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Reducing criminal recidivism: evaluation of Citizenship, an evidence-based probation supervision process

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## REDUCING CRIMINAL RECIDIVISM: EVALUATION OF CITIZENSHIP, AN EVIDENCE-BASED PROBATION SUPERVISION PROCESS

### **Abstract**

'Citizenship' is a structured probation supervision program based on 'what works' principles, designed for offenders on community orders or licences supervised within the UK National Probation Service. The program was evaluated using survival analysis comparing the reconvictions of a cohort of all offenders in one probation area eligible for Citizenship over a two-year period ( $n = 3,819$ ) with those of a retrospective cohort of all eligible offenders in the same probation area receiving 'traditional' probation supervision ( $n = 2,110$ ), controlling for risk related factors. At the two year stage, 50% of offenders in the comparison group had reoffended compared with 41% in the experimental group, and the difference between the survival curves was statistically significant. The hazard ratio was 0.69, which represents a 31% reduction in reconvictions in the experimental group over the proportion in the comparison group at any given time. Time to violation of a supervision order or post custody licence was also statistically significantly longer in the experimental group. A key element of the program, promoting contact with community support agencies, was statistically significantly related to reduced reoffending in the Citizenship group. The overall effects remained after controlling for differences in risk scores although effectiveness varied by risk level. Contrary to other 'what works' research findings, the program was found to be most effective across the low-medium and medium-high risk thresholds, and was not effective with the highest risk group. This difference can be explained and is discussed in terms of risk, need, and responsivity principles. The Citizenship program was found to be cost-beneficial.

*Keywords* Cognitive-behavioural · Community reintegration · Cost-benefits · Evidence-based · Offender · Probation supervision · Reconviction · Risk need responsivity

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Probation supervision forms a major part of community sentencing of offenders and the monitoring of offenders on release from prison on parole or other community licence, yet it is a comparatively under-researched aspect of corrections. Supervision appears to have been mainly viewed as being 'in the background of other programming', and 'considered inconsequential to effectiveness' (Taxman 2002). Results from meta-analyses of offender intervention studies (Andrews et al. 1990b; Antonowicz and Ross 1994; Izzo and Ross 1990; Lipsey 1992; Lösel and Köferl 1989; Pearson et al. 1997; Redondo 1994) have led to the development of offending behaviour programs found to be effective in reducing reoffending (Andrews et al. 1990a; Hollin 1999; Lipsey et al. 2007; Lipsey and Wilson 1998; McGuire 1995). However until recently the findings of 'what works' in reducing reoffending have not been applied to supervision methodologies (Taxman 2002). Evaluations of types of supervision have mainly examined frequency and intensity of probation contact, producing a number of evaluations of intensive supervision programs (ISP), with largely inconclusive or negative findings on effectiveness (Cullen et al. 1996; Gendreau et al. 2001; MacKenzie 2000; Petersilia et al. 1992; Sherman et al. 2002). The limited amount of research on the content of probation supervision has been remedied in the last few years with a move towards 'evidence-based' supervision and attempts to understand and evaluate whether the evidence can be supported and shown to be effective in practice (Alexander and VanBenschoten 2008; Paparozzi and Gendreau 2005; Taxman et al. 2006; Thanner and Taxman 2003; Taxman 2008).

This paper describes the design and evaluation of a probation supervision program, Citizenship, in the National Probation Service County Durham, UK, with a participant and comparison group sample of 5,929, which has incorporated 'what works' principles and methods (Andrews and Bonta 2006) into regular offender supervision. Citizenship has additionally employed methods aimed at promoting social inclusion of offenders by working in partnership with community social support agencies. The paper will describe some of the international research already conducted on probation supervision and, more recently, on evidence-based supervision and will describe the Citizenship supervision program, making links and comparisons with other forms of supervision and their evaluation. This evaluation of Citizenship is the first of three regional probation

evaluations. The current study, being the first to introduce the Citizenship supervision program, adopts a quasi-experimental design, however a later study will employ a randomised controlled trial design.

## **Background**

Probation supervision has evolved over the last 40 years as a methodology which has largely been in the hands of individual professionals to perform in line with their specialist training. Probation officers must of course conform to organisational policy and legal requirements, but these are mainly about standards for the frequency of contact with the offender and have not until recently been about the content of the supervision itself. Hence it has been difficult to obtain a consistent picture of what probation supervision entails and an agreed definition of the role (Taxman 2002). Historically probation has adopted a variety of methods and philosophies ranging from social work principles, psychotherapy, compliance, surveillance, intensive supervision, and some tougher forms of therapy such as outward bound wilderness training and 'scared straight' initiatives. It is likely therefore that a range of different approaches will have been retained within the unstructured supervision process, depending on the previous training and experiences of the probation officers.

The effectiveness of general probation work has therefore been hard to measure. Probation supervision often cannot be compared with other disposals, due to the lack of transparency of what is meant by supervision (Taxman 2002). When examining some of the main community sentences identified in a systematic review of UK studies, McDougall et al. (2006) found studies that showed effectiveness for probation 'with a treatment requirement' (Oldfield 1997), probation that was effective 'without a treatment requirement' (Home Office 1993), and community punishment orders<sup>1</sup> (unpaid work) that were effective in comparison with probation 'with and without a treatment requirement' (May 1999a, b). Without a clear definition of the 'requirements' applied in each study, and indeed what supervision 'without requirements' entailed, it is difficult to conclude which approach was the most effective.

Although many probation evaluation studies have claimed to show the effectiveness of probation, when examined closely (McDougall et al. 2006), often research designs have been poor with differences in outcomes between different court imposed sentences being as likely to reflect differences in the offenders allocated to the disposals as to the effectiveness of the sentence. In the community service studies identified above, May (1999a, b) acknowledged that community service is usually given to lower risk offenders, who already have a reduced probability of reoffending. In studies where statistical adjustments have been made to control for differences in risk of reoffending indicators, differences in reconviction rates have narrowed (Home Office 1993). In other studies, often small sample sizes and poorly controlled designs limit the quality of evidence available to evaluate probation supervision.

This lack of definition also applied to ISPs, which often varied in approach (Paparozzi and Gendreau 2005), and in some cases lacked precision in program implementation (Posavac and Carey 2003). Program integrity has been identified as an essential element of effective programs (Gendreau and Andrews 2001; Gendreau et al. 2001; Hollin 1995; Latessa and Holsinger 1998), however it has been suggested that in some ISPs a lack of organisational support for program implementation may have led to diffusion between experimental and comparison group interventions, with similar interventions being applied to both groups (Posavac and Carey 2003). The risk of diffusion in implementation was minimised in Citizenship, where all of the experimental cohort were subject to Citizenship supervision which was not available in the earlier comparison cohort.

### **Cost-Benefits and Cost-Effectiveness of Probation Supervision**

Studies that have looked at the costs and benefits of probation supervision have often produced more encouraging results, but these are dependent on the quality of the original research designs as a basis for the cost-benefits and cost-effectiveness calculations, and their conclusions need therefore to be considered carefully. Often studies have found community supervision to be cost-beneficial when compared to imprisonment, but without taking account of offences that might be

committed by more serious offenders if they were released under probation supervision (Gray and Olson 1989). In a systematic review of the costs and benefits of sentencing (McDougall et al. 2008), a number of ISPs were identified either as cost-benefits or cost-effectiveness studies. Of these, in the only ISP cost-benefits study, ISP was found by the authors to be cost-beneficial (Pearson and Harper 1990). This was contrary to the findings from most other studies of effectiveness of intensive supervision. However Pappozzi and Gendreau (2005), in discussing this study point out that some therapeutic counselling was incorporated, so the study was not strictly an evaluation of a traditional ISP program. Four studies in the systematic review were ISP cost-effectiveness studies, i.e., calculating monetary costs of the different options, although not putting monetary values on the outcomes (Latessa 1986; Turner and Petersilia 1992; United States General Accounting Office 1993; Weibush 1993). Of these only the Latessa study found intensive supervision to be cost-effective, although if costs of imprisonment and re-parole following revocation of intensive supervision had been included in Latessa (1986) the conclusion of cost-effectiveness might have changed. Costs and benefits have been calculated for the present study to estimate the cost-benefits of introducing the Citizenship program. This has compared the costs of staff training, implementation and mainstreaming of the Citizenship program against the benefits accrued in 'offences saved' as a consequence of participation in the program.

