RESEARCH REPORT

A short questionnaire (IRQ) to assess injecting risk behaviour

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Abstract

Aim. To develop a short injecting risk questionnaire (IRQ) to measure sharing of injecting equipment.

Design. Matrix design with quota assignment, designed to compare the questionnaire when used by interview and self-completion, in agency and community settings, by agency staff and fieldworkers, with different injectors (age < 26 vs. 26+; male vs. female, opiate vs stimulant injectors), and in different geographical areas.


Participants. Drug users who had injected in the last 4 weeks.

Measurements. Questions measured different aspects of equipment sharing. Questionnaire performance assessed by question acceptability, test-retest (parallel forms) reliability, inter-rater reliability, inter-instrument reliability, internal reliability, construct validity and internal collateral validity. Statistical tests included product moment correlation, principal components analysis, and Cronbach's alpha.

Findings. The questionnaire was highly acceptable. Test-retest correlations were all high and significant, questions performed well in all conditions, with no differences by site (agency vs. out-of-contact), order (interview vs. self-completion first), administration (staff vs. fieldworker), elapsed time or subject characteristics. The questionnaire had high internal reliability (Cronbach's alpha > + 0.86), and items measured a similar domain with all questions loading highly (> 0.32) on a single factor which accounted for > 42% of the variance. The complete IRQ elicited higher reports of equipment sharing (77%) than a single question (56%).

Conclusions. IRQ performs well in a variety of settings, when administered in different ways to different kinds of IDUs. A single question on 'sharing' elicits fewer positive responses than the use of multiple questions about different sharing practices.

Introduction

HIV prevention strategies for injecting drug users (IDU) focus on encouraging reductions in the sharing of injecting equipment. There is now substantial evidence of behaviour change from injectors in a wide variety of settings in many countries (Stimson, Des Jarlais & Ball, 1997; Des Jarlais et al., 1995). In the UK important reductions in risk behaviour occurred following the increase in awareness of AIDS among drug injectors and introduction of HIV prevention measures (starting in 1986). It has been argued that these behavioural changes have resulted in continuing low prevalence of HIV-1 infection in

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England and Wales (Stimson, 1995, 1996). Reduction in the sharing of injecting equipment is one of the targets of the UK government Health of the Nation strategy (Department of Health, 1992). In the UK, equipment sharing is monitored through Regional Drug Misuse Databases (RDMD), the Public Health Laboratory Service survey of HIV and risk behaviour (Durante et al., 1995), and ad hoc studies.

All sources of information on equipment sharing rely on self-reporting by selected samples of injectors. A review of research studies and other sources of information in the UK found considerable variation in the methods used to measure the sharing of injecting equipment. There is a lack of comparability between studies in terms of: subjects; definitions of sharing; behaviours investigated and question wording; time frames; sampling methods; sites and subject recruitment.

Studies have defined an injector as someone who has injected a drug within the last 4 weeks, month, 2 months, year, 5 years, or ever. Definitions and question wording differ between studies: for example, the Health of the Nation target refers to ‘equipment sharing’, but many sources define this as just ‘needle and/or syringe sharing’. In some cases the activity is differentiated between the accepting of used needles and passing on of used needles (Frischer et al., 1992; Ball et al., 1995; Hunter, Donoghoe & Stimson, 1995). Many sources of information, such as RDMD (ISDD 1994) rely on a single question on needle and/or syringe sharing, and do not ask questions about ‘indirect sharing’ such as the sharing of filters and spoons used in drug preparation, and ‘backloading’ and ‘frontloading’ (methods for dividing a drug solution by passing it from one syringe to another) (Grund et al., 1991; Power et al., 1994). Time frames for sharing have included the last 4 weeks, 3 months and 6 months, ever, or preparedness to share in the future (McKeganey et al., 1994). Questionnaires have been administered by agency staff, researchers, household survey interviewers and indigenous interviewers; settings have included drug agencies, households and public venues; questions have been asked as part of research or of client assessment; questions have been answered face-to-face, self-completed by subjects in the interviewer’s presence and placed in sealed envelopes, or self-completed and anonymized out of the interviewer’s presence. There is also scope for misunderstanding: activities which investigators may consider to be sharing may not be thought of as ‘sharing’ by respondents (Hunt, Shelley & Jones, 1994); for example, sharing may be understood as proximal use (the direct passing of the syringe from one person to another on a specific drug using occasion) (Turnbull, Power & Stimson, 1996), while sharing with regular sexual partners may not be viewed by IDUs as risky sharing, and hence not considered worth reporting as ‘sharing syringes’ (see also Stimson et al., 1988; Hart et al., 1989; Klee et al., 1990; Klee et al., 1991; Johnson et al., 1992; Bath et al., 1993; Griffiths et al., 1993; Hunt et al., 1994; Hunter & Donoghoe, 1994; Peters Reid & Griffin, 1994; Hunter et al., 1995; Stimson & Hunter, 1996).

There are no published UK reports of the performance of different questions and questionnaires in this area excepting the Opiate Treatment Index (Darke et al., 1991; Adelekan et al., 1996a, b), which contains an injecting risk subscale. It is therefore important to develop a standard measure of risk behaviour that will perform well in a variety of settings. This paper reports on the development and performance of an injecting risk questionnaire designed to measure the sharing of injecting equipment. The study was commissioned by the UK Department of Health and designed to develop a suitable measure for the Health of the Nation target. The objective was to produce a short questionnaire that could be conducted by interview or by self-completion, used in agency or community settings, administered by agency staff or fieldworkers, and which would perform well with different kinds of injectors and in different parts of the United Kingdom.

