Involving Patients in Primary Care: Lessons for Primary Care Organisations

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Abstract
This article reports the results of a national postal questionnaire to Chief Executives of Primary Care Organisations (PCOs) in England and two in depth case studies of public involvement in decision making in primary care organisations. The case studies took place in Trent Region. The study is placed in the context of the development of public involvement in decision-making in the NHS. The national survey revealed a high level of commitment to public involvement, and significant efforts to involve the public were being made but there was little evidence of clear strategic policy. The case studies identified considerable activity related to public involvement in both PCOs, and again little evidence of written strategies or policy to direct the activity. Findings indicated that success in engaging the public was greater where attempts were made to work in partnership and build longer-term relationships. Despite this, PCOs were undertaking a substantial amount of public meetings and events to inform the public. There appeared to be a lack of a strategic approach to public involvement, which could undermine the evident enthusiasm of PCOs and the public.

Key Words: primary care organisations, patient involvement, public engagement

Background

Debates about the need to involve patients and the public in decision-making in the health services are not new. The growth of the patient and user movement from the mid 1980s and concern about the perceived democratic deficit in the NHS post the 1990 reforms have gradually strengthened interest in the issue. As Beresford and Croft (1993) eloquently stated:

> *'A powerful idea is gaining ground. People have a right to a say and involvement in the services they use, in the neighbourhood where they live and in the institutions that affect them'.*

The rise of pressure for individual patients and groups of patients to have some level of influence on the delivery of health services has been supported by a series of directives from the Department of Health (DoH) starting with the 'Griffiths Report' (1983) which argued that the NHS had to recognise and respond to the needs of its 'customers'. How patients and the public should be involved has been a matter for debate. Rhodes and Nocon (1998) propose two possible models; an 'advocacy' model where the public has the opportunity to become actively involved in decision making contrasted with a 'consumerist' model which emphasises rights to redress and choice in the services an individual uses. Different approaches to the 'advocacy model' are discussed by Barnes and Evans (1998) including direct participation of users in service developments and more effective systems for ensuring public scrutiny and accountability. The introduction of market principles through the White Paper 'Working for Patients' (Department of Health, 1989) cast recipients of health care as consumers in an economic sense. This concept of health service users as consumers was reinforced by 'The Patient's Charter' (Department of Health, 1991), and the policy document 'Local Voices; (Department of Health, 1992), which emphasised the need for health authorities to make services more responsive to patients through consultation processes.

The DoH (2001) discussion document 'Involving Patients and the Public in Healthcare', further reinforces the role of public involvement in decision making in the NHS. It describes a vision of 'a new model where the voices of patients, their carers and the public are heard through every level of the service, acting as a powerful lever for change and improvement'. Government guidance since 1997 (Department of Health, 1997) has explicitly required PCOs to have clear arrangements for public involvement and made open Primary Care Group and Trust board meetings mandatory. In many ways it could be argued that the whole concept of PCOs is to facilitate the development of local health services with the maximum input and support of the local community, staff and, perhaps most importantly, service users. So how and what are they doing?

Anderson et al (2002) in their report on similar work in London emphasise how public involvement is value driven; people and

organisations do it because they believe in the process. They state that partnership approaches to public involvement have many benefits as expertise, knowledge and resources can be shared. They make the point that sustained initiatives need corporate commitment. Milewa and Harrison (2001) provide evidence that a high proportion of Primary Care Organisations could demonstrate some sustained consideration of public and patient involvement in their work. The question is how effective are PCOs in involving the public in their decision-making processes and how clear are they about what they require from the public?

This paper reports on a 18 month case study of a rural and an urban PCO undertaken by the University of Sheffield in conjunction with North Derbyshire Health Authority into the nature of public involvement undertaken and considers how these organisations can best employ their resources in this area. To place the findings in a national context the study was supported by a postal survey of all PCOs in England.

Definitions: Level of Involvement

The requirement to 'involve the public' can be interpreted very widely. Drawing on the concept of a ladder of increasing power proposed by Arnstein (1969) public involvement in health services can be considered as a continuum (see box 1) from information provision through consultation and partnership to degrees of delegated power. Arnstein developed the hierarchy to describe the degrees of citizen participation in Community Action Programmes in the late 1960's in the U.S.A and argued that there is a critical difference between going through the empty ritual of participation and having the real power to affect the outcome of the process (Arnstein, 1969).

Definitions: Success of Involvement

The research literature emphases the importance of good preparation including consideration of the aims, methods, resources and required outputs before launching into attempts to involve the public (Chan, 2000; Barker et al, 1997). Three criteria were therefore taken into consideration in assessing the case studies: was there evidence of a planned strategic approach to attempts to involve the public, what level of involvement was achieved and was there evidence that this had any impact on PCO policy or practice?

Box 1: Continuum of involvement	
Manipulation Therapy	Non-participation: e.g. people on 'rubber stamp' committees for the purpose of educating them or demonstrating their support for decisions that they can't influence.
Informing Consultation Placation	Informing the public of their rights, and options, and seeking their opinions and inviting individuals onto the boards of public bodies can be the first step to legitimate participation. However these are not true participation as views are sought which may or may not be taken into account in the final decision.
Partnership Delegated power Citizen / patient control	Degrees of citizen power: power delegation in which part or all of the decision making is devolved to local people.

Local Case Studies

Methods

We studied two PCOs in the former Trent Region for an 18 month period from the summer of 1999 focussing on initiatives, lead by the PCOs, which had the aim of involving the public. One PCO covered a large predominantly rural area, the other a deprived inner city area.

Case studies offer a holistic research strategy for investigating phenomena within their real life context (Robson, 1993; Yin, 1994; Stake, 1995). Within each case study multiple methods, sources of data and levels of analysis are required to strengthen reliability, validity and the possibility of generalising from the findings (Barlow and Herson, 1984; Sandelowski, 1996). Thus in this study qualitative and quantitative data were collected in different ways from a range of sources:

(a) Semi-structured interviews were held with PCO staff; and with a range of stakeholders related to specific initiatives identified for each PCO
(b) PCO meetings and public meetings were observed and documents of meetings were examined
(c) For one of the case study initiatives a postal questionnaire survey of the community involved was undertaken.