### **Evidence-Based Probation Supervision**

Since many of the probation supervision approaches referred to above came without an evidence base of effectiveness, this led to the conclusion that probation supervision was atheoretical (Taxman 2002). There is little research evidence of effectiveness of traditional probation supervision, due to the small number of rigorously conducted research studies (Taxman 2002; McDougall et al. 2006). Lessons have however been learned from reviews of evaluations that the more control-oriented supervision methods, such as ISP, have a limited impact on recidivism unless they include a therapeutic component (Petersilia 1999), and they may even be harmful as in the case of the 'scared straight' project (Petrosino et al. 2002). The need for probation supervision to be placed on a sound evidence base is therefore essential.

Following the evidence of the effectiveness in reducing reoffending of offending behaviour programs based on principles derived from meta-analyses of evaluation studies, attention turned to incorporating such evidence-based approaches into probation supervision (Taxman 2002; Bruce and Hollin 2009). Key components of effective supervision were adopted by the National Institute of Corrections (NIC) (National Institute of Corrections 2005; Taxman et al. 2004), and linked to this was a change in NIC philosophy towards probation becoming an outcome-driven agency (Alexander and VanBenschoten 2008). Similar policies were being adopted in Australia, Canada and the UK (Bonta and Cormier 1999; McDonald 2003; Home Office 1999). The key principles of the NIC approach were: reliable and valid risk/needs assessments; cognitive behavioural interventions (CBI); fidelity to the risk/needs assessment tool and CBI; effective communication/motivational interviewing; and examining, applying and testing emerging practices (Alexander and VanBenschoten 2008).

A number of studies have been conducted to examine whether application of a risk/needs/responsivity (RNR) approach (Andrews and Bonta 2006) would work with probation supervision in practice and have shown encouraging results. There has still been an emphasis on providing intensive supervision, but what is different is that the intervention is targeted at those with the highest risk, and addresses the identified needs, often combining surveillance with treatment services. Application of RNR was found to be a successful approach to reducing reconvictions by Pappozzi and Gendreau (2005), who concluded that recidivism could be reduced by 10% to 30% in an intensive supervision program by targeting high-risk offenders, employing parole officers with balanced law enforcement/social casework orientations, and providing a supportive organisational environment. The value of 'responsivity' in delivering supervision was studied by Thanner and Taxman (2003), who examined the effectiveness of providing intensive services to high-risk offenders using a seamless system, integrating treatment with supervision in comparison with a traditional probation supervision approach. This was an exploratory study, whose results indicated a potentially positive effect using the seamless approach with substance abusing offenders, although not producing statistically significant results. A later study (Taxman et al. 2006) examined the seamless system approach versus the traditional probation approach with drug abusers using the

Wisconsin Risk and Needs tool (WRN: Van Voorhis and Brown 1996) to identify risk level. Although the study found that there was improved treatment participation by the high-risk offenders, no effects were found on frequency of drug use or re-arrest. This was in part attributed by the authors (Taxman et al., 2006) to possible weaknesses in the WRN tool, which, although discriminating between high-risk and moderate-risk offenders, was unable to detect dynamic differences such as the persistence or severity of the behaviour, and how much these contributed to the commission of crime. This study, Taxman et al. (2006), emphasises the importance of using a reliable and valid tool to categorise offenders, and the authors also highlight the need for more research to help understand the role of dynamic factors in program effectiveness.

Latessa and Lowenkamp (2006) examined the principles of effective intervention, presenting results from two large scale studies in terms of risk, need, treatment and program fidelity principles. One study was of residential community programs in halfway houses and community based correctional facilities; the second study was of community programs including intensive supervision, day reporting, and electronic monitoring. Both studies found that risk/need principles were important to greater program effectiveness, with high-risk offenders appearing to benefit from a longer and more intense form of supervision and treatment. Treatment and program integrity were also important. Additionally Latessa and Lowenkamp found that the number of referrals to outside agencies of high-risk offenders was significantly positively related to recidivism.

A study by Taxman (2008), used a new evidenced-based supervision model, Proactive Community Supervision (PCS). The study, which controlled for length of time on supervision and prior history, found that offenders were less likely to be re-arrested (30% PCS versus 42% traditional supervision) and this result was statistically significant. The PCS model has four main components: (1) it identifies risk and need using validated assessment tools; (2) it is responsive to the criminogenic needs of the selected offenders; (3) it provides programs and services that are cognitive-behavioural or are based on social learning theory; and (4) it provides a pro-social and supportive organisational environment. The PCS approach has many similarities to the Citizenship



program, which is the subject of this study, and the similarities will be highlighted below in describing the Citizenship supervision program.

The only element on which Citizenship diverges from other programs mentioned is its central emphasis on social integration with community agencies, although this relates to one of the eight evidence-based principles listed in the NIC guidance for evidence-based practice, i.e., 'engaging ongoing support in natural communities' (National Institute of Corrections 2005). The Latessa and Lowenkamp (2006) studies, found that increased referral to agencies was related to reduced recidivism with high-risk offenders, although this was not their main focus. Attention to community integration is fundamental to the National Probation Service, UK, philosophy (Crow 2001; Hale 2005; Robinson and Raynor 2006) and is supported by international research evidence (Bonta et al. 2002; Myers et al. 2002). Social exclusion (Robinson and Raynor 2006) has been considered one of the major hindrances to offenders taking up law-abiding lives and this is an element of the Citizenship program that is considered to be essential to maintaining progress during and after a supervision or licence period is concluded.

### **The Citizenship Program**

Citizenship is a structured probation supervision program, based on 'what works' principles (Andrews et al. 1990a; McGuire 1995) designed and implemented by the National Probation Service in County Durham. Its aim was to bring probation supervision under the auspices of a research evidence-base of what is effective in reducing reoffending. The design, development and detail of Citizenship are described fully in Bruce and Hollin (2009). Citizenship was developed by an in-house working group of probation practitioners under the guidance of Hollin, drawing on available research evidence. Citizenship has adopted the Risk/Needs/Responsivity principles (RNR), and hence targets medium- to high-risk offenders for the more intensive supervision and treatment (Andrews and Bonta 2006) in keeping with other evidence-based supervision programs (Alexander and VanBenschoten 2008; Pappozzi and Gendreau 2005; Taxman 2008; Taxman et al. 2006). However it also encompasses the needs of the lower risk offenders, by making an informed and

defensible decision on the level of supervision required. Citizenship is therefore consistent with RNR and provides a structured intervention to all offenders including those whose needs are not met by existing accredited programs.

The risk/needs assessment tool used in Citizenship is the Offender Assessment System (OASys<sup>2</sup>) (Home Office 2002) in operation throughout the National Offender Management Service - NOMS (i.e., the Prison and Probation Services of England and Wales). All records of offenders in these Services are held on the OASys database, and accessed and updated by whichever Service is currently responsible for the supervision of the offender. OASys calculates risk, using a combination of static historical information (Offender Group Reconviction Scale, OGRS: Copas and Marshall 1998) and dynamic risk information based on Level of Service Inventory (LSI-R) type variables (Andrews and Bonta 1995), e.g., education and employment, lifestyle / associates, and pro-criminal attitudes. OASys has been validated by Howard et al. (2006) who found, in assessments of around 3,000 offenders across 17 prison establishments and 11 probation areas, that OASys was a very good predictor of reconviction, slightly outperforming other instruments including the LSI-R. Mean OASys sub-section scores for drug misuse, accommodation and criminal history were over twice as great in offenders reconvicted compared to offenders not reconvicted. In addition the static risk score, based on OGRS has demonstrated a high level of predictive validity with a wide range of offender populations (Coid et al. 2007; Gray et al. 2004; Lloyd et al. 1994). OASys has the advantage of being the standard risk protocol used throughout the two Services, therefore standardising methods of assessing risk and need.

Although accommodating the supervision of all offenders, Citizenship actively seeks to engage medium- and high-risk offenders in targeted interventions, complying with the risk principle. The specific targeting of dynamic areas which are functionally related to the offender's behaviour is consistent with the need principle of effective intervention. The Citizenship program is designed to be individually tailored to the risk level and needs of the offender, and the methods employed within Citizenship are designed to engage and motivate offenders, and address their specific skills deficits (the responsivity principle) (Andrews and Bonta 2006). As in PCS, motivational techniques are

considered to be extremely important to the responsivity process, and all staff delivering Citizenship have been trained in motivational interviewing (Miller and Rollnick 1991) and pro-social modelling (e.g., Trotter 1996).

