found that 19% of perpetrators who were imprisoned for under one year were reconvicted for another domestic abuse offence within a year. This compares with perpetrators sentenced to RLOs, 10% of whom were reconvicted for another domestic abuse offence within a year.

However, it is important to note that the differences in reconviction rates may be explained in part by the type of perpetrator most likely to be sentenced to imprisonment, as perpetrators at high risk of reoffending are less likely to be sentenced to RLOs in the first place.

The evidence base on EM and domestic abuse is limited

This review did not identify any studies which compared outcomes for perpetrators of domestic abuse on EM with outcomes for a matched sample who serve their entire sentence either in prison or on a community sentence with no EM intervention. Without a matched comparison group it is very difficult, if not impossible, to draw robust conclusions regarding the effectiveness of EM with perpetrators of domestic abuse compared with other sentences.

Following an extended review, a 2015 report by the SCCJR concluded that, in relation to BEM and perpetrators of domestic abuse, “(t)he empirical evidence and criminological literature on GPS-based bilateral EM is limited and relatively new, and it is too early to make strong claims about its impact”. This was echoed in the 2015 report by Lockhart-Mirams and colleagues who recommended that the UK government implement a mandatory pilot scheme for perpetrators of domestic abuse as a means of developing the evidence.³⁵²

³⁵² Lockhart-Mirams, G., Pickles, C., and Crowhurst, E. (2015) 'Cutting Crime: the role of tagging in offender management' *Reform* available at: https://reform.uk/sites/default/files/2018-10/Tagging%20report_AW_8.pdf

Conclusions

The range of uses of EM

This paper has outlined the possible uses of electronic monitoring systems at different points of the justice pathway. EM is used as a tool in justice systems across a wide number of international jurisdictions. There is evidence to support the use of EM at different points along the justice pathway, including to monitor compliance with pre-trial bail conditions, to support early release from prison and as a condition of probation. There are different types of monitoring systems, including Radio Frequency (RF), Global Positioning Systems (GPS) and Remote Alcohol Monitoring (RAM) systems. In general, it is difficult to draw generalisations across the types of monitoring technologies, particularly RAM because it is intended to monitor compliance in a different way.

The evidence evaluating the effectiveness and use of EM is limited but promising

There is a significant literature on the theory of EM, a number of reliable empirical studies and various systematic reviews on the use of EM.

Of the available evidence there are some promising results. Research from France, for example, concluded a 9-11% reduction in reoffending³⁵³ and an Australian study evidenced a 25% reduction in reoffending for monitored people.³⁵⁴ A large study from Florida found that, in terms of breach rates, over a period of 6 years monitored people were 31% less likely to breach the conditions of their sentence than comparable groups not on electronic supervision.³⁵⁵ Ministry of Justice research from 2011 concluded that monitored people released on HDC were no more likely to reoffend than those in a matched sample who were not eligible for release.³⁵⁶ This has led some researchers to conclude that EM and imprisonment are equally effective, but that EM has a number of additional benefits, both for the individual and for the state.³⁵⁷

³⁵³ Henneguette *et al.* (2016)

³⁵⁴ Williams and Weatherburn (2019) p. 23

³⁵⁵ Bales *et al.* (2010)

³⁵⁶ Ministry of Justice (2011) p.1

³⁵⁷ Flango and Cheesman (2007) p. 103, for example, state “(e)lectronic monitoring is as effective as incarceration, and less expensive”.

Despite the range of this literature, the evidence base on EM remains limited because research design and empirical outcomes are highly varied. Research design in some of the studies does not allow for robust conclusions to be drawn. Some empirical studies use self-selecting groups and a number of studies have very small sample sizes. A large number of studies consider GPS monitoring systems, and there are identified differences between RF and GPS EM outcomes. As a result of inconsistent research design, it is difficult to draw reliable conclusions regarding cause and effect.

An evaluation of the effectiveness of EM depends on the intended aims and purpose of monitoring. From the available evidence it is concluded that EM has been used to achieve a range of different objectives across jurisdictions. The effectiveness of EM can therefore only be judged on whether and how it achieved the particular objectives defined within an individual study. Reliable comparison between studies is not possible in the majority of cases.

Literature on the use of EM for other offence types suggests there can be better outcomes if EM is used as part of a wider intervention of supports and supervision.

In terms of reoffending and reintegration outcomes, an evaluation of the available evidence suggests that EM is best considered as one tool to be used in conjunction with a wider package of community supervision and support for people serving their sentence in the community.

EM can be used to support reintegration

One of the objectives of EM can be to support reintegration and encourage a pro-social life. Assessing the relationship between EM and reintegration depends upon how reintegration is defined.

The literature identified that EM can be used to encourage the construction of positive social capital. EM can allow family responsibilities and relationships to be maintained and increases the likelihood of the monitored person gaining or maintaining employment. In addition EM may discourage association with criminal peers. The conditions of EM can also be applied flexibly to incentivise compliance and pro-social behaviour.

EM outcomes tend to focus on reconviction rates and this does not necessarily provide reliable evidence on the effectiveness of EM

Evidence on electronic monitoring has tended to focus on reoffending rates and while quasi-experimental conditions have been established in some studies, comparisons between monitored people serving their sentence in the community and a matched groups in prison are problematic in terms of producing reliable conclusions. As noted in the section on risk assessment, the HDC assessment process purposefully targets low risk offenders. Thus, any comparisons made between groups monitored on HDC with those retained in prison are not reliable, as it would be expected that reconviction rates would be lower for a lower risk group.

More reliable and robust research methods would involve examining the cohort of people released on HDC and analysing the proportions of those who breached, who were recalled and the reasons why. The available literature notes that research on the experience of monitored people is also lacking and further research in this area would be beneficial to evaluate effectiveness.

The available evidence suggests that the cost of EM is lower than imprisonment

The majority of the available literature concludes that EM costs less than imprisonment. There were no studies that considered the whole system cost of implementing EM – in terms of costs associated with monitoring centres, breaches, technology failures and community support. A number of studies identified that cost effectiveness was conditional on certain factors. GPS EM was assessed to be more cost effective than RF monitoring systems.

There are a number of ethical considerations related to EM

There is some evidence – specifically from qualitative studies that examine the experience of monitored people – that highlight the stigma, stress and embarrassment associated with wearing a tag. In addition a number of the theoretical studies and systematic reviews discuss the risk of penological drift associated with EM.

Some literature highlights the negative impact on a monitored person's family and on a monitored person's employment prospects. There are also a limited number of

studies that conclude EM may not be appropriate for all groups, specifically people with additional vulnerabilities and minority groups, and that EM may further disadvantage monitored people of a lower socioeconomic status.

In cases of domestic abuse, the purpose of EM is different to that in cases of non-domestic crime.

The use of Electronic Monitoring in cases of domestic abuse is a specialised area of research and is far more limited than the evidence base on the use of EM for other crime types. In cases of domestic abuse, the purpose of EM is different to that in cases of non-domestic crime. Bilateral Electronic Monitoring (BEM) monitors both an perpetrator's compliance with the conditions of sentence and protects victims of domestic abuse by monitoring the perpetrator's movements in relation to the victim.

In evaluating the use of EM in cases of domestic abuse qualitative evidence on victim experience should be considered

While the evidence base on the use of EM for perpetrators of domestic abuse is limited, there are a number of reliable qualitative studies that suggest BEM can be used to make the criminal justice system more victim-centric, improve victim engagement and perceptions of safety. When considering criminal justice measures for domestic abuse, the hidden nature of domestic abuse must be taken into account. Even if there is a reliable body of evidence detailing reconviction rates for perpetrators on EM, it is unclear what lessons could be learned from this. Increased reconviction rates may indicate increased reporting by victims and an improved engagement with the justice system, while a decrease in rates may indicate the effectiveness of EM in terms of reintegration and rehabilitation. In the absence of such data, the lived experience of victims, practitioners and perpetrators – on which there is a some available evidence – should be considered.

Appendix A: Reconviction rates for domestic and non-domestic crimes or offences

Reconviction rates for domestic abuse and non-domestic abuse crimes and offences: 2015-16 cohort

	Number of offenders			Percentage reconvicted for any crime or offence			Percentage reconvicted for a domestic abuse crime or offence ¹		
	Non-DA index	DA index ¹	All index	Non-DA index	DA index ¹	All index	Non-DA index	DA index ¹	All index
Index disposal									
RLO	887	106	993	34.2	32.1	33.9	4.8	10.4	5.4
CPO	8,549	2,252	10,801	32.2	25.3	30.8	4.9	12.1	6.4
Under 3 month custodial									
RLO	1,161	163	1,324	60.2	46.6	58.5	6.3	20.9	8.1
CPO	3,926	597	4,523	52.2	42.9	51.0	6.2	19.3	7.9
Under 1 year custodial									
RLO	35,636	8,400	44,036	28.9	18.8	27.0	3.7	8.8	4.7

1. Domestic abuse crimes and offences are those marked with a domestic abuse aggravator.

Average number of reconvictions per offender for domestic abuse and non-domestic abuse crimes and offences: 201516 cohort

	Number of offenders			Average number of reconvictions (for any crime or offence) per offender			Average number of reconvictions (for a domestic abuse crime or offence ¹) per offender		
	Non-DA index	DA index ¹	All index	Non-DA index	DA index ¹	All index	Non-DA index	DA index ¹	All index
Index disposal									
RLO	887	106	993	0.59	0.51	0.58	0.06	0.11	0.06
CPO	8,549	2,252	10,801	0.58	0.37	0.54	0.06	0.14	0.07
Under 3 month custodial									
RLO	1,161	163	1,324	1.32	0.77	1.26	0.07	0.24	0.10
CPO	3,926	597	4,523	1.10	0.69	1.05	0.07	0.24	0.09
Under 1 year custodial									
RLO	35,636	8,400	44,036	0.52	0.27	0.47	0.04	0.10	0.05

1. Domestic abuse crimes and offences are those marked with a domestic abuse aggravator.

How to access background or source data

The data collected for this social research publication:

- are available in more detail through Scottish Neighbourhood Statistics
- are available via an alternative route <specify or delete this text>
- may be made available on request, subject to consideration of legal and ethical factors. Please contact <email address> for further information.
- cannot be made available by Scottish Government for further analysis as Scottish Government is not the data controller.



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