Methods
Development of the questionnaire
Development of the questionnaire followed a three-step process:

(1) The existing UK literature was examined for relevant questions, target groups, instructions, definitions, wording, time frames and coding, and for information on research design, innovative methods and previous validation studies. Questionnaires were collected and compared, including documentation from research studies and
Injecting risk questionnaire

RDMD forms and instructions. Researchers and other experts in the United Kingdom were consulted.

(2) Focus groups with injectors were held in order to: clarify what they understood by the terms 'sharing' and 'injecting equipment'; determine how best to obtain honest answers, especially regarding wording and context of questioning; and get comments on wording and style by critical examination of existing questionnaires. Subjects were recruited through indigenous field staff (Griffiths et al., 1993; Power 1994). Proceedings were led by a fieldworker and tape-recorded. Groups were held in Birmingham (n = 4), Wolverhampton (n = 5), Bristol (n = 5) and London (n = 5). Subjects were 12 male and seven female, four amphetamine and 15 heroin injectors, 15 white and four non-white, four aged up to 25 years of age and 15 over 25 years, and were paid £10 plus travel expenses.

The main findings were that: direct sharing was perceived as no longer the norm; indirect sharing was more common than direct sharing; there was regional variation in the understanding of terms such as 'backloading' and 'frontloading'; most people thought that sharing was rare, but agreed that it occurred; there was regional variation in awareness of risk from indirect sharing; there was stigma attached to an admission of sharing; questions with yes/no answers were thought less likely to elicit admissions of sharing than questions which allowed a graded response (i.e. people might admit that they 'hardly ever' did something they knew that they should not do at all); there was, in some groups, considerable sophistication about the risk of viral transmission through different practices, having implications for question wording—e.g. 'sharing spoons' was, correctly, not seen as posing risk of viral exposure if the spoon was formerly unused and all needles/syringes were sterile; there was a need for a definition of 'sharing' and 'injecting equipment' to be included in a questionnaire; questions and questionnaires should be short; time frames should be short.

(3) From the above exercises, questions were selected and field-tested with current and ex-injectors. It proved difficult to design short questions which were adequately precise in terms of potential exposure to blood-borne infections. The following considerations influenced questionnaire design: it should be quick to administer and complete (taking about 5 minutes); there should be a self-completion and an interview version; all instructions and definitions should be on the questionnaire; it should include one key sharing question, and other questions in order to provide collateral validation of the key question and the development of a measure of different aspects of sharing; answers should be closed, or answered by writing in numbers; respondents should be invited to answer questions on a graded scale which included the category 'hardly ever'; questions should be comparable to those used in other studies and routine data collection systems (e.g. RDMD). The resulting questionnaire was piloted with the Birmingham focus group, four out-of-contact injectors from London and six clients in the South West, and sent to experts for comments. Four versions of the questionnaire were produced each differing in introductory preambles, for use in agencies and for out-of-contact groups, and for self-completion and interview. There were no differences in question wording or recording.

Structure of the questionnaire
The whole questionnaire is called IRQ (see Appendix). All questions refer to the last 4 weeks. Question 2 is an all-embracing question about the occurrence of sharing (Health of the Nation Question—HNQ). A short form of the questionnaire (SF) combines HNQ and a question about the number of people with whom equipment was shared (Qs 2 and 3). The longer form (LF) includes questions about different sharing practices (Qs 4–17) and one (Q 18) about the number of people with whom they occurred.

Study design
The study was designed to test the performance of the questions and the questionnaires in different areas and sites, with different interviewers and instruments, and with different kinds of subjects. The following variations were chosen: (a) area: London, West Midlands and the South West; (b) site: within each area, three sites reflected
agency types and one was for out-of-contact subjects; (c) interviewers: agency staff and fieldworkers; (d) instruments: interview and a self-completion version of the questionnaire; (e) subjects: gender (male vs. female), age (<26 vs. 26+), mainly opiate vs. mainly stimulant injectors, ethnicity (non-white vs. white).

The following measures of questionnaire performance were selected:

(1) Question acceptability. This was measured by the response rate for each question.
(2) Test-retest (parallel forms) reliability. This measured the consistency of response over time, i.e. whether people tended to give similar responses when questioned on a second occasion. This required administration and re-administration of the questionnaire (interview then self-completion and vice versa), with sufficient time lapse to allow for subjects to 'forget' answers to the first test, yet for behaviour not to have changed by the second test. To avoid problems of attrition and of behaviour change in the elapsed period, it was decided that the questionnaire should be administered twice on the same day. However, in the South West out-of-contact condition, time lapse was set at 2–7 days to provide a longer comparison.
(3) Inter-rater reliability. This measured the consistency of responses across different interviewers, i.e. agency staff vs. (independent) field workers.
(4) Inter-instrument reliability. This measured the consistency of responses between the interview vs. self-completion questionnaire.
(5) Internal reliability. The split-half correlation was calculated using Cronbach's coefficient alpha.
(6) Construct validity. The validity of a set of questions may be inferred from the structure of item correlations. This was done using principal components analysis.
(7) Collateral validity of HNQ. The validity of a measure is inferred from its correlation with other measures, preferably (though in practice rarely) measured independently. HNQ was compared against LF.

Conditions and quotas
The design was based on initial stratification by areas and sites and assignment of subjects with different characteristics to different interviewers and instruments. Within each of the three geographical areas three agencies were selected to reflect a range of intensity of contact with clients. Intensity was categorized by frequency and regularity of contact, and level of demand made on clients. Examples of low intensity ones were drug advice and information agencies, and high-intensity ones those which prescribed substitute drugs. Each area also had an out-of-contact sample defined as no agency contact except syringe exