

Session: Policy Development and Implementation

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The Neighbourhood Road Safety Initiative

Background

One of the British Government's road safety targets is to reduce the number of children killed or seriously injured in road traffic accidents by 50 per cent by 2010. An important part of the strategy for achieving this is to tackle the significantly higher incidence of road traffic casualties in disadvantaged communities. Children from disadvantaged backgrounds are five times more likely to be killed on the roads as pedestrians than their peers from the highest socio-economic group. There is also an inequalities gradient for men aged 20 to 64 years where it has been estimated that annually there would be 600 fewer deaths nationally if all had the same accident probabilities as Social Class I.

The Government's Public Service Agreement (PSA) for the Department for Transport (DfT) states that road safety strategy targets should tackle the significantly higher incidence of road traffic injury among disadvantaged communities. Therefore, local authorities have a clear mandate 'to ensure that the needs of all sections of the community are met' and that they provide services that are appropriate and accessible to the whole community. There are other policy initiatives that require closer working with the local community targeted at deprived communities such as democratic renewal, partnership working through Local Strategic Partnerships, and Best Value.

Tackling inequalities is a crosscutting policy issue across all age groups but especially the young and the old. Recent policy initiatives have recognised the need to address such inequalities in accident risk. The Department of Health has inequalities clearly on the agenda "... we will set a target to narrow the longstanding gap in infant and early childhood mortality and morbidity between socio-economic groups ..." (para 13.5).

The ***Neighbourhood Road Safety Initiative (NRSI)*** forms part of the Government's response to dealing with reducing inequalities in road traffic accidents. The initiative involves 15 local authorities with deprived districts that have high child pedestrian casualties. The causal links between deprivation and road traffic injury are little understood and this is currently a barrier to developing the most effective action in

these neighbourhoods. In partnership with the DfT these authorities have been investigating their casualty problems and developing comprehensive strategies to deal with these throughout their deprived communities. Broad based solutions are required together with the need to work in partnership with a range of local stakeholders.

The overall aims of the project are to:

- reduce casualty rates in disadvantaged areas at a greater rate than across the local authority as a whole.
- evaluate the impact of this initiative on disadvantaged communities; and
- understand the causal chain that has resulted in the poor road safety performance of particularly disadvantaged areas.

Government policy aimed at reducing inequalities means that there are many stakeholders with social agenda and budgets working to improve quality of life and liveability in these neighbourhoods. Road safety is rarely on their agenda but the actions of stakeholders in pursuing them can affect road safety outcomes by, for example, increasing exposure through more walking in neighbourhoods that are freer from crime. The NRSI aims to build upon the work of other stakeholders and to use the synergies between them to add value to the road safety monies and effort.

As yet there is a small body of literature on the road safety problems of disadvantaged communities and the evidence related to causal mechanisms is patchy and imbalanced. However, from some targeted road safety studies taken together with the broader public health literature, a number of risk factors have been identified that are associated with increased risk of child pedestrian injury.

- *Household and individual risk factors* include: child psychiatric problems, gender, ethnic background, parental medical and psychiatric problems, lone parenting, maternal education, maternal age, number of people in the household and number of children in the household, and household type.
- *Social and environmental factors* include: speed of traffic, housing type and density, kerb parking, density of the road network, traffic volume, and lack of safe crossing places and safe play areas (Christie 1995).

Disadvantaged areas may have specific characteristics that set them apart from more advantaged areas and this may affect the way in which specific road safety measures work. Not much is known about which road traffic injury prevention interventions work in disadvantaged areas. Through the literature review and analysis of the interventions we hope to make an assessment of what works in reducing the gap between the most disadvantaged and the rest.

The local context of the fifteen NRSI areas.

The areas were chosen for action on the basis of their high child pedestrian casualty rate and their inclusion in a Government programme of Neighbourhood Renewal which aims to tackle poor job prospects, high levels of crime, educational

underachievement, poor health, and problems associated with poor housing and physical environment.

Eight of the 15 areas are located in districts in the Greater Manchester area and two are in the adjacent County of Lancashire. The other five are located in Sandwell near Birmingham, Bradford, Nottingham, Stoke on Trent, and Liverpool.

Many, but not all, of the areas have in their populations, proportions of black minority ethnic groups that are well above the national average. One area has 16 Mosques to which over 2000 children visit each day for religious instruction after the end of the conventional school day. This in itself requires a deeper understanding by local government officials and the police of cultural and faith differences in exposure to risk.

Many of the areas lack safe play facilities. Their provision and safe routes to access them is a major part of many of the local strategies. In general, projects tend to fall into the following categories: traffic calming; pedestrian/cycle crossings; local junction and crossing improvements; education, training and publicity initiatives; parking schemes; streetscape improvements and home zones; provision or upgrading of recreation/safe play areas and access to them; initiatives generated by the partners or community; and a variety of speed management initiatives.