Semi-structured interviews were held with PCO staff to explore attitudes to public involvement, to gain an understanding of the range of initiatives undertaken and to identify any impact on PCO practice or policy. Semi-structured interviews, and in one case a questionnaire, were employed with other stakeholders involved in identified initiatives (e.g. PCO subgroups, community groups and residents of an estate). These were intended to clarify the scope of the initiative, and to identify their perceptions of the issues raised and the extent to which these had been addressed by the PCO. The questions for the interviews and questionnaire were derived in discussion with the study advisory group. The advisory group comprised a sociologist with experience of researching the area of public involvement, two members of a PCO, two members of local Community Health Councils and a former Health Authority Manager. The interviews with PCO members were held at two points in time with one year in between. The issues covered in the two interviews with PCO staff included the following in relation to public involvement in their organisation: - existence and development of a formal policy; aims and expectations for the coming year (1st interview) and then progress against these expectations (2nd interview); importance of involving the public; issues which they perceived as being important to involve the public with and ones which were considered to be inappropriate; specific activities and initiatives planned or in progress; lessons learnt; resources available; barriers to implementation; impact on the organisation; the roles of lay members and other PCO members and implications for new PCOs. Eight board members from each PCO were interviewed. The interviews lasted between 30 minutes and one hour and were taped recorded and transcribed. A thematic analysis was employed paying attention to the main themes as identified by: regularity with which they come up and disconfirming cases (where individuals didn't confer on an issue); importance that individuals ascribe to them and, in the case of the interviews with PCO board members, disconfirmation between first and second interviews for the same individuals. Thematic analysis is a well established method (Leninger, 1985; Taylor and Bogdan, 1984). We used a simplified approach to a pragmatic method described previously (Aronson, 1994) identifying themes from direct quotes or paraphrasing from the interview transcripts. Related issues were combined into sub-themes and our interpretation was fed back to the interviewees for validation.

PCO meetings were observed and documents related to these meetings were scrutinised to elicit: level of interest/importance apparently attached to discussion of items related to public involvement; how often such issues were raised and by whom; whether the discussion was noted in records and whether the issues were followed up. Meetings arranged by the PCO for the public and records of these meetings were scrutinised to elicit for example: numbers of attendees and whether these were members of the public or representatives of organisations; nature of meeting (e.g. one off open public meetings or meetings with specific groups as part of on-going exchange); response to and follow up of issues raised.

Results

Both PCOs had undertaken a number of initiatives to involve the public in the first year of their establishment although neither had produced a comprehensive written strategy. Interestingly, all the board members interviewed had taken part in some of the public involvement work, and the responsibility did not rest solely with the lay member. Apart from issues affecting individual patients and staff, board members saw few issues that should not be in the public domain. Both PCOs had held public meetings as part of their consultation on the proposed move to a Primary Care Trust. The Health Authority had led the process for the city PCO. PCO board members voiced concerns about the level of public consultation achieved. For the rural PCO, the PCO took the lead in collaboration with the Health Authority and the local Trust. One meeting had

been attended by about 50 people, which included service users as well as representatives of groups.

Board members in both PCOs identified barriers to involving the public. One was the limited time and skills available to carry out the work. Engaging the public's interest unless it was a topic of direct concern to them was perceived to be another important obstacle.

The City PCO

There was consistency between interviewed members of the city PCO that public involvement was a key priority for the organisation. No dedicated resources were made available to the issue of public involvement at the start of the work. However, at a later stage, staff with experience in this field, were transferred from the local district health authority to the PCO. Work was delegated to a public and community participation subgroup of the board. The area already had a well-established network of community and voluntary organisations, and the PCO had participated in some activities involving the public that were led by members of this network. The PCO itself had:

- Held three public events to raise awareness about coronary heart disease and consult on related services;
- Produced an annual report available in Braille and in ethnic minority languages;
- Produced a newsletter
- Established a community health advisory group with patient representatives from local practices and community groups

Most of the activities that had been initiated by the PCO were at the level of information provision to the public or information exchange between members of the public and the PCO. These would in the main therefore be classified according to Arnstein's as non-participation. However the liaison with the community health advisory group on issues of concern to both the PCO and its members would be classified as 'consultation'. At the time of the case study it was too early to say where this activity had influenced PCO practice or policy.

Although the principles of public involvement had been agreed at a board level, there was no written plan for how that may be implemented or what the intended outcome was. In the interviews with PCO members coronary heart disease was identified as a priority for the PCO and the public events organised had addressed this area. However, there were difficulties in venue, timing and publicity. Issues raised by attendees at these meetings were given respectful consideration and were documented. However, although there was some follow up of issues raised at these public events there were no discernable changes in practice or policy apart from those related to the process of involving the public in the future. This was generally attributed by PCO members to lack of resources and more pressing priorities, such as establishing the PCO structure and dealing with issues like prescribing overspends. This again would therefore be classified as consultation and not true participation.

The Rural PCO

The rural PCO had taken a number of initiatives to involving the public including information provision, developing formal and informal communication networks, holding public forums and focusing on community participation. In particular they had:

- Made efforts to increase awareness of the PCO through production of a newsletter and worked at the community level, developing joint partnerships and links with community organisations.
- Undertaken a consultation process in partnership with a local community, for residents of a housing estate in a deprived area to identify and address the community's concerns. This had developed into a longer-term collaboration with members of the community through creation of a multi-agency working group involving residents.
- Developed formal links with local community groups: - members of a local planning group were attending board meetings on a rota basis. A link had been developed with the local maternity services lay committee that included recent users of maternity services, as part of a review of local maternity services.

- Worked proactively at establishing more systematic links with local communities, for example attempts were made to facilitate patient participation groups at some local practices. Two were already in existence. The PCO was also assisting the development of a local Council for Voluntary Service.

The majority of the work undertaken by the rural PCO was targeted at the level of what might be considered as working in partnership, in that members of the public or specific community groups were involved in groups and meetings with PCO members on an on-going basis. Relationships between these groups were developing. However, this is not partnership as envisaged in Arnstein's model but a form of consultation as there is no delegation of power and all decision-making remained with the PCO. In the words of one resident 'In the past people used to come into the area and told you what was needed. Now they come in and ask what is needed.' Even at this level it was obviously a challenging experience for members of the PCO. One member commented on the process that '…you've really got to take on board what people are saying and it's part of the decision making process and you can't ignore this… it's a bit of a shock to actually take this on board.'

There was some evidence of public involvement activity influencing PCO policy and practice. The consultation exercise with residents, resulted in support in principle by three local GP practices for the residents' main request, primary care facilities located on the estate. Options for resourcing this were being explored and proposals were being developed for a public health nurse to be based on the estate. These developments took place through the on-going multi-agency partnership and in interview one of the PCO members remarked that that without the ongoing commitment the PCO would lose its credibility. This was the clearest example of an attempt to involve the public resulting in a change in PCO policy with a likely future impact on service delivery and would have met Arnstein's classification of participation.

Discussion

Both PCOs had devoted appreciable time and effort to involving the public in some of the key decisions they had to make. There were no attempts in either organisation to devolve power to groups of users or the public and control of decisions was maintained firmly with the PCOs. The majority of the activity was at the level of 'informing' or 'consultation' with no clear evidence of influence on PCO policy apart from on policy related to how the process of involving the public may be carried out in the future. However, there was at least one example where an attempt to seek the views of a specific subgroup of the public (residents of an estate) had influenced PCO policy and practice. This outcome had been realised, after several months through an on-going relationship with the representatives of the community within a multi-agency partnership group. There was also an attempt in the other PCO to establish an ongoing dialogue with patient representatives from each practice and local voluntary organisations about health policy issues. However it was too early to judge the success of this initiative on influencing policy.

Although both PCOs had formulated some policy on public involvement issues neither had formulated policy relating to the level of public involvement that was intended or to the outcome expected from public involvement work. Neither had a clear implementation plan or strategy that addressed issues of capacity, skills or resources. This was despite these issues being identified as possible barriers to involvement and in hindsight being considered by members of the PCOs to have hindered the ability to effect change.

Success of involvement was measured in terms of the level of engagement of the public and evidence of influence on PCO policy or practice. Success in both respects was greatest where the PCOs had been able to create on-going involvement with communities or groups. The community consultation exercise and on-going partnership resulted in a policy of trying to deliver primary care services closer to the community and some steps had been taken to address this aim.

National Perspective

Method

To obtain a wider perspective on public involvement we carried out a postal survey of all PCOs in England (486) in the summer of 1999.

The questionnaire is given in Appendix 1. The questions were derived in consultation with advisory group described above and addressed similar themes to those included in the semi-structured interviews carried out with PCO members. We had a 45 per cent (n=218) response rate. The data was analysed using SPSS software to identify response frequencies.

Table 1. Key issues considered important for public consultation (n=218)

Issue	Number of PCOs (%)
Change from PGC to PCT status	76 (34.9)
Health Improvement Plans	67 (30.7)
Acute services – current services & service development	45 (20.6)
Service development –mental health	24 (11.0)
Primary care investment plan	21 (9.6)
Primary care development – general	20 (9.2)
Rationing / Prioritising	18 (8.3)
Health Living Centres /Sure Start	16 (7.3)
Service development: Community services	12 (5.5)

Table 2. Key issues identified as being inappropriate to consult the public on (n=218)

Issue	Number of PCOs (%)
None	49 (22.5)
Matters confidential to practices or the board	16 (7.3)
Performance management	14 (6.4)
None as yet	12 (5.5)
Any issue where change is not possible or where the decision is imposed on the PCO	13 (6.0)
Payment of staff	11 (5.0)

Results

Virtually all respondents (96.8%) identified at least one issue that they thought it would be important to consult the public on in the coming year. The issues raised most frequently are given in Table 1.

Table 3a. Main methods used to identify the views and interests of the public

	Number of PCOs (%) employing this method
Open Board meetings	211 (96.8)
Formal links with user groups	152 (69.7)
Written information	145 (66.5)
Occasional meetings	137 (62.8)
User representation on the Board	116 (53.2)
Regular meetings	111 (50.9)
Surveys	87 (39.9)
Open public meetings	83 (38.1)

Table 3b. Other methods identified by respondents

Method	Number of PCOs
Multi-agency initiative	21
Newsletter	10
Website forum	9
Roadshow	9
Locality based meetings	8
Links with Community Health Council	7
Employed project worker /staff	7
Stakeholder conference	6
Public participation working group	6
Health panel	6
Press release	5
Health forum /participation group	5
Others	24

To the question of whether there were any topics on which it would not be appropriate to consult the public 49 22.5%) replied that there were none. A further 12 (5.5%) replied that none had been identified 'as yet'. Other frequent responses are given in Table 2.

The range of methods employed by PCOs to obtain the views and interests of the public included almost the whole range of approaches available for obtaining public opinion from surveys, focus groups, roadshows and public meetings to recruitment of dedicated staff and development of multi-agency initiatives. The most frequent responses are given in Table 3.

Only 32 per cent of PCOs had a written policy for public involvement in place though for a further 40 per cent a written policy was in preparation

The questionnaire also asked for any general comments on involving the public in decision-making. Ninety respondents took this opportunity to give their views. The most frequent comment was that it was 'difficult'. Other frequent responses are given in Table 4.

Table 4: Most frequent issues raised in open question: 'Any comments on involving the public in decision-making'

General theme	Frequency of response
It is difficult	22
A priority for the PCO	8
Lack of resources	8
A clear purpose is needed	7
Public need to be supported to achieve this	7
Multi-agency approach recommended	7
The lack of public interest is a problem	6
It is time consuming	6
PCO have a role in education of the public	5
Desire to do it properly	4
Query about the right way to go about it	4
It is stimulating	4

The considerable amount of activity in this area within the first year of creation of PCOs, despite the effort required simply to establish the organisations, and the relatively good response rate to our questionnaire are indications of the importance PCOs placed on public involvement. However, the findings show that activity is preceding development of clear strategic policy.

Conclusions

At the time the research was carried out it was very clear that public and user involvement was a major theme underpinning health policy in the UK. It was also clear that many PCOs were working hard to develop public involvement initiatives and indeed were proving to be imaginative in their approaches. Few PCOs appeared to have a documented strategic approach. It appears from evidence from two case studies that arrangements where the public are involved as partners in initiatives sustained overtime are more likely to result in impact on PCO policy and practice. The success may have been due in part to the involvement of a number of other local organisations and their involvement may also have provided resources and skills additional to those held within the PCO.

The authors therefore recommend that PCOs need to develop a more strategic approach to involving the public to avoid undermining the enthusiasm of both the health care professionals and the public for these types of initiative. Without a more focussed approach there is a danger that public involvement initiatives will both disillusion the participants and divert resources from patient services without any discernable benefit

For PCOs intending to undertake this type of work it is suggested that they consider the following issues:

- What questions do we wish to answer and which elements of the public are best placed to answer them?
- What will we do with the information we receive from the public? How will information be fed into the decision making process?
- How will the impact be demonstrated or measured?
- What level, for example on Arnstein's ladder, of involvement is intended?
- How can initiatives be sustained and developed as part of a continuing dialogue?

- Can lessons be learnt from experience elsewhere? There is a substantial body of valuable literature available that should be utilised (CHEPAS, 2000; Wensing and Elwyn, 2003).
  - Have the questions already been asked by other organisations?
  - What skills and resources are required and how will these be found?
  - Can the two prior questions be addressed through working with other agencies?
  - What level of priority does this activity really have in relation to other PCO responsibilities?

Note on Terminology

At the time this research was carried out both case study organisations were Primary Care Groups. PCOs surveyed were in transition from Primary Care Groups to Primary Care Trusts. This research has implications for PCOs today. Therefore, for simplicity, we have used the term PCOs throughout.

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References

Anderson, W., Florin, D., Gillam, S. and Mountford, L. (2002) *Every Voice Counts,* London: King's Fund.

Arnstein, R. (1969) 'A Ladder of Citizen Participation', *Journal of the American Institute of Planners*, 35(4): 216-224.

Aronson, J. (1994) 'A Pragmatic View of Thematic Analysis', *The Qualitative Report*, vol. 2(1) Spring.

Barker, J., Bullen, M. and de Ville, J. (1997) *Reference Manual for Public Involvement,* London: South Bank University, 20-21 and 30-31.

Barlow, D.H. and Herson, M. (1984) *Single case Experiential Designs,* (second edition) New York: Pergamon Press.

Barnes, M. and Evans, M. (1998) 'Who wants a say in the NHS?', *Health Matters* (Summer /Autumn), 6-7.

Beresford, P. and Croft, S. (1993) *Citizen Involvement; A Practical Guide for Change,* British Association of Social Workers.

Chan, A.A. (2000) *Guide to Public Involvement for Health Services in Leicester, Leicestershire and Rutland,* Leicester: Leicestershire Health.

CHEPAS (2000) *Eliciting Users' Views of the Processes of Health Care: A Scoping Study for SDO,* ScHARR, University of Sheffield.

Department of Health (1989) *Working for Patients,* London: HMSO.

Department of Health (1991) *The Patient's Charter,* London: HMSO.

Department of Health (1992) *Local Voices: The Views of People in Purchasing,* London: NHS Management Executive.

Department of Health (1997) *The New NHS. Modern and Dependable,* London: Department of Health.

Department of Health (2001) *Involving Patients and the Public in Healthcare. A Discussion Document,* London: Department of Health.

Department of Health and Social Security (1983) *NHS Management Inquiry (The Griffiths Report)*. London: HMSO.

Leninger, M.M. (1985) 'Ethnography and Ethnonursing: Models and Modes of Qualitative Data Analysis', in M.M. Leninger (ed) *Qualitative Research Methods in Nursing*, Orlando, FL: Grune and Stratton.

Milewa, T. and Harrison, S. (2001) 'Group Dynamics', *Health Service Journal,* 26 April, 32-3.

Rhodes, P. and Nocon, A. (1998) 'User Involvement and the NHS Reforms', *Health Expectations*, 1: 73-81.

Robson, C. (1993) *Real World Research: A Resource for Social Scientists and Practitioner Researchers,* Oxford: Blackwell Publishers Ltd.

Sandelowski, M. (1996) 'One is the Liveliest Number: The Case Orientation of Qualitative Research', *Research in Nursing and Health*, 19: 525-29.

Stake, R. (1995) *The Art of Case Study Research,* London: Sage Publishers.

Taylor, S.J. and Bogdan, R. (1984) *Introduction to Qualitative Research Methods. The Search for Meanings,* New York: John Wiley and Sons.

Wensing, M. and Elwyn, G.E. (2003) 'Methods for Incorporating Views in Healthcare, *British Medical Journal,* 326: 877-79.

Yin, R.K. (1994) *Case Study Research,* Beverley Hills: Sage Publishers.

A screening tool intended to identify children at risk of future anti-social behaviour

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Abstract
This paper offers a description of a screening tool developed to support the early identification of children likely to be at risk of future anti-social and offending behaviour. Appendices to the paper include a copy of the instrument, the value and variable labels used, and a description of the coding scheme and the syntax used in the SPSSX software to analyse collected data. The tool has been in daily use in a local 'On Track' project office for over a year, and successfully identifies children who are appropriate for the interventions the project is able to offer.

Introduction

Shortly before coming to power, the Labour Party pledged in its manifesto that if elected it would be 'tough on crime and tough on the causes of crime:'

> 'We propose a new approach to law and order: tough on crime and tough on the causes of crime. We insist on individual responsibility for crime, and will attack the causes of crime by our measures to relieve social deprivation'.

The Labour Party (1997) p.22.

At the time the statement was intended to respond to public disquiet about crime and apparent increases in the volume of reported crime.

What made the statement a little different was the new focus upon attempting to address the causes of crime, and once elected, the Government did not wait long before announcing a number of initiatives in fulfilment of this election promise.

One of these was the On Track Initiative launched by the Home Office in December 1999. On Track was an ambitious attempt to respond to youth crime. Local authorities were invited to bid for funding to establish locally based projects in geographically definable, deprived, high crime areas. Two things made the initiative relatively unique at the time. The first was that the funding was being offered to establish preventive services dealing with causes, rather than responding to the effects of crime, and the second was that each selected project would be part of a national research study that would develop a better understanding of 'what works'.

Northamptonshire Social Care & Health Directorate was one of a number of local authorities that bid successfully to set up a local 'On Track' project.

The bid enabled the Northamptonshire On Track Management Team to clearly establish, in aggregate terms, a need for a local On Track project in a specific geographical location in Northampton. However, to deliver an effective service one of the things it had to do was to accurately identify children vulnerable to future anti-social behaviour.

Much is now known about factors present in a child's life that are associated with anti-social behaviour due to a small number of extensive international literature reviews (eg. Rutter, Giller and Hagel, 1998; Farrington, 1999). There is also an emerging body of evidence to support the use of certain kinds of intervention (Utting, 1999). However no instrument could be identified that would help identify vulnerable children, assess their degree of vulnerability or point to the kinds of areas in the child's life in which intervention might be helpful. A decision was therefore made to develop a screening instrument 'in house'. The instrument also needed to be an appropriate one to use for children aged between 4-12 years of age, as this was the age group with which the project team would be working.

How the Tool was Constructed

Using the work of Rutter et al, a list of factors associated with future anti-social behaviour was obtained. Broadly speaking, the authors conclude that available evidence suggests three groups of influences are at work – individual, psycho-social and population wide, though the latter are deemed to have an effect at an aggregate rather than an individual level. The first two groups of factors are presented in the box below.

Individual factors	Psycho-social factors
Hyperactivity Cognitive impairment Temperamental features Distorted social information processing	Teenage parents Large family size Poverty and social disadvantage Coercive and hostile parenting Abuse and neglect Poor parental supervision

Their review of research evidence also led them to suggest that individual factors may be more likely to be associated with earlier onset of anti-social behaviour, and with anti-social behaviour that is more likely to be present throughout adult life, rather than fleetingly during adolescent years. They also suggest that amongst those factors operating at an individual level, the one most significantly associated with future antisocial behaviour is hyperactivity.

The authors also concluded that the presence of these factors in a child were predisposing, but not causal:

> 'The research evidence is increasingly clear that genes – probably several or many – constitute one set of influences setting up a **liability** to develop anti-social behaviour in childhood through dimensions such as impulsivity and hyperactivity, given the presence of other environmental risk factors as well' .
>
> Rutter, Giller & Hagel (1998) p.13.

Using these factors the first of many drafts of the instrument was constructed. Wherever possible and appropriate, the instrument incorporated sub-scales from pre-existing validated questionnaires. Use was made of a number of scales included in the Framework for the Assessment of Children in Need and their Families (D.o.H 2000), including the Parenting Daily Hassles Questionnaire, and the Goodman Strengths and Difficulties Scale. (Details of all sources used are presented in appendix 2).

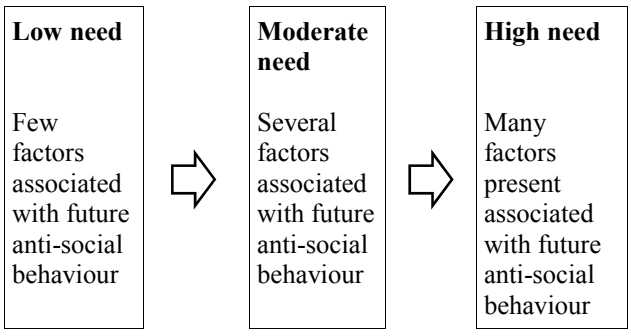
Peer Review and Piloting

Before the questionnaire was piloted, an extensive period of peer review took place in which professionals from health and social care backgrounds and who routinely worked with vulnerable children and families were invited to comment critically on the questions included in the instrument. This led to extensive re-working of many of the questions not derived from already validated scales. Focussed discussions were also held with local health and social care professionals to enable the 'shortlisting' of questions from pre-existing validated scales that could be used as proxy measures for some of the factors about which information was sought.

The instrument was then piloted over a period of several weeks by a health service professional working in a community setting. Further minor amendments were made on the basis of feedback obtained from the interviewees.

Electronic Analysis

The Project team needed to be able to use the screening tool to decide whether a given child might appropriately be offered the services that were being developed. It was important to ensure that the project did not waste public money by offering services to children and their families who did not need them. Equally, it was important that to maximise the preventive intentions of the project that children displaying very high levels of need, or at high risk, were not disproportionately represented: the project was not intended to be an adjunct to child protection services. The target group of children was conceived as being in the middle of these two ends of a continuum. Northampton's On Track Co-ordinator has described the approach taken by the team elsewhere (Precht, 2003).



To achieve this it was decided to compute the scores derived from the questionnaire using SPSSX software. Details of the questionnaire, the value and variable labels, how the indicators were constructed and the syntax used to analyse the data are presented in appendices to this paper.

Establishing the Values Used in the Analysis

Insufficient empirical evidence could be found to justify the weighting of most of the variables used in the instrument, or benchmarking threshold scores where a range of values were obtained for a variable. Therefore a standard score of 1 was used if specific risk factors appeared to be present. One factor – hyperactivity – was given a score of 2 on the basis of Rutter et al's conclusion that this is likely to be a particularly significant pre-disposing factor.

Consent and Use

Legitimate concerns have been expressed by some professionals about the dangers of stigmatising children and their families by 'labelling' children who meet the criteria for vulnerability established by the project, and the identification of vulnerable children is an issue that is very sensitive. For example, a recent announcement by Lord Warner, Chair of the Youth Justice Board, of powers to be given to Youth Inclusion and Support Panels to identify 8-13 year olds displaying 'problematic' behaviour who may be vulnerable to future anti-social behaviour has created considerable controversy. Specifically, fears have been expressed that the proposals will stigmatise and punish vulnerable children, young people and their families.

In practice, the screening tool developed in Northamptonshire was intended, and has always been used, to identify children and families most likely to benefit from the services offered by On Track in Northampton. The intention has been not to stigmatise but to support. Identified children and families subsequently received a full assessment of need and services appropriate to meet those identified needs. The principle of informed consent was maintained throughout the development of the instrument, and subsequently during its use by staff working in the On Track Team. Parents of children are given a full oral and written explanation of the purpose of the screening tool and the basis upon which the information collected will be stored, analysed and used. Written consent is obtained from a child's parent or guardian before any information is collected.

Using the Tool in Operational Settings

The screening tool has been used by the On Track team for over a year. A small number of children referred to the project have been excluded because their home address fell outside the project area, and in a small number of cases, no service was required by those children and families referred. At the time of writing, data relating to 81 children has been obtained. To date, most referrals came from staff working in Community Health settings, though some have also come via Education and Social Services. Of these referrals, 16 per cent had a 'low' risk score, 65 per cent a 'moderate' score and 19 per cent a 'high' score. Feedback from staff members confirms that the tool is proving valuable in identifying children who are most likely to benefit from the services provided by the project.

Operational use has also highlighted a small number of limitations with the tool.

- First, it has been less successful in providing indicative information about the specific kinds of services or interventions (available within the Northampton On Track Project) that might be helpful to the child or his or her family. This is as much a reflection of the kinds of services available as a limitation of the tool itself.
- Second, in a very small number of cases, parents appear to have chosen not to answer some of the questions. This has meant that in a handful of cases the recorded scores *may* be lower than would have been the case had the question been answered.
- Third, in a much larger proportion of cases – over 90 per cent at the present time - parents were unable to answer questions relating to the standard attainment test scores achieved by their children. Although this finding is significant in itself, the consequences can be overcome with parental consent as the scores can be obtained from elsewhere.

Although the existing software syntax 'calibrates' the scores that reflect the priority of the On Track team in Northampton to identify children who might be described as falling in a 'moderate' need range, different 'values' could be placed on total scores to suit different organisational needs.

References

Department of Health. (2000) *Framework for the Assessment of Children in Need and their Families*. London: Department of Health.

Farrington, D. (1996) *Understanding and Preventing Youth Crime.* York: Joseph Rowntree Foundation.

Home Office, Family Policy Unit (1999) On Track Programme, Invitations to Bid & Guidance Notes.

Labour Party, The. *New Labour – Because Britain Deserves Better.* (1997) London: The Labour Party, John Smith House.

Precht, D. (2003) 'Northampton On Track Project: Some Lessons from the First Year's Work', *Practice*, Birmingham: BASW.

Rutter, M., Giller, H. and Hagell, A. (1998) *Anti-Social Behaviour by Young People: A Major New Review of the Research,* Cambridge.

Rutter, M., Giller, H. and Hagell, A. (1998) *Anti-Social Behaviour by Young People: the Main Messages from a Major New Review of the Research,* Knutsford: Social Information Systems Ltd.

Utting, D. (ed) (1999) *A Guide to Promising Approaches,* London: Communities that Care .

Youth Justice Board: *Speech by Lord Warner to ACPO Youth Justice Conference 23rd October 2002.*

Appendix 1. *Copyright Northamptonshire County Council Social Care & Health Directorate*

Northampton On Track Project screening tool

For office use only				Caseno1	
				Caseno2	

1. **Name & full address of parent (including postcode)** | **Name of child & full address** ***if this is different from the parent's address***

Section 1. Background information

(NB: if more than one child referred to 'on track live in this parent's family, please complete section 1 only once, in relation to the first child about whom information is collected

Note to interviewer.
It may help to introduce this section with the following:
'I realise these questions may seem to be very personal and, of course, you don't have to answer them, but knowing about a child's parents and daily carers is an important part of knowing a child's background and life experiences. It would really help us to have this information.'

Questions about parents/guardians or primary carers

2. **Gender** (please circle one box)

1	2		
Male	Female	Sex	

3. **Which of the following would you say best described your ethnic background?** (please circle one box)

1	2	3	4	5		
White European	Black	Asian	Dual heritage	Please specify any other ethnic group	Ethnic1	

4. **How old are you?**

Yrs	Agepar1	

5. **Are you in a relationship with anyone at the moment?** (please circle one box)

1	2		
Yes	No	Relation	

If parent or guardian says 'no' to question 5, ask questions 5a and 5b, then go straight to q.6. . If they say 'yes' ask questions 5c - 5g.

a. Are you caring for your children on your own?

1	2		
Yes	No	Careown	

b. How often are you able to go out without the children?

1	2	3	4		
Frequently (every week)	Sometimes (every month)	Rarely (every 3 months)	Almost never	Goout	

c. Do you live with your partner?

1	2		
Yes	No	Livepart	

d. (*for parents with partners)* how long have you been together now?

Yrs	Mths	Lentoget	

e. How old is your partner?

Yrs	Ageper2	

f. Which of the following would you say best described your partner's ethnic background?

1	2	3	4	5	
White European	Black	Asian	Dual heritage	Please specify any other ethnic group	*Ethnic2* ☐

g. How often are you able to go out together without the children?

1	2	3	4	
Frequently (every week)	Sometimes (every month)	Rarely (every 3 months)	Almost never	*goouttog* ☐

6. **Are there any other adults (aged over 18) permanently living in your household?**

1	2	
Yes (Number of adults = ...)	No	*Otheradu* ☐ *Noothead* ☐

7. **Have any of the adults in your immediate family ever been in trouble with the police?** (please circle one box)

1	2	3	
Yes	No	Don't know	*Adpol* ☐

8. **Do either you, or your partner work in paid employment?**

1	2	
Yes	No	

If no, please tick if this has been for longer than 12 months

1		
		Paidempl ☐ *Lenunemp* ☐

9a. **Do you/your partner claim Income Support at the moment?** (please circle one box)

1	2	3	
Yes	No	Not sure	*Incsupp* ☐

9b. If you're claiming Income Support, Roughly how long have you been claiming? (please circle one box)

1	2	3	4	5	
Less than a month	Less than 6 months	Less than a year	Less than 5 years	Over 5 years	*Lenincsu* ☐

10a. **Do you/your partner claim Working Families Tax Credit at the moment?** (please circle one box)

1	2	3	
Yes	No	Not sure	*Wftcredi* ☐

10b. **If you're claiming Family Credit, Roughly how long have you been claiming?** (please circle one box)

1	2	3	4	5	
Less than a month	Less than 6 months	Less than a year	Less than 5 years	Over 5 years	*Lenwfter* ☐

Questions about other children in your household

Note to interviewer.
It might help to introduce this section with the following
'I'd like to move on now and ask you a few questions about other children in your household ...'

11. **How many children (up to the age of 18) are there in your household?**

TOTAL NUMBER OF CHILDREN IN HOUSEHOLD..... *Noothchi* ☐

	1 2		
Name:	Male/Female	Age:	*Gen1* ☐ *Age1* ☐
Name:	Male/Female	Age:	*Gen2* ☐ *Age2* ☐
Name	Male Female	Age	*Gen3* ☐ *Age3* ☐
Name:	Male/Female	Age:	*Gen4* ☐ *Age4* ☐
Name:	Male/Female	Age:	*Gen5* ☐ *Age5* ☐
Name:	Male/Female	Age:	*Gen6* ☐ *Age6* ☐

12. **How often do the following things seem to occur with your children, and how much of a 'hassle' are they for you, or you & your partner, at the moment? (1= low, 5 =high)** [i]
(NB. Please circle one box for each part of the question. If one parent's level of 'hassle' seems higher than another's record the highest)

		1	2	3	4	Level of 'hassle' (low to high)						
a.	Continually cleaning up messes of toys or food	Rarely	Sometimes	A lot	Constantly	1	2	3	4	5	*Messes1* *Messes2*	
b.	The kids won't listen or do what they are asked to do	Rarely	Sometimes	A lot	Constantly	1	2	3	4	5	*Wontlis1* *Wontlis2*	
c.	The kids argue or fight and you have to 'referee'	Rarely	Sometimes	A lot	Constantly	1	2	3	4	5	n/a	*Argue1* *Argue2*
d.	The kids are hard to manage in public (e.g. in shops, cafes, etc)	Rarely	Sometimes	A lot	Constantly	1	2	3	4	5	*Harman1* *Harman2*	
e.	The kids have difficulties with friends (e.g. fighting, squabbling, falling out, no friends available)	Rarely	Sometimes	A lot	Constantly	1	2	3	4	5	*Friends1* *Friends2*	

13. **How often do you/your partner (if appropriate) experience the following, and how much 'hassle' does this cause you?** (NB .Please circle one box for each part of the question If one parent's level of 'hassle' seems higher than another's record the highest) [ii]

		1	2	3	4	Level of 'hassle' (low to high)						
a.	Mealtime difficulties with picky eaters, complaining, etc	Rarely	Sometimes	A lot	Constantly	1	2	3	4	5	*Meals1* *Meals2*	
b.	The kids resisting or struggling with you over bed-time	Rarely	Sometimes	A lot	Constantly	1	2	3	4	5	*Bedtim1* *Bedtim2*	
c.	The need to keep a constant eye on where the kids are and what they are doing	Rarely	Sometimes	A lot	Constantly	1	2	3	4	5	*Eyeon1* *Eyeon2*	
d.	Difficulties in getting privacy	Rarely	Sometimes	A lot	Constantly	1	2	3	4	5	*Privacy1* *Privacy2*	
e.	Difficulties in finding a babysitter	Rarely	Sometimes	A lot	Constantly	1	2	3	4	5	*Sitter1* *Sitter2*	

14. **Have any of the children in your family ever been in trouble with the police?** (please circle one box)

1	2	3	
Yes	No	Don't know	*Chilpol*

Part 2: About your child

Note to interviewer:
It may help to introduce this section with the following.
I'd like to ask you some questions about (say the name of the child). This will help the On Track team decide if he/she they might be suitable for the project, and if so, what kinds of things it might be able to offer to him,/her and to you as his/her parent(s)'.

15. **How old is……(name of child upon whom screening is focussed?)** _____ *Agechil* ☐

16. **How would you describe your child at the moment?** (please circle one box)[iii]

		1	2	3	
a.	Restless, overactive, cannot sit still for long	Not true	Somewhat true	Certainly true	*Restless* ☐
b.	Constantly fidgeting or squirming	Not true	Somewhat true	Certainly true	*Fidget* ☐
c.	Easily distracted, concentration wanders	Not true	Somewhat true	Certainly true	*Distracts* ☐
d.	Thinks things out before acting	Not true	Somewhat true	Certainly true	*Thinks* ☐
e.	Sees things through to the end, has a good attention span	Not true	Somewhat true	Certainly true	*Attentio* ☐

Note to interviewer:
N. B. Questions 17, 18, & 19 are intended to collect information for children of different ages.
- *Question 17* ***is for children aged between*** *4 & 6,*
- *Question 18* ***is for children aged*** *7-10* ***and***
- ***Question 19*** *is for children aged* ***11+.***

Please complete ***only*** *the question that's appropriate for the age of the child.*
- ***If the child is aged under 4, go straight to question 20.***

17. **Which of the following things can your child manage at the present time?** [iv]
(N.B. for interviewer: the boxes are arranged sequentially Please read out each option in turn and circle the answer that best describes what the child can manage)

	1	2	3	
a.	Listen and respond to a simple request or instruction & uses language to express needs	Ask questions to find out and listens to the answers you give, & can recount events or experiences	Make up and tell a story, with detail, to a small group, & can answer questions in detail after hearing a story.	*Doa* ☐
b.	Respond to pictures when sharing a book with an adult, & handles books appropriately	Recognise familiar written words including own name & identifies by shape & sound at least half the letters of the alphabet	Read books and simple text.	Dob ☐
c.	Make marks holding a pen or a pencil properly & uses marks or drawings to communicate meanings	Write using symbols or letters to represent words & writes own name with appropriate lower & upper case letters	Usually form letters pointing in the right direction and in the right shape, without any help & writes simple phrases or sentences independently.	Doc ☐
d.	Match objects in a 1:1 relationship, or sorts objects using a single criterion (e.g. all red objects, all square items etc)	Recognise numbers and count to 10 accurately & uses mathematical language to describe size (e.g. longer, wider rather than bigger)	Solve problems using addition and subtraction to 10 & can describe the properties of 2D and 3D shapes	*Dod* ☐