The Citizenship pathway model is depicted in Figure 1. All offenders starting community orders/licences complete the compulsory Induction module of Citizenship. Some offenders (low-risk) may not continue beyond the Induction module if not warranted by their level of risk and need. After Induction, those offenders assessed by OASys as suitable to continue with Citizenship will be allocated to any of up to five optional modules (i.e., alcohol misuse, drug misuse, lifestyle & associates, relationships, and emotional well-being) and/or accredited programs, and will complete the compulsory exit (Next Steps) module before termination of their order/licence (Bruce and Hollin 2009). The content of these modules, as in PCS, are based on cognitive-behavioural methods.

[Figure 1 about here]

The Induction module, delivered over seven sessions, is for use with all offenders at the start of their contact with probation. During this module they will receive a detailed explanation of the terms and conditions of their order or licence, and complete an initial sentence plan, as required by national standards. The Induction module aims to identify the reasons for offending, plan for future interventions and improve problem solving skills. Using a functional analysis of the offending behaviour, the module seeks to develop the offender's awareness of the contributory factors to his/her offending including the impact of crime on their victims. The Induction module contains sessions introducing problem solving based on the cognitive-behavioural methods employed in the accredited One-to-One program (Priestley 2000). The intention is for the offender and their officer to begin to apply these problem solving methods to the offender's primary criminogenic needs. The final session of Induction, called 'where next', develops an individualised profile of the offender's pattern of offending, to identify the core need areas that lead to offending and to help with sequencing those modules and any accredited programs that will address those needs. Those low-

risk offenders not considered suitable to continue with Citizenship may be referred to community support agencies if necessary.

The subsequent Citizenship modules (see Figure 1) were designed to address the items that contribute to risk within each area of the OASys assessment. In addition to a cognitive-behavioural approach many have an educational focus seeking to raise knowledge and awareness about the offender's level of drug or alcohol use for example, via the use of diaries and quizzes. As with the Induction module, the offender and their officer begin to apply problem solving skills to the offender's criminogenic needs. The final module, at the conclusion of supervision, provides the link between the content of the program and the successful reintegration of the offender back into the community at the end of his/her statutory supervision. Since offenders may each have completed a different combination of modules, the worksheets in this module encourage a review of general progress and a link with future plans post-supervision. The offender takes with him/her a copy of their 'Next Steps' plan at the end of supervision to serve firstly as a motivational record and reminder of progress, but also as a detailed contact list of relevant services and support networks for use after statutory contact has ended.

It has been agreed with the local courts that Citizenship is now the format for statutory supervision orders and is able to incorporate additional requirements. For example if the offender has an accredited program requirement, he/she completes the Induction module then in sequence with the accredited program he/she completes any optional modules that meet his/her 'needs', and then finally completes the Next Steps module prior to the supervision order/licence expiry. A key part of the model of change within Citizenship is offender connection with community agencies that can support and assist reduction in criminogenic needs. Offenders are encouraged during Citizenship to engage with local agencies that can support their rehabilitation and risk management. It is known that in some cases these agencies may be able to offer specialist advice and support that is not within the scope of probation officers. Government supported agencies working with offenders in the community include accommodation agencies, drug and alcohol action teams, mental health providers, 'employment training and education' teams, and agencies offering advice on financial

management and income. Links with such community provision are promoted and supported throughout the period of statutory supervision, with the aim of sustained engagement after program termination. Probation officer skills are employed in exploring how relationships, attitudes, and lifestyle and associates are linked to their offending. This emphasis on community partnerships may be more pronounced in Citizenship than in other evidence-based supervision programs.

All probation supervision staff were trained before the launch of Citizenship in the procedures and practice of Citizenship, with emphasis on the motivational aspects of the supervision. The training allowed staff to familiarise themselves with the philosophy of the community re-integration model which is at the heart of Citizenship. A manual for Citizenship has been compiled with guidance notes and worksheets (Bruce and Hollin 2009), and an electronic case recording system monitors the program integrity of the program on an ongoing basis (Hollin 1995).

#### **Pilot evaluation of the Citizenship program.**

In the initial stages of implementation of Citizenship, a pilot evaluation on a sample of offenders was carried out which examined a number of indicators of effectiveness: i) the targeting of offenders' needs to the Citizenship modules ii) the extent of referral to external agencies iii) the impact on one-year reconvictions (Gray and Pearson 2006).

In the pilot evaluation, the Citizenship group was composed of the first 100 cases starting community orders or post release licences since Citizenship implementation, that had been subject to supervision by a core set of Citizenship trained staff ( $n = 14$ ). The comparison group was derived from a separate cohort of 100 cases from an earlier period that had been subject to supervision by the same set of staff. Both groups reduced to 85 cases (total sample  $n = 170$ ) after those with accredited programs or with incomplete supervision were excluded. Accredited program cases were excluded to ensure that Citizenship was the subject of the evaluation, rather than accredited programs. Cases were assigned to the comparison group rather than the Citizenship group if they

were on the caseload of the relevant staff and their supervision had been completed before the Area-wide implementation of Citizenship.

The two groups were matched on a number of risk indices including: risk of reconviction (both groups were restricted to medium- or high-risk offenders); and length of sentence (all cases were sentenced to at least 12 months of supervision). In addition, offence types in the sample were reviewed to ensure that they were equally distributed across groups.

In the Citizenship group 49% (25/51) of those cases that had reached the end of their statutory supervision had completed all required Citizenship modules. 29% (15/51) did not complete all modules due to further offences, including technical violation for failure to attend the Citizenship program. Within the Citizenship group as a whole 73% (62/85) were referred to one agency or more over the course of supervision. Of these, 69% (43/62) showed evidence of take-up during the supervision period. In total, 95 different referrals were made to community organisations over the course of Citizenship supervision. This compared with 19 community contacts already in place at the start of supervision. A paired samples *t*-test showed that the average number of agency links post-Citizenship was statistically significantly greater than the average number of community agency links pre-existing Citizenship [ $t(1) = -8.709, p = 0.000$ ].

Reoffending was also lower amongst the Citizenship group (30%, 30/85) than the non-Citizenship group (48%, 41/85). This difference was not however statistically significant [ $\chi^2(1) = 2.93, p = 0.087$ ], which may have been due to the relatively low power of the study. Based on the odds ratio, offenders were 1.7 times more likely to desist from reoffending after the Citizenship program than after the former standard supervision. Since there was a trend towards a reduction in reoffending and this could not be attributed to unmatched samples, initial pilot testing indicated a case for a larger scale evaluation of the impact of Citizenship on criminal reconvictions.

## **The Current Evaluation**

Since the National Probation Service in County Durham had implemented Citizenship area-wide to those under supervision, it was not possible to compare effectiveness with a non-Citizenship group within the same area. Adjacent probation areas who proposed to adopt Citizenship were unsuitable as comparison groups, as the nature of the offender populations in terms of offence profile, 'risk' and 'need', and social environment were different. As a result, evaluation of Citizenship in County Durham area necessarily involved a retrospective design.

One of the key limitations of a retrospective design is that it does not control for extraneous factors that are happening outside of the influence of the program being evaluated. One such factor was the prevailing national performance in reducing reoffending. Ministry of Justice reports on national reconviction rates have indicated that there was a reduction in reconvictions between years 2005 and 2006 (Ministry of Justice 2008), which was the time period of the Citizenship evaluation. This reduction applied to the frequency of reconvictions per offender as well as the binary (reconvicted - yes/no) rate. This meant that the implementation and evaluation of Citizenship occurred in the context of good national performance in reducing reconvictions between 2005 and 2006. We consider this in our treatment of the results below. This design problem has been avoided in the second stage of analysis of Citizenship in a neighbouring probation area by using random assignment.

## **Method**

### **Participants**

Participants in the evaluation of Citizenship were offenders, aged 18 or over, under the supervision of the National Probation Service in County Durham on either community rehabilitation orders (receiving probation supervision) or post-release licences (e.g., parole supervision). A total

of 6,441 offenders were on the caseload of the County Durham area of the National Probation Service, in the time periods covered by the research.

The experimental group who received Citizenship was made up of 3,819 offenders sentenced to community rehabilitation orders or released from prison on licences into County Durham probation area between August 1, 2005 and August 1, 2007. The 3,819 offenders comprised all offenders eligible to commence Citizenship in the two-year period, with the exception of 468 offenders in the experimental group who commenced Citizenship after June 30, 2007 and whose reconviction data would have been incomplete at the end of the evaluation period. Offenders on community rehabilitation orders/licences that commenced prior to August 1, 2005, but who joined the Citizenship program part-way through their orders/licences were not included in this group as they would not have completed the Induction module as designed. The experimental group was therefore strictly confined to those with the potential to receive full Citizenship supervision.

The comparison group data were obtained from 2,110 offenders sentenced to community rehabilitation orders or post-release licences between April 1, 2004 and April 1, 2005. This number excluded 44 offenders who had a custodial sentence and were not released during the time period. The comparison group had not undergone the Citizenship program, due to Citizenship deployment being in a subsequent period, and were subject to 'traditional supervision'.

Participant characteristics are shown in Table 1 below. The participants were mainly males (86%) of white ethnicity (99%) with a mean age of approximately 29 years. The high proportion of white ethnic group offenders is consistent with the proportion in the general population in North-East England where the white ethnic category predominates (97.6%, Office for National Statistics, 2010).

[Table 1 about here]



Table 2 below shows the number of offenders undergoing each of the modules available within the Citizenship program. As shown previously in Figure 1, all offenders under supervision should undergo the Induction module, and if assessed as suitable to continue with Citizenship, should finally complete the Next Steps module. Table 2 shows that 80% (3072/3819) underwent the Induction sessions and 63% of these offenders completed the module. Although 60% of those who started the final Next Steps module completed it, a minority of offenders actually reached these final sessions. This is unsurprising as a number of offenders would not have continued after Induction due to low risk and need, while others allocated to Citizenship may have failed to complete supervision for a variety of reasons including case transfers, hospitalisation, resentencing following technical violation, and imprisonment. The remaining modules listed in Table 2 are not compulsory and depend on the assessment of criminogenic need. This explains the lower proportions of offenders undertaking these modules. Table 2 shows that the alcohol module was the most frequent additional module undertaken. Overall approximately 39% (1191/3072) of Citizenship commencements underwent an optional module to address relevant criminogenic needs. As shown in Table 3 below, 27% of all cases (1016/3819) under Citizenship, contacted an external agency. Since only 19% of all cases had agency contacts in the comparison group (391/2110), the relationship between group and agency contacts was significant [ $\chi^2 (1, N = 5929) = 48.94; p = 0.000$ ].

The performance target for individuals undertaking accredited programs during Citizenship, in years 2005/6 and 2006/7 was an average of 220 per year, in comparison with a performance target of 212 per year in 2003/4. It can be seen therefore that the inclusion of accredited programs was no greater within the Citizenship supervision pathway, than in the earlier comparison group period.

[Table 2 about here]

[Table 3 about here]

## **Risk and Need Assessment Tool**

All offenders under prison or probation supervision in England and Wales have their demographic and offending data recorded on the Offender Assessment System (OASys: Home Office 2002) database. OASys is a structured data protocol that provides a means of assessing the likelihood of reconviction and of identifying areas of need. An OASys risk score is calculated by adding together sub-scores, based on file and interview information, on 10 dynamic factors<sup>3</sup> and on one static risk factor, the Offender Group Reconvictions Scale, version 2 (OGRS-2: Copas and Marshall 1998). The OGRS static risk scale is based on the 2-year reconviction rates of approximately 18,000 offenders serving community and custodial sentences in the UK. The scale screens for a number of static factors including category of current offence, current age, age at first offence, and history of custody, which in analysis have been found to be associated with reoffending.

Offenders are managed by their supervising officers within a 'tier' system, on the basis of levels of risk and need identified by OASys. Different offender management approaches correspond to each tier of supervision. In ascending order: Tier 1 (low risk offenders), addresses mainly the punishment element of community sentencing such as unpaid work. Tier 1 offenders commencing Citizenship are likely to have received only the Induction module, unless previously unidentified needs have become apparent during Induction; Tier 2 (medium to low risk offenders) additionally provides help for lower risk offenders not requiring formal accredited offending behaviour programs; Tier 3 (medium to high risk offenders) attempts to rehabilitate by providing programs and specialised help; and Tier 4 (high risk offenders) focuses on control and public protection. Citizenship is primarily delivered therefore to offenders at Tiers 2 and 3, although it does also aim to impact on Tier 4.

## **Eligibility Criteria**

Offenders are targeted for Citizenship if their OASys risk score falls between 50 and 168 (the medium- to high-risk range). Therefore, for offenders whose overall scores fall between 0 and 49, the recommended sentence would usually be a financial penalty or conditional discharge. If however, notwithstanding their risk level, these offenders have been sentenced to an order requiring supervision, they would receive less intensive supervision, completing only the Induction module. It is recognised that offenders, particularly as their OASys scores rise, will be assessed as having multiple and entrenched crime-related needs. The offender manager is tasked with selecting and sequencing the relevant Citizenship modules to meet those crime-related needs.

## **Research Design**

Ideally a randomised controlled trial design would have been applied in order to minimise bias and ensure that the experimental and comparison samples were not systematically different at baseline. This approach was however not possible since in County Durham the program was introduced across all delivery offices in the area contemporaneously. This did not allow for a naturally occurring or pre-planned comparison group, and hence necessitated comparison retrospectively with an earlier cohort that had not undergone Citizenship.

The outcome measures of the study were reconvictions, including technical violations of the order or licence (i.e., breach of an order or licence conditions requiring a return to court for re-sentencing). Reconviction data was obtained from the Home Office Reconvictions Analysis Team and from Local Measures of Performance reports (Ministry of Justice, 2010). These data have been provided quarterly by the Research, Development and Statistics department of the National Offender Management Service [NOMS] since March 2006. Referrals of offenders to external community agencies was identified from electronic Probation case records and contact logs.

## Statistical Analysis

The data were analysed on the basis of an 'Intention to treat', i.e., all offenders who were under supervision from August 1, 2005, were included in the results whether or not they received all of the required elements of the Citizenship program. This avoided the possibility of differences in motivation to cooperate with supervision which could have occurred in a 'treatment received' analysis.

Since offenders are on caseloads for different lengths of time, the study necessarily had variable follow-up intervals. A survival time analysis design was therefore adopted. The proportion surviving at any given time (i.e., not being reconvicted or committing a technical violation) is estimated using the Kaplan Meier survival estimate (Kaplan and Meier 1958). A Kaplan Meier survival curve is used to summarise the complex data graphically, and the curves are statistically compared using a logrank test of significance (e.g., Bowles and Florackis 2007).

The Cox proportional hazards model (Cox 1972) was used to explore the impact of Citizenship on time to reoffending, controlling for the following prognostic factors: OASys score, OGRS score, and Tier, all presented individually. For each model investigated, age at sentencing, age at first conviction, number of prior convictions, gender and agency contact was also controlled. Interaction between each of these scores and the group variable was examined. The proportional hazard assumption was checked in each case. The hazard at a given time is the rate at which events (e.g., reconviction) happen. The Hazard Ratio (HR) gives the probability, based on values of the prognostic factors, that a case that has survived to a given point will subsequently fail in the following time interval<sup>4</sup>. Among those who reoffended, the impact of Citizenship on time to a technical violation was investigated using Cox proportional hazards and controlling for risk scores, age, gender, age at first conviction and number of prior convictions. Furthermore, the odds of a technical violation in the Citizenship group versus the comparison group was calculated using logistic regression and controlling for the aforementioned variables.

Since it was known that the national rate of reconviction had reduced during the time period (Ministry of Justice 2008), it was necessary to compare the reductions nationally with those of Citizenship. To do this, offenders in the comparison group who commenced supervision between January 1, 2005 and March 31, 2005 were sampled (473 cases in total). Reconviction status at one year was recorded. A predictive model was constructed using logistic regression for the 2005 first quarter data. The following variables were included in this model: gender, age, number of prior convictions and OGRS score. The model was checked for its predictive ability using a Receiver Operator Curve (Hanley and McNeil 1982). This model was then used to predict reconvictions for the Citizenship cases that commenced their sentences between January 1, 2006 and March 31, 2006 (538 cases in total). This rate was compared to the actual rate based on a one-year follow up period for Citizenship cases commencing in the first quarter of 2006. A progress percentage was then calculated as  $(\text{actual} - \text{predicted}) / \text{predicted}$ , (see Ministry of Justice 2008).

## **Ethical Considerations**

During the first session of supervision, the relevant court order or post-release licence is fully explained to the offender, together with the purpose and process of Citizenship supervision, including sharing information with other agencies (limited confidentiality). The offender then signs a legally enforceable supervision contract. The offender is additionally invited to give informed consent to the collection of data for evaluation of the effectiveness of work done during supervision and signs a Citizenship consent form to indicate agreement to the probation service obtaining information about his/her contacts with other agencies.

## **Results**

### **Survival Time Analysis (Cox Regression)**

Figure 2 shows the Kaplan-Meier curve for time to reconviction in the experimental and comparison groups. Inspection of this figure shows that, for any point in time, the proportion not yet

reconvicted is higher in the Citizenship group compared to the comparison group. The median survival time was 701 days in the comparison group. No median survival time could be calculated for the Citizenship group as more than half of this group were not reconvicted by the last exit time of 915 days. Figure 2 shows that by 24 months (728 days) 50% of offenders have reconvicted in the comparison group, compared to 41% in the Citizenship group. The difference between the curves was statistically significant [LR  $\chi^2(1) = 70.48$ ;  $p > \chi^2 = 0.0000$ ]. Since survival curves represent cumulative rates of reoffending over time taking into account the different periods of observation, they say nothing in relation to a comparison of the proportion reconvicted at any one given time. For this, a calculation of the Hazard Ratio (HR) was performed using Cox proportional hazards model. The HR for Citizenship versus the comparison group, controlling only for group, was 0.69 (95% CI: 0.64-0.76). This means that the hazard of reconviction for Citizenship at any one time is 69% of that in the comparison group. This represents a 31% reduction in reconvictions in the Citizenship group relative to the proportion of cases reconvicted in the comparison group at any given time (for a first reconviction).

[Figure 2 about here]

### **Variation by risk scores: Analysis across and within risk categories.**

The size of the difference between the curves was also analysed across risk categories in separate risk models (OGRS, Model A; OASys, Model B; Tier, Model C). It was necessary to create separate models since the risk scores for each measure are based on some of the same factors. These models showed a very similar HR for Citizenship versus comparison group to that found before risk scores were taken into account. The reduction in the proportion reconvicted under Citizenship compared to traditional probation practice is approximately 30%, varying from 26% to 40% (Model A: HR 0.74, CI: 0.68-0.80; Model B: HR 0.71, CI: 0.65-0.77; Model C: 0.60, CI: 0.55-0.66). There was a statistically significant increase in the hazard that accompanies the increase in the respective risk scores.

[Table 4 about here]

Models were extended to include interaction terms for the risk variables with the group variable (Citizenship and comparison). Thus the extended models allowed the HR associated with the risk categories to vary across the groups. Conversely, it allowed for the HR associated with group to vary across the different risk categories. The results are presented in Table 4 under models A1, B1, and C1 for models based on OGRS, OASys and Tier respectively. Each model was also adjusted for age at sentencing, age at first conviction, gender, number of prior convictions, and agency contact.

Table 4 shows an increase in the hazard of reconviction as the risk category rises, in each model, and an associated reduction in the benefit of Citizenship relative to the comparison group. Taking model A1, based on OGRS, as an example offenders assessed at low-risk had a HR of 0.47 for Citizenship versus the comparison group (a 53% reduction in the proportion reconvicted under Citizenship relative to the comparison group), while offenders assessed at medium-risk were associated with a HR of 0.70 (a 30% reduction in the proportion reconvicted under Citizenship relative to the comparison group). For high-risk cases the HR for Citizenship versus the comparison group of 0.95 was not statistically significant.

When the HR was computed at different OASys risk categories, the results were very similar to those relating to OGRS as might be expected given that the risk assessments are based on similar items. Table 4 model B1 shows that the rates comparing someone in the Citizenship group with someone in the comparison group at low, medium and high OASys risk, were 0.48, 0.73 and 1.05 respectively. The hazard of 1.05 in the high risk group was not statistically significant. Both models show that the benefit of Citizenship, indexed by the HR, reduces as risk categories rise. This was confirmed again in Model C1 using offender tier, with the hazard of reconviction in Citizenship statistically significantly reduced relative to the comparison group in Tiers 1-3, with reductions diminishing as tier level increased. The same comparison between Tier 4 cases in the two groups yielded a statistically non-significant result. The hazard of 1.15 might represent a trend, in Tier 4

cases, for a small increase in the proportion of cases reconvicted in the Citizenship group compared to the comparison group at any given time (for a first reconviction).

### **External agency contact.**

Controlling for other variables, the hazard of re-offending among those who had agency contact was 0.85, 0.78 and 0.70 across the three risk models A1, B1 and C1, respectively. In the tier risk model, the hazard for offenders contacting an external agency represents a 30% reduction on the proportion reconvicting where agency contact has not occurred.

### **Impact on technical violations.**

Analysis of group data revealed proportionately fewer offences for technical violations in the Citizenship group (8.5%) than the comparison group (21%) [ $\chi^2 (1, N = 2242) = 70.24; p = 0.000$ ].

The odds ratio (OR) of a technical violation for Citizenship versus the comparison group, controlling only for group, was 0.34 (95% CI: 0.27-0.44). Controlling for OGRS risk score and adjusting for age, gender, age at first conviction and number of prior convictions yielded an OR suggesting that the odds of failing for a technical violation in Citizenship are 36% those of the odds of failing under traditional supervision (OR=0.36, 95% CI: 0.40-0.58). Very similar results were obtained from the models controlling for OASys and Tier level.

Time to the event of a technical violation was analysed, to take account of differing failure opportunities. The difference between the survival curves of Citizenship and the comparison group was statistically significant [ $\chi^2 (1, N = 2234) = 48.58; p > \chi^2 = 0.0000$ ]. The hazard of failing for a technical violation in the Citizenship period was 0.44 of that in the comparison period, controlling only for group. This represents a 56% reduction relative to the proportion failing in the comparison group at any given time. Controlling for OGRS and adjusting for age, gender, age at first conviction and number of prior convictions yielded a similar HR of failing for a technical violation in the



Citizenship period versus the comparison period. Similar results were obtained using the OASys score and Tier.

### **Comparison with National Rates**

In line with the methodology used by the Ministry of Justice (see Ministry of Justice 2008) changes in reconvictions over time were compared using a predictive model based on offender characteristics in a baseline period. This means that the actual reconviction rate is compared with what is expected using a predictive model. As described in the method above the progress against the predicted rate is the difference between the actual and predicted rate as a proportion of the predicted rate.

[Table 5 about here]

Table 5 shows that the actual rates and predicted rates in County Durham and nationally in the year were very similar. However, the change in actual rates relative to the previous year was greater in County Durham than Nationally. This is despite differences in the pre-existing chances of reoffending relating to the offender characteristics associated with risk of reconviction (predicted rates). Since the predicted rate of reconviction was higher in County Durham to start with, the relative progress in bringing down the actual rate was greater. In County Durham it was 7.9% while the progress Nationally was 3.7%. This suggests that County Durham was reducing reoffending at a rate faster than achieved nationally. This may be attributed to the use of the Citizenship program.

### **Cost-Benefits Methodology and Results**

As part of the evaluation we developed an analysis of the costs and benefits of implementing the structured approach represented by the Citizenship program. This follows the standard approach for an economic evaluation of a crime reduction project as set out in Dhiri and Brand (1999) and applied to burglary prevention projects by Bowles and Pradiptyo (2004). Establishing

that a new intervention is effective in reducing reconviction rates in a pilot setting relative to existing practice may be a necessary condition for justifying further piloting (or wider implementation) but it may not be sufficient. Reconviction rates are a convenient outcome measure but do not map perfectly onto the aggregate harm done by offenders<sup>5</sup>. In order to make a case for investing public funds in an extension of a pilot, an estimate of the financial equivalent of the potential harm reduction benefits may be required for comparison with the costs of extension<sup>6</sup>. Reoffending data will typically include a listing of the offences committed by recidivists, and thus will support estimates of aggregate harm as well as a simple binary reconviction rate. Below, costs are reviewed first, then benefits.

### **Costs.**

Cost information was obtained from semi-structured interviews with Offender Managers, Middle Managers and the National Probation Service County Durham area's Finance Manager. There were set-up costs associated with the conceptualisation, design and development of the contents of the program. These costs are largely ignored here because they would not recur if the project were to be implemented in a similar format elsewhere. The (one-off) costs of staff training and senior management time associated with introducing a significant change of this kind have to be taken into account but we focus primarily on the recurrent costs of delivering the project.

### **Benefits.**

Measuring the benefits from an intervention of this kind can be approached in various ways, for example by looking at the scale (if any) of a reduction in the reoffending rate of offenders. In terms of the savings in the economic and social costs associated with the offending, however, a more direct approach is appropriate. Comparison of offending outcomes can be made on the basis of the total costs of the bundle of reconvictions associated with the Citizenship and non-Citizenship settings. This allows for differences in the severity of the offences committed as well as the proportion of offenders who are reconvicted.

In a world with perfect information the complete set of offences committed by each group during some follow-up period (12 or 24 months or whatever) would be included. In practice we have to rely on reconvictions as a proxy for actual offending. We make the further assumption that the first offence type for which an offender is reconvicted can be used as an indicator of the seriousness of the offending they have resumed.

### **Qualitative assessments of costs.**

Interviews with managers and staff revealed no evidence of any change in workload for staff or any increase in the time spent by staff with offenders. If more staff had been needed, perhaps because workloads needed to be reduced as a result of a switch to Citizenship, then these recurrent costs would have been positive. As a result of the interviews, it was concluded that Citizenship represents a change in how time is used rather than a change in the amount of time required per offender. The project, in effect, was found to be costless because there was no increase in resource inputs or expenditure required to run it apart from the initial set-up costs.

### **Assessment of benefits.**

Table 5 shows the scale and pattern of reconvictions by the Citizenship and comparison groups. Before assigning costs to the two offence profiles we noted some relevant features. First, although the reconviction rate is much lower for the Citizenship group, some of the decline is attributable to a lower rate of technical violation. This, and the decline in some of the other offence types, can be attributed at least in part to underlying crime trends.

[Table 6 about here]

A fall in crime rates had occurred during the time (see Home Office 2008) in relation to many (but not all) offence types and this trend needs to be extracted if possible. From a 'cost of crime'

perspective, 'violence against the person' offences have high costs relative to property offences such as theft. Background trends in crime rates are drawn from Home Office (2008) statistics. They demonstrate that violent offences were rising in County Durham between 2004/05 and 2006/07. They fell in 2007/08, however, so care is needed in contextualising the findings from the two groups reported on.

In order to estimate the relative costs of offending by the two groups the pattern of offending needs to be weighted by estimates of the unit economic and social costs of the various offence types. The costs of an offence vary widely across offence types. The Home Office estimates of the average social and economic costs of crime were compiled originally by Brand and Price (2000) and updated by Dubourg et al. (2005). The estimates are based on quite intricate methodology but, in broad terms, cover a range of components including costs in anticipation of crime, costs to victims and others of the consequences of crime plus the costs to the criminal justice system.

The estimates do not cover the full range of offence types committed by the County Durham offender groups as listed in Table 6 above. Violation offences, fraud and forgery and drug offences are thus omitted from our estimates, as are motoring offences and other summary offences. But the estimates, summarised in Table 7, do cover the principal types of crimes against individuals and households. Table 7 uses the unit costs of offence types (in 2003 prices) from Dubourg et al. (2005) to estimate the total costs of the offences entailed by the offender's offence at first reconviction.

[Table 7 about here]

Having estimated the total cost of offending by the comparison group and the Citizenship group it becomes possible to estimate the value of the 'crime prevention' benefits attributable to Citizenship. This requires adjustment for difference in the group sizes. This can be done by expressing the costs as a cost per offender in the relevant group, as was done in Table 7. But for overall cost-benefit purposes it is convenient to work in aggregate cost terms and to adjust the costs for one of the groups by an appropriate factor of proportionality. Multiplying the comparison group

total by 3,819/2,110 would equalise aggregate costs if the average cost were the same for both groups. As shown in Table 8 this gives an indicative saving of over £200,000 (approximately 318,000 USD).

[Table 8 about here]

This estimate is subject to a number of limitations, as indicated. It would be unlikely that improvements to the model, such as taking account of all offences (not just the first) committed during the first twelve months following conviction or taking fuller account of underlying crime trends, would reverse the finding that benefits were positive. Such adjustments would increase substantially both the complexity of the model and the data requirements. Our view is that, despite any limitations, this is a worthwhile complement to the finding that the Citizenship approach is effective in reducing reconviction rates. In other policy areas, particularly health, it has become commonplace to consider issues of cost-effectiveness alongside clinical effectiveness (National Institute for Health and Clinical Excellence, 2008). Given that the Citizenship approach appears to deliver positive benefits in the form of reductions in the cost of offending and given that it poses no additional recurrent costs, the finding is that it would pass standard economic appraisal tests.

## **Discussion**

The evaluation of Citizenship in the National Probation Service in County Durham has shown that implementation of the supervision program is associated with a statistically significant reduction in reconvictions. The implementation of Citizenship is associated with a longer survival time before there is a further conviction, and a statistically significant difference between the actual reconvictions of the experimental group and the comparison group at the 1 year and 2 year stages. It has been recognised that, during the same time period, the national rate of reconvictions had also reduced, but comparisons between the Citizenship group and the national figures show that the reduction in the Citizenship group using the same paradigm, i.e., actual reconvictions versus predicted reconvictions, was greater for Citizenship. It can therefore be concluded that Citizenship is

associated with a reduced rate of reconviction in the County Durham probation area. A key feature of Citizenship supervision is facilitating contact with external social support agencies, and results have shown that improved contact with agencies had a statistically significant positive impact on the effectiveness outcome.

It is acknowledged that the use of a retrospective comparison group does not have the rigour of a randomised controlled trial. The study did however control for differences between the groups on two separate offence prediction models, OGRS and OASys, and on the tiering system used to classify offenders by level of risk and need. The possibility of selection bias was minimised by including all supervised offenders in both time periods.

In addition to the use of reconviction as an outcome measure, violation of the conditions of supervision (breach of an order or licence) was also measured. Under Citizenship supervision, time to a violation was also statistically significantly longer than for the comparison group, and there was a statistically significant difference between number of violations in the Citizenship and comparison groups. There was no statutory change in the violation policy or practice between the retrospective and experimental time periods of the evaluation which could have contributed to this reduction, other than Citizenship.

When costs and benefits were considered, the cost of running Citizenship supervision has been shown to be cost neutral, with the only costs being the initial costs of implementation of the program and staff training. No additional resources were required to run Citizenship, as its implementation reflects a change in how supervision is conducted rather than an increase in workload. Benefits were obtained from the reduction in reconvictions which have been derived from running the program. It can be concluded therefore that, in addition to the program being effective in terms of reducing reconvictions, it has also been shown to be cost-beneficial.

Although it has been noted that earlier evaluations have not always been clear about the kinds of probation supervision and special conditions that have been evaluated (McDougall et al.

2006; Paparozzi and Gendreau 2005; Taxman 2002), the design of Citizenship is very precise and specific, as described in the introduction to this paper. 'Traditional' probation supervision, as applied in the comparison group involved an unstructured counselling technique which was largely left to the discretion of the trained probation officer. As with the 'what works' principles, Citizenship supervision is structured, is based on 'risk' and 'need' identified by the OASys assessment, and observes the 'dosage' and hence responsivity required by the level of risk. This allows for a clear comparison to be made between the two systems, and for the transfer of Citizenship to other probation areas. Program integrity is monitored through electronic recording on the case records of contacts and offender management decisions (Bruce and Hollin 2009).

Although the Citizenship supervision program was designed on 'what works' principles our results have shown some divergence from the anticipated risk/need/responsivity (RNR) conclusions (Andrews et al. 1990a; Andrews et al. 2006). Predictions from the literature on effectiveness of evidence-based supervision propose that supervision will be most effective with medium- to high-risk offenders (Andrews and Bonta 2006). The current study found that Citizenship supervision was effective with 'low to medium' risk offenders, and 'medium to high' risk offenders, but did not have a statistically significant effect with 'high' risk offenders. These results are contrary to those found by Latessa and Lowenkamp (2006), Paparozzi and Gendreau (2005) and to some extent Taxman et al. (2006). In particular Latessa and Lowenkamp found that a significant factor in the reduction in recidivism with high-risk offenders was an association with referral to outside agencies. The results from the Citizenship evaluation suggest that the offenders in the high-risk category in this study have 'needs' which may be too complex to be ameliorated by the Citizenship supervision process, and this is to some extent understandable. An important aim of Citizenship is to reduce reconvictions by improving social support networks and promoting social inclusion of offenders, as demonstrated in the Latessa and Lowenkamp study, however the nature of the offences of the Citizenship high-risk offenders may have mitigated against this. Many of the high-risk offenders in Tier 4 are subject to official restrictions for public protection, and their social interactions are monitored and restricted rather than encouraged. As described in the Method section, Tier 4 supervision mainly focuses on control and public protection. Although cognitive behavioural programs and specialist support are

provided to this Tier 4 group if appropriate, it is likely that the 'controlling' element of the supervision of the high-risk tier offenders may be in conflict with the aims of the Citizenship supervision process, which concentrates on rehabilitation and community integration. This may be an effect similar to that highlighted by Papparozzi and Gendreau (2005), which emphasises the importance of 'balancing law enforcement and social casework orientations' in order to have the greatest impact. The implementation of Citizenship with this high 'risk of serious harm' group is being reviewed.

From the present study, it appears that Citizenship supervision may be most effective with low to medium risk, and medium to high risk offenders. However this does not contravene the RNR principles. Citizenship, while focusing intensive supervision on the medium to high risk offenders as RNR principles would propose, did also aim to bring a rigour to the supervision of offenders for whom no suitable offending behaviour programs were available and whose motivation for offending was thought to be related to social exclusion. The low-risk group received a level of supervision appropriate to their level of risk, with a short, though rigorously structured analysis of their offending and the problem solving skills needed to manage future offence-related behaviour. Referral to external support agencies was available if appropriate. In that sense, Citizenship supervision has been shown to address the needs of the low to medium risk group and, in so doing, has led to a reduction in their re-offending. It did not attempt to give intensive supervision to this low-risk group, in keeping with RNR principles. The reduced level of supervision appears to have been sufficient to impact positively on their reoffending as, even controlling for risk level, their reconviction rates showed the greatest reduction.

The medium to high risk group (Tier 3) is targeted for the most intensive supervision, as is appropriate for their level of risk and need, and indeed this level of responsivity achieved a statistically significant reduction in re-offending, controlling for risk, age at sentence and first conviction, number of previous convictions and agency contact, which is in line with the RNR principles.



Citizenship supervision is clearly not sufficient to address the needs of the high-risk offending group in its present form. It cannot be concluded from this evaluation that structured supervision does not provide an adequate framework for supervision of some high-risk offenders, however it may be that more specialised modules and individually crafted agency links may be required to meet the needs of this particular group. This study has highlighted that the targeting of supervision based on medium to high risk and need is not always clear-cut, with some high risk offenders requiring special measures in order to respond, and some low risk offenders benefiting from low intensity supervision.

A particularly encouraging aspect of this evaluation has been the cost-benefits analysis, that has shown that the Citizenship program is cost-beneficial, and provides better value in terms of reduced reconvictions than 'traditional' probation supervision. It should be noted however that the cost-benefits analysis was cautious in its claim of benefits, and did not project beyond the first two years after starting the Citizenship program. If the offenders maintain the level of improvement in reduced reconvictions beyond the two year time point, then much greater monetary benefits can be claimed for the Citizenship program.

Because we could not randomise we cannot entirely rule out the possibility of there being some unknown factor that may correlate with Citizenship that is responsible for the differences we have observed. We did control for observed baseline differences between the groups, yet it is possible that some unobserved covariate or an imperfectly measured variable may have contributed to some of the difference between the experimental and the comparison groups. Consequently, it is important to confirm our findings using a randomised controlled design. The Citizenship supervision program has been 'rolled out' to a further two probation areas, one of which is being evaluated as a randomised controlled trial. These two further evaluations will provide additional information and potentially clarify issues raised in the current study regarding evaluation methodology and those offenders who most benefit from Citizenship. They will also confirm the transferability of the program to different probation areas with different offence populations. The County Durham probation area evaluation has however already demonstrated the effectiveness and cost-benefits of Citizenship, when implemented according to RNR principles in a structured and managed way.

## Endnotes

- 1 Community punishment is delivered as unpaid work in the community (reparation).
- 2 OASys is the Offender Assessment System for offenders in the National Offender Management Service, which records a wide range of information about offenders including offence-related treatment needs.
- 3 The ten dynamic factors incorporated in the OASys score are: accommodation; education training and employability; financial management and income; relationships; lifestyle and associates; drug misuse; alcohol misuse; emotional well-being; thinking and behaviour; pro-criminal attitudes.
- 4 Technically based on the assumption of proportional hazards, survival in the experimental group equals survival in the comparison group to the power of the hazard ratio.
- 5 For example if a proportion  $x$  of offenders in one cohort commit a robbery while a proportion  $y$  of a similar cohort are caught shoplifting then it is perfectly possible that the robbery cohort is doing greater aggregate harm than their shoplifting counterparts even if the proportion  $y$  is considerably greater than  $x$ .
- 6 This is the case in England & Wales where Treasury rules require an investment appraisal demonstrating that public projects offer a positive net return: HM Treasury (2003).

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## Tables

Table 1:

### *Participant Characteristics*

	Citizenship group ( <i>n</i> = 3,819)	Comparison group ( <i>n</i> = 2,110)
Gender: Male, <i>n</i> (%)	3,274 (85.73)	1,826 (86.54)
Ethnicity: White, <i>n</i> (%)	3,749 (98.74)	2,085 (99.00)
Age, <i>M</i> (SD)	29.0 (9.87)	28.6 (9.81)
No. Prior convictions, <i>M</i> (SD)	7.7 (9.42)	8.4 (9.41)
Age 1 <sup>st</sup> Convicted, <i>M</i> (SD)	20.3 (8.60)	20.1 (8.65)
OASys score, <i>M</i> (SD)	60.6 (35.92)	64.3 (36.80)
OGRS score, <i>M</i> (SD)	48.0 (29.21)	53.0 (29.85)
OASys score grouped, <i>n</i> (%)		
0-49	1,631 (43.80)	776 (38.65)
50-99	1,454 (39.04)	830 (41.33)
100+	639 (17.16)	402 (20.02)
OGRS score grouped, <i>n</i> (%)		
0-40	1,747 (46.91)	791 (39.31)
41-75	1,060 (28.46)	580 (28.83)
76+	917 (24.62)	641 (31.86)
Tiers, <i>n</i> (%)		
T1	495 (13.22)	112 (7.32)
T2	1,761 (47.05)	716 (46.77)

T3	1,332 (35.59)	597 (38.99)
T4	155 (4.14)	106 (6.92)

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*Note.* Percentages calculated taking into account missing data.

Table 2:

*Participation in Citizenship*

Citizenship Module	Starters (eligible, <i>n</i> ) [%]			Completing Module [%]	
Induction	3072	(3819)	[80.44]	1954	[63.61]
Alcohol	479	(-) <sup>a</sup>	[-]	104	[21.71]
Drugs	208	(-) <sup>a</sup>	[-]	44	[21.15]
Emotional	250	(-) <sup>a</sup>	[-]	89	[35.60]
Associates	134	(-) <sup>a</sup>	[-]	47	[35.07]
Relationships	120	(-) <sup>a</sup>	[-]	35	[29.17]
Next Steps (Exit)	721	(3072)	[23.47]	435	[60.33]

<sup>a</sup> Optional modules – Referrals depend on identified need. Not all offenders completing Induction are suitable for these modules.

Table 3:

*Relationship between Agency Contacts and Groups*

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Groups	Agency Contacts		Total (%)
	No (%)	Yes (%)	
Citizenship	2,803 (73.40)	1,016 (26.60)	3,819 (100.00)
Comparison	1,719 (81.47)	391 (18.53)	2,110 (100.00)

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Table 4:

*Cox Proportional Hazard Regression Models Predicting Reconviction Controlling for Risk Scores (categories) Adjusting for Agency and other Covariates*

	Model A1 OGRS (N = 5701)		Model B1 OASys (N = 5697)		Model C1 Tier (N = 5120)	
	HR	95% CI	HR	95% CI	HR	95% CI
<b>OGRS *Group</b>						
OGRS(0-40): Citizen vs Compar	0.47***	0.39-0.57				
OGRS(41-75): Citizen vs Compar	0.70***	0.60-0.81				
OGRS(76+): Citizen vs Compar	0.95	0.84-1.08				
<i>Group: Comparison</i>						
OGRS: 76+ vs 41-75	1.28***	1.10-1.49				
<i>Group: Citizenship</i>						
OGRS: 76+ vs 41-75	1.75***	1.51-2.03				
<b>OASys *Group</b>						
OASys(0-49): Citizen vs Compar			0.48***	0.40-0.58		
OASys(50-99): Citizen vs Compar			0.73***	0.64-0.82		
OASys(100+): Citizen vs Compar			1.05	0.90-1.22		
<i>Group: Comparison</i>						
OASys: 100+ vs 50-99			1.13	0.97-1.32		
<i>Group: Citizenship</i>						
OASys: 100+ vs 50-99			1.63***	1.41-1.88		
<b>Tier *Group</b>						
Tier 1: Citizen vs Compar					0.19***	0.12-0.29
Tier 2: Citizen vs Compar					0.53***	0.46-0.61

Tier 3: Citizen vs Compar					0.79***	0.69-0.90
Tier 4: Citizen vs Compar					1.15	0.85-1.56
<i>Group: Comparison</i>						
Tier 3 vs Tier 2					1.31***	1.13-1.51
Tier 4 vs Tier 2					1.39**	1.08-1.79
<i>Group: Citizenship</i>						
Tier 3 vs Tier 2					1.95***	1.71-2.22
Tier 4 vs Tier 2					3.02***	2.40-3.79
Age	0.97***	0.97-0.98	0.96***	0.95-0.96	0.96***	0.95-0.96
Age 1 <sup>st</sup> Convicted	0.99*	0.98-0.99	1.00	0.99-1.00	0.98**	0.97-0.99
Gender: Female vs Male	1.01	0.88-1.17	0.89	0.77-1.02	0.96	0.83-1.11
No. Prior Convictions	1.02***	1.02-1.03	1.03***	1.02-1.03	1.03***	1.03-1.03 <sup>a</sup>
Agency: Yes vs No	0.85**	0.77-0.94	0.78***	0.70-0.86	0.70***	0.63-0.78
Log-likelihood	-17299		-17251		-15441	

\* =  $p < 0.05$

\*\* =  $p < 0.01$

\*\*\* =  $p < 0.001$

<sup>a</sup> Calculated to 3 decimal places, 95% CI: 1.026-1.033

Table 5:

*National Reduction in Reconvictions in Comparison with Citizenship*

Year	Cohort	Number in Cohort	Actual (%)	Change <sup>a</sup> (%)	Predicted <sup>b</sup> (%)	Progress (%)
2005 Q1 <sup>c</sup>	Co Durham	450	42.44	0	42.44	0
2006 Q1 <sup>c</sup>	Co Durham	524	39.31	-7.37	42.69	-7.92
2005 Q1 <sup>c</sup>	National	44,323	41.60	0	41.60	0
2006 Q1 <sup>c</sup>	National	51,157	39.00	-6.25	40.50	-3.70

<sup>a</sup> Change on previous year's actual rate of reconviction.

<sup>b</sup> (Actual – predicted) / predicted – see Ministry of Justice 2008.

<sup>c</sup> Q1 = Quarter 1 (offenders released from custody or on court orders in the first quarter of the year, consistent with Ministry of Justice, 2008)

Table 6:

*Reconvictions by (first) Offence Type*

Offence Type	Citizenship Group		Comparison Group		Total	
		(%)		(%)		(%)
Breach offences (technical violations)	95	(8.61)	243	(21.30)	338	(15.06)
Fraud and forgery	17	(1.54)	24	(2.10)	41	(1.83)
Drug offences	74	(6.71)	66	(5.78)	140	(6.24)
Indictable motoring offences	5	(0.45)	12	(1.05)	17	(0.76)
Other indictable offences	75	(6.80)	71	(6.22)	146	(6.51)
Offences outside England and Wales	0	(0.00)	1	(0.09)	1	(0.04)
Summary motoring offences	150	(13.60)	151	(13.23)	301	(13.41)
Summary offences excl motoring	141	(12.78)	227	(19.89)	368	(16.40)
Burglary	58	(5.26)	39	(3.42)	97	(4.32)
Criminal damage	68	(6.17)	51	(4.47)	119	(5.30)
Robbery	10	(0.91)	3	(0.26)	13	(0.58)
Sexual offences	4	(0.36)	5	(0.44)	9	(0.40)
Theft and handling stolen goods	240	(21.76)	163	(14.29)	403	(17.96)
Violence against the person	164	(14.87)	85	(7.45)	249	(11.10)
Offence type unknown	2	(0.18)	0	(0.00)	2	(0.09)
Total reconvicted	1,103	(100.00)	1,141	(100.00)	2,244	(100.00)
No reconvictions	2,716		969		3,685	

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Total offenders in group	3,819	2,110	5,929
Reconviction rate	28.88%	54.08%	37.85%

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Source: Data supplied by National Probation Service, County Durham

Table 7:

*Economic Costs of Various Offence Types*

Offence Type	Cost per offence	Total Cost of Offending			
		Citizenship group <i>n</i> = 3819		Comparison group <i>n</i> = 2110	
		<i>n</i>	£	<i>n</i>	£
Burglary	3,268	58	189,544	39	127,452
Criminal damage	866	68	58,888	51	44,166
Robbery	7,282	10	72,820	3	21,846
Sexual offences	31,438	4	125,752	5	157,190
Theft and handling stolen goods	844	240	202,560	163	137,572
Violence against the person	1,440	164	236,160	85	122,400
Total			885,724		610,626
Average per offender			232		289

Table 8:

*Estimates of Offending Costs*

	Total cost of offending	
	Citizenship Group	Comparison Group
Total cost of offending, £	885,724	610,626
Number of offenders in group	3,819	2,110
Adjusted total cost of offending, £	885,724	1,105,204
Estimated gross savings from Citizenship, £	219,480	

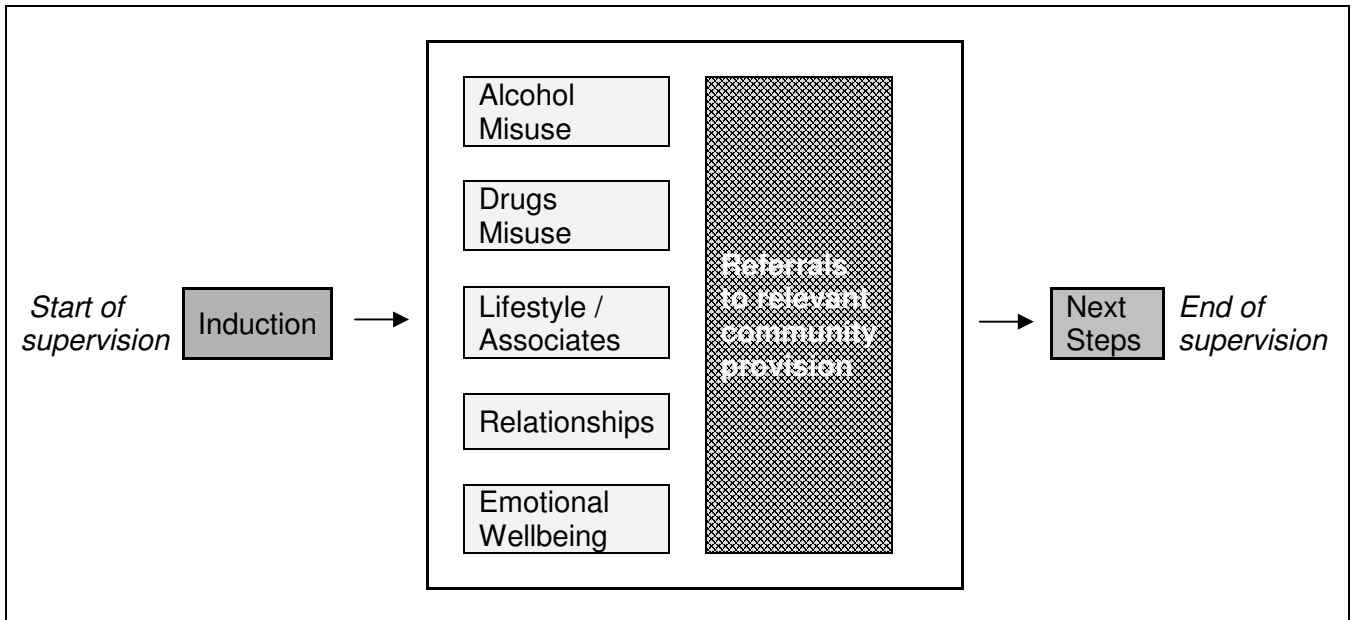
## Notes:

- Adjusted total cost of offending based on multiplying comparison group costs by  $3,819/2,110$  to offset difference in group size.
- The costs refer only to the first offence for which an offender is reconvicted.

**Figures**

Figure 1:

*Citizenship Pathway Model*



- Compulsory Module
- Optional Modules to be selected according to ongoing assessments of need
- Process to be inherent within the Program