We are currently building a detailed picture of the areas and assessing how conditions between the different authorities and neighbourhoods within the authorities differ and how neighbourhoods are perceived and experienced by residents of different ages.

Evaluation of the NRSI

The NRSI is in its early stages and this paper describes the range of problems and actions being implemented to resolve them in the neighbourhoods together with the scope and scale of the evaluation programme being put in place by a team of researchers led by University College London. The evaluation aims to increase knowledge of causal links by monitoring changes in numbers of casualties and exposure of all road user groups, whether the injury gap is being narrowed, and changes in lifestyles, perceptions of safety, and levels of engagement by all sectors of the community. Partnership surveys will yield knowledge of barriers and facilitators to effective working by different agencies in these neighbourhoods, and provide guidance to enhance future collaborations.

Evaluation objectives

1. evaluate the impact of the NRSI and its added value over and above what is going on already through multi-agency working;
2. assess what would have happened in the absence of action and assess what NRSI is adding, where and why;

3. identify the key factors/processes that encourage or inhibit the effectiveness of the NRSI;
4. describe the relationship of NRSI to other area-based initiatives targeting disadvantaged communities;
5. develop a more thorough understanding of the road safety problems of disadvantaged communities, in particular why the participating authorities have a particularly poor record for road safety and how they may differ from other disadvantaged areas.
6. assess the transferability of effective measures from the participating authorities to other disadvantaged communities.

The Evaluation Programme

To evaluate the NRSI five distinct types of surveys and/or analyses are being undertaken and will form the basis of the assessment of how the NRSI is contributing to local and national road safety targets.

1. Analysis of routinely collected data

The backbone of the evaluation is the conventional analysis of data routinely collected by Local Authorities. Their collection, analysis, and interpretation are well known so they will not be covered further in this paper. These are:

- Casualties reported to the police
- Spot speeds
- Traffic flows and pedestrian counts
- Demographic, socio-economic, and road environment data.

2. Understanding levels of risk and injury patterns amongst different population groups

Information is not routinely collected about people from different ethnic groups and from disadvantaged backgrounds that have been injured in road traffic accidents. Without this it is difficult to identify different patterns of injury among different population groups, especially black minority ethnic groups, and hence to evaluate the effect of the NRSI on these groups.

We are about to undertake an in-depth interview survey among RTA casualties detailing the characteristics of the casualty (age, gender, ethnicity, socio-economic status) their travel and activities in the 24 hours before the accident (travel pattern) and the accident circumstances. The purpose of this research is to provide detailed information on the casualty not normally found in the police data such as ethnicity and disability and other factors such as journey purpose. This is an opportunity to identify whether or not the incident leading to the injury was related to a crime such as the deliberate running down of another person.

The survey will be undertaken as a case crossover study. This is a relatively new type of study design in which the cases also act as their own controls for the period 24 hours prior to the injury event. This design is able to measure the importance of

temporary risk factors for injury and has been used to estimate risks associated with use of mobile telephones whilst driving, and recent emotional events as a risk factor for childhood injuries, for example.

3. Estimating true levels of risk through assessing levels of under-reporting to the police

Reporting of road traffic accidents to the police is not homogeneous across all age groups and road user types and we know very little about the levels of reporting for deprived communities. These issues need to be investigated in order to supplement the police data especially to increase our knowledge of the range and extent of severity of injury. This will be achieved by linking hospital A&E data with police data for a sample of hospitals.

4. Community Surveys

The NRSI is likely to have an impact beyond casualty reduction by changing the way people feel about and behave within their local community. Community surveys will help to assess to what extent the community has become engaged and whether there have been wider benefits of facilitating social capital. There is also potential for the NRSI and other Government strategies to provide mutually beneficial outcomes. For example, access to after school activities and youth clubs for children may reduce the extent young people play or hang out in the street. This could lead to reductions in exposure to traffic risk, as well as anti-social behaviour and street crime. Improving the environment and reducing traffic speed may improve feelings of safety, reduce community severance, and change the extent to which people move about locally. Many of the initiatives that aim to prevent street crime, or fear of street crime, may have the benefit of increasing mobility.

Two sets of surveys are being undertaken:

- A household survey among 400 people aged 16 years and over
- A schools survey among 500 school children aged 15 and below.