18. **If your child is aged *7-10* please say what Key Stage 1 SATs test scores your child achieved**

		Not known	
Reading/Comprehension		Not known	*Reading1* ☐
Mathematics		Not known	*Maths1* ☐
Writing		Not known	*Writing1* ☐
Spelling		Not known	*Spell1* ☐

19. **If your child is *aged 11+* please say what Key Stage 2 SATs test scores your child achieved**

Reading/Comprehension		Not known	*Reading2*
Mathematics		Not known	*Maths2*
Writing		Not known	*Writing2*
Spelling		Not known	*Spell2*

20. **In relation to the following things, which of the statements best describes your child at the moment?** (please circle one box for each question)

		1	2	3		
a.	Often has temper tantrums or hot tempers	Not true	Somewhat true	Certainly true		*Tantrums*
b.	Generally obedient, does what adults request	Not true	Somewhat true	Certainly true		*Obedient*
c.	Often gets into fights with other children, and/or has been accused of bullying them	Not true	Somewhat true	Certainly true		*Fights*
d.	If your child is aged 6 or over, do they have difficulty in telling the truth, and in playing games without cheating?	Not true	Somewhat true	Certainly true	N/a	*Truthful*
e.	If your child is aged 6 or over, do they take things which don't belong to them from home, school, or elsewhere?	Not true	Somewhat true	Certainly true	N/a	*Takes*
f.	If your child is aged 6 or over do they often have difficulty in seeing things in 'perspective' and tend to overreact to things?	Not true	Somewhat true	Certainly true	N/a	*Perspect*
g.	If your child is aged 6 or over, do they often interpret things incorrectly, or 'get hold of the wrong end of the stick'?	Not true	Somewhat true	Certainly true	N/a	*Wrongend*
h.	If your child is aged 6 or over, do they often interpret accidents as deliberate 'wind-ups' by others?	Not true	Somewhat true	Certainly true	N/a	*Windup*

21. **Have any of these things happened to anyone in your immediate family over the last year?** (*please tick any that apply*)*

		1	
a.	Change of job		*Job*
b.	Recent unemployment		*Unemploy*
c.	Someone moving out		*Moveout*
d.	Someone moving in		*Movein*
e.	Changes of address		*Changead*
f.	Major illness		*Illness*
g.	A serious accident or injury		*Injury*
h.	A death in the family		*Death*
i.	A birth in the family		*Birth*
j.	Separation		*Separat*
k.	Divorce		*Divorce*
l.	Access difficulties		*Access*
m.	Other (please state briefly)		*Otheven1*
			Otheven2

22. **If the answer to any of the above is '*yes*' does your child ever talk about any of these?** (please circle one box)

1	2	3
Yes	No	Not applicable

talk ☐

23. **If applicable: How do you feel your child coping with this event/ these events?**

Coping ☐

24. **Has your child ever been in contact with Social Services?** (NB. Please circle one box. If answer is 'no' conclude interview & thank parent for their time. If 'yes' ask q.24).

1	2
Yes	No

Chilsssd ☐

25. **Was this in connection with any concerns about whether your child was being abused or neglected?** (NB. Please circle one box if answer is 'no' conclude interview & thank parent for their time. If 'yes' ask q.25)

1	2
Yes	No

Abuseneg ☐

25. **Has your child's name ever been placed on the child protection register?**

1	2
Yes	No

register ☐

26. **Is there anything you'd like to add to any of the information you've given ?**

Othinfo ☐

Date of completion of this screening form

Details of worker completing this form	Name ..... Address..... ..... Tel. .....

If you'd like feedback about any response that this organisation may make as a Result of this information, please tick the box ☐

Appendix 2. Scoring for the Northampton On Track screening tool

Risk indicator	Question & variable label	How indicator is constructed
Teenage parents	Q4 (Agepar1) Q5e (Agepar2)	If age of parent = <21 or If age of partner =<21
Broken homes	Q5 (Relation) Q5a (Careown)	If q5 = no and If q5a = yes
History of offending	Q7 (Adpol) Q14 (Chilpol)	If q 7 = yes or Q 14 = yes
Large families	Q11 (Noothchi)	If total for q 11 = 4+ children,
Poverty & social disadvantage	Q8 (Paidempl) & Lenunemp) Q9a (Incsupp & Q10a (Wftcredi)	If q8 = no and length unemploy is 1 (12 mths) If q9a = yes or If q10 = yes
Co-ercive & hostile parenting Source: 5 questions selected from the 'Parenting Daily Hassles questionnaire'	Q12 a-e (Messes1 Wontlis1 Argue1 Harman1, Friends1) & (Messes2 Wontlis2 Argue2 Harman2 Friends2).	Frequency = total scores of 13+ = difficulties Intensity = total scores of 18+ = difficulties
Inconsistent discipline Source: 3 questions selected from the 'Parenting Daily Hassles questionnaire'	Q13a-c (Meals1 Bedtim1 Eyeone1) & (Meals2 Bedtim2 Eyeon2)	Frequency = total scores of 8+ = difficulties Intensity = total scores of 11+ =difficulties
Poor supervision & monitoring of children Source: 2 questions selected from the 'Parenting Daily Hassles questionnaire'	Q13 d&e (Privacy1 Sitter1) & (Privacy2 Sitter2)	Frequency = total scores of >=5 = difficulties Intensity = total scores of >=7 = difficulties
Hyperactivity Source: Hyperactivity sub-scale from Goodman Strengths & Difficulties Scale	Q16 a-e (Restless Fidget Distract Thinks Attention)	Total scores of 0-5 = low need Total score of 6 = some need Total scores of 7-10 = high need NB. Scores for values run from 0,1,& 2. For positive statements (d&e) scores are reversed.

Cognitive impairment Source: a. for children aged 4-6: baseline assessment schedule from Northamptonshire Inspection & Advisory Service	No question for children under 4 Q17 (for children aged 4-6). (Doa Dob Doc Dod)	 If box 1 is scored for 3 out of the 4 possible combinations, evidence suggests child's development may be below average
Source b. Standard Attainment Test (SATS) key stage 1 levels	Q18 (for children aged 7-10). (Reading1 Maths1 Writing1 Spell1)	If disapplied for more than 2 SATs, and/or if attainment = working towards level 1 on all four SATs
Source c. SATs Key stage 2 levels	Q19 (for children aged 11+). (Reading2 Maths2 Writing2 Spell2)	If disapplied for more than 2 SATs and/or if level of attainment = working towards level 3 on all four SATs
Temperamental features Source: a. Goodman conduct disorder sub-scale from the Goodman Strengths & Difficulties Scale	Q20 a-h For children aged 4 – 6: score total for questions 20a-c inclusive. (Tantrums Obedient Fights)	 Total scores of 0-2 = low need Total score of 3 = some need Total scores of 4+ = high need
Source: b. Goodman conduct disorder sub-scale from the Goodman Strengths & Difficulties Scale	For children aged 6+ score total for questions 20a-e inclusive. (Tantrums Obedient Fights Truthful Takes) For children aged 6 or over also score total for questions 20f-h inclusive (Perspect Wrongend Windup)	 Total scores of 0–4 = low need Total score of 5 = some need Total score of 6+ = high need Total scores of 0 –5 = low need Total score of 6 = some need Total score of 7+ = high need NB score for 20b is reversed as the statement is positive,
Loss Source: Pen Green Centre, Corby. Parents questionnaire used in 'Involving Parents in their Children's Learning' Research Project	Q21 c, h, j, k, l, (Moveout Death Separate Divorce Access)	 If any two of c, h, j, k, & l are ticked
Abuse/neglect	Q26 (Register)	If answer is 'yes '

TOTAL RISK SCORE	ALL above:	
	Q4	If parent <=21 or partner <=21 **score 1**
	Q5 & 5a	If parent is not in a relationship and is caring for children on own **score 1**
	Q7 & Q14	If adult in household or child in household have been in trouble with Police **score 1**
	Q11	If 4+ children in family **score 1**
	Q8, Q9, & Q10	If main wage earner is unemployed and has been so for 12 months or more, or if family member is claiming Income Support or Family Credit **score 1**
	Q12 a-e	If frequency score is >=13 **score 1** If intensity score is >=18 **score 1**
	Q13 a-c	If frequency score is >=8 **score l** If intensity score is >11 **score 1**
	Q13 d&e	If frequency score is >=5 **score 1** If intensity score is >=7 **score 1**
	Q16 a-e	If total score = 0-5 **score 0** If total score = 6 **score 1** If total score = 7+ **score 2**
	Q17 or	If total score for 17 is <6 for Children aged 4-6 Or
	Q18 or	If SATs scores disapplied for 2 or more or working towards level 1 For KS1 on all 4 tests for children Aged 7-10 Or
	Q19	If SATs scores disapplied for 2 or more or working towards level 2 for KS2 on all 4 tests for children aged 11+ **= score 1**
	Q20	For children aged <4 ignore this question
	Q20 a-c	For children aged 4-6 if score >= 4 or
	Q20 a-e	For children aged 7 + if score >= 6 **= score 1**
	Q20 f-h	Also for children aged 7+ if Score >=7 **= score 1**
	Q21	If any two of those listed applies **= score 1**
	Q26	If answer is 'yes' **= score 1**
	Total score scale	**High = 11 - 17** **Moderate = 6 - 10** **Low = 0 - 5**

Appendix 3. Syntax used in SPSSX to compute the collected data for the Northampton On Track Screening Tool

```
COMPUTE Youngpar = agepar1 <= 21 | agepar2 <= 21 .
EXECUTE .
COMPUTE lonepare = relation = 2 & careown = 1 .
VARIABLE LABELS lonepare 'lone parent' .
EXECUTE .
COMPUTE Offendin = adultpol = 1 | chilpol = 1 .
VARIABLE LABELS Offendin "Offending behaviour in child's family" .
EXECUTE .
COMPUTE Largefam = noothchi >= 4 .
EXECUTE .
COMPUTE Socdisad = paidempl = 2 & lenunemp = 1 | incsupp = 1 | wftcredi = 1 .
EXECUTE .
COMPUTE cohost1 = messes1 + wontlis1 + argue1 + harman1 + friends1 >=13.
EXECUTE .
COMPUTE cohost2 = messes2 + wontlis2 + argue2 + harman2 + friends2 >=18.
EXECUTE .
COMPUTE Incdis1 = meals1 + bedtim1 + eyeon1 >=8.
EXECUTE .
COMPUTE Incdis2 = meals2 + bedtim2 + eyeon2 >=11.
EXECUTE .
COMPUTE Psuperv1 = privacy1 + sitter1 >=5.
EXECUTE .
COMPUTE Psuperv2 = privacy2 + sitter2 >=7.
EXECUTE .
IF (restless + fidget + distract + thinks + attentio <= 5) Hyper = 0.
EXECUTE .
IF (restless + fidget + distract + thinks + attentio = 6) Hyper = 1.
EXECUTE .
IF (restless + fidget + distract + thinks + attentio >= 7) Hyper = 2.
IF ((agechil >= 4 & agechil <= 6) & ((doa + dob + doc) = 3) |
   (agechil >= 4 & agechil <= 6) & ((doa + dob + dod) = 3) |
   (agechil >= 4 & agechil <= 6) & ((doa + doc + dod) = 3) |
   (agechil >= 4 & agechil <= 6) & ((dob + doc + dod) = 3)) cogtry = 1.
IF ((agechil >= 7 & agechil <= 10) & (reading1 + maths1 + writing1 + spell1 <=
 8)) cogtry2 = 1.
IF (agechil >= 11 & reading2 + maths2 + writing2 + spell2 <= 8) Cogtry3 = 1 .
IF ((agechil >= 4 & agechil<= 6) & (tantrums + obedient + fights <=2)) Temfe1 = 1.
If ((agechil >=4 & agechil<=6) & (tantrums + obedient + fights =3)) temfe1 = 2.
If ((agechil >=4 &agechil <=6) & (tantrums + obedient + fights >=4)) temfe1= 3.
If (temfe1 = 3) temp1=1.
IF (agechil>= 7 & tantrums + obedient + fights + truthful + takes <=4) Temfe2= 1.
If (agechil >=7 & tantrums + obedient + fights + truthful + takes =5) temfe2= 2.
If (agechil >=7 & tantrums + obedient + fights + truthful + takes >=6) temfe2= 3.
If (temfe2 = 3) temp2=1.
IF (agechil>=7 & perspect + wrongend + windup <=5) Temfe3 = 1.
If (agechil>=7 & perspect + wrongend +windup =6) temfe3 =2.
If (agechil >=7 & perspect + wrongend + windup >=7) temfe3 = 3.
If (temfe3 = 3) temp3=1.
Recode moveout death separat divorce access (sysmis=0).
If (moveout + death + separat + divorce + access>=2) loss=1.
If (register = 1) Abneg1 =1.
Recode youngpar lonepare offendin largefam socdisad cohost1 cohost2
Incdis1 Incdis2 Psuperv1 Psuperv2 Hyper cogtry cogtry2 cogtry3
Temp1 temp2 Temp3 loss abneg1 (SYSMIS = 0).
COMPUTE totscore = Youngpar + lonepare + offendin + largefam + socdisad +
cohost1 + cohost2 + incdis1 + incdis2 + psuperv1 + psuperv2 + hyper + cogtry +
cogtry2 + cogtry3 + temp1 + temp2 + temp3 + loss + abneg1.
IF (totscore >=0 & totscore <=5) Riskscor = 1.
IF (totscore >=6 & totscore <=10) Riskscor =2.
IF (totscore >=11 & totscore <=17) Riskscor = 3.
Variable labels Riskscor "total risk score" Totscore "total score".
Value Labels Riskscor 1 'low' 2 'moderate' 3 'high'.
EXECUTE.
```