Understanding travel patterns within the community will be crucial to describing exposure to risk, health gains through more physical activity, and whether the NRSI and other initiatives have facilitated a lessening of social exclusion as measured by better and safer access to shops, healthcare, and other facilities. This component of the evaluation will help to identify different patterns of travel and activities for different population groups, especially black minority ethnic groups, and provides a denominator for comparing exposure based injury rates before, during and after interventions. A quantitative approach has been adopted for the travel survey with household interviews being undertaken on a one-to-one basis to ensure that people who have difficulties reading and writing are not excluded. The survey covers journeys and activities in the last 24 hours together with reasons why these journeys and activities were undertaken. More specifically the questions cover:

- accessibility to local services
- travel patterns
- perception of local services including local transport
- perceived safety and security

- experience of crime
- satisfaction with neighbourhood
- community action and influence
- road safety behaviour
- accident involvement

The survey represents all days of the week and will be conducted three times; before, during, and after the interventions commence. The surveys also measure the reach/penetration of the intervention (e.g. awareness of newsletters, attendance at public meetings, training courses, media coverage of the intervention.)

The school questionnaire is self-completion by the students and designed to be filled in tutor time. It aims to provide information about children's journeys and activities, perception of safety, safety training and behaviour and accident involvement and to provide a denominator for understanding risk in the local environment in terms of accidents rates per unit of exposure for children of different age and gender. The questions are designed to collect information on:

- travel patterns of children in terms the school journey and different patterns according to age and gender
- other journeys and play
- levels of accompaniment (adults traveling with young with young children)
- road safety training and safety behaviour
- perceptions of safety and security
- accident involvement

5 Partnership surveys

Working in partnership is central to the Government's agenda to encourage collaboration in delivering interventions at a local level. Local authorities are being encouraged to prepare community strategies to promote economic, social, and environmental well being of their areas. Each local area is required to have a Local Strategic Partnership (LSP) that brings together public, private, voluntary and community sectors, especially to address health inequalities. Partnership working is therefore a key tool in addressing road safety in disadvantaged communities.

Community involvement is at the heart of the NRSI. Partnership working that engages the local community may have the wider benefit of facilitating social capital. A number of indicators of social capital are being used including social relations, formal and informal social networks, group membership, generalised trust, mutual reciprocity, and civic engagement. In addition, partnership working needs to engage those groups who are socially disadvantaged and often excluded, especially older people, children, those with a disability, and those from ethnic minority groups.

Key partnership issues centre on cultural and organisational behaviour, not just on structures. The development and establishment of joint structures, policies, and protocols are comparatively straightforward. The challenge is whether individuals and

organisations can work in new ways that mean that partnerships are genuine and sustainable.

The evaluation will closely track the development, sustainability, culture, and operation of the partnerships throughout the project. Baseline data are being collected from key informants drawn from the main stakeholder groups, such as local political and community leaders, local authority staff in a range of departments (road safety, highways, education, leisure services, social services, housing, etc), the health sector, and voluntary agencies, community groups and business people. From the surveys we will explore changes in the knowledge of, attitudes towards and working practices relating to partnerships, whether training and capacity building have taken place, and whether revised practices have become institutionalised and sustained.

The scope of the partnership survey includes questions that cover issues such as:

1. What cross cutting multi-agency groups are already in existence before the project develops?
2. What examples of innovative partnership working already exists?
3. Does acting together accomplish more than by acting alone?
4. Have appropriate roles been identified for each partner, do they know what is expected of them?
5. Has the partnership been given enough time to become effective?
6. Partnerships evolve and take time, need to respond to changes, therefore need to be periodically modified. Is the project periodically reviewed?
7. Is the partnership sustainable – does it offer something to the partner as well as achieving its own goals?
8. Is the partnership a good mechanism to harness the resources of different sectors?
9. Does the partnership have the flexibility to change and be responsive to what works well and what works less well and make adjustments by providing regular opportunities for feedback?
10. What qualitative information is provided by partnership? Is it provided in a way that can be shared and communicated between partners?
11. Have all relevant primary players been asked to contribute as appropriate to the project?
12. Is there institutional ownership of the project and commitment at a senior and practitioner level?
13. Is there a champion of the partnership?
14. How have the partners coped with changing working practices, have they built the capacity for partnership i.e. a workable interface?
15. Have the costs and benefits been identified of working in partnership?

These surveys will facilitate understanding of which factors inhibit or facilitate partnership working in relation to delivering casualty reduction, reductions in health inequalities, and wider local effects. Whilst part of the evaluation process these surveys also have the potential to make a significant contribution to our understanding of the causation of accidents in deprived areas.

Relationship between the evaluation team and other key partners

The Evaluation Team is itself one of four major partners in this initiative. The others are:

- Department for Transport who are leading and funding this initiative
- The Central NRSI Team, and
- WSP, the DfT project management consultants

The Central NRSI team is located in central Manchester and is staffed by people with backgrounds in road safety education and training, community development, public relations, and research. The Central Team has three main functions:

- acting as a "centre of excellence", gathering and disseminating knowledge and skills to support the work of the Districts
- undertaking research to inform and support the work of the Districts
- acting as a channel of communication between the Districts in terms of what each is undertaking

The role of the management consultants is to assist the Department for Transport in managing the NRSI project and supporting the partner Authorities. There are several strands to their work:

- supporting the Districts as they implement their strategies, to ensure that schemes and initiatives are undertaken as planned, comply with existing best practice, meet the agreed milestones, are delivered to time and to budget, and that appropriate data collection and monitoring takes place to enable the effects of the various interventions to be evaluated;
- assisting with financial management of the project including ensuring financial returns are provided on time, validating these financial returns, and ensuring that schemes represent value for money;
- working with the Neighbourhood Road Safety team in Greater Manchester and being involved with cross-boundary special projects;
- liaison with the evaluation team;

Obviously this partnership is critical to the success of the project as a whole and all partners have invested a great deal of effort in developing good and sustainable working relationships.

Economic evaluation and assessment of value for money

One of the requirements of spending monies from the public purse is an economic evaluation and assessment of value for money of the policy initiative. It is, therefore, an essential item in any evaluation programme.

A good surveillance system is necessary for casualty and other output data, as well as process information to enable evaluation of effectiveness to be undertaken. As part of the evaluation we will be undertaking cost/benefit analysis where monetised

values for elements exist. The conventional areas for which there are values are accident and casualty savings, time, and vehicle operating costs. In order to derive values for vehicle operating cost and time costs a small sample of journey time surveys will be undertaken in addition to the LA's spot speed surveys.

However, whilst there will be interventions where monetary values may be assigned to all or some elements there will be many cases where this will not be possible as such values do not exist. These effects need to be described in ways that reflect their importance. For example, a monetary value can be ascribed to the provision of play or community facilities but the wider benefits that this brings to the community cannot be monetised and other ways of assessing effectiveness and value for money need to be developed.

An approach to evaluating health gain, for which the prime example in this case is the measurement of casualty reduction, QALYs (Quality-Adjusted Life Years) can also be used. These take into account the duration and severity of a health problem and this may well be different for disadvantaged groups in comparison with those from less disadvantaged backgrounds.

The evaluation will use appropriate methodologies especially where process evaluation is being considered. This will be the case for many of the programmes of partner organisations such as education, social services, and health promotion. In these examples appropriate indicators may need to be developed such as the number of children playing outdoors in newly created play areas (controlled for time of year and weather where possible), the number of trips to school made on foot by children, the number of older people being independent and feeling safe enough to walk to the shops.

Capacity building amongst professionals delivering the NRSI on methods of monitoring, evaluation, and evidence based policy development.

One of the real problems facing local authorities is the lack of capacity within road safety teams not only to design and implement schemes but to monitor their effectiveness both to assess value for money in what they have done but also to add to the store of knowledge about what works, what works well and where it works best. Within most road safety teams the main area of weakness in knowledge and skills is in data collection, data management, analysis and interpretation.

Awareness of what should comprise an evaluation programme and how the results are to be presented should help those collecting data understand and appreciate the need for careful collection and management to agreed protocols. Understanding of this kind is fundamental to the motivation to build upon existing skills and knowledge and for teams to appreciate that data and information are the building blocks of good management, whether it be of data or policy. The legacy of the evaluation programme should be to add value to the local authorities, management consultants, and the NRSI central team in terms of capacity building in this important area.

Summary

This paper has described the early stages of an exciting, innovative, and important approach to reducing the higher incidence of road traffic injuries, especially to children from disadvantaged communities. The evaluation of the programme is a challenge especially as there are so many social interventions in the areas as a result of activity by other partners and stakeholders. The NRSI is one of the first Government led projects that fully appreciates the linkage between social, economic and individual factors and the occurrence of road traffic injury. It has long been known that urban policies affect the level of road safety (see for example Institution of Highways and Transportation 1990) but there has been little explicit recognition of the impact on road safety of policies and actions to reduce crime, increase employment, improve educational achievement, improve housing and the environment, and provide structured activities for young people. The evaluation seeks to assess the added impact of targeted road safety interventions on a changing scenario in which social and economic interventions may themselves have the effect of changing travel and mobility patterns.

The NRSI runs until March 2006 but the evaluation extends until 2008 to allow for full collection and analysis of after data.

References

- Christie N. (1995) The high-risk child pedestrian: socio-economic and environmental factors in their accidents. Transport Research Laboratory Project Report 117, TRL, Crowthorne
- Institution of Highways and Transportation (1990) Guidelines for urban safety management. IHT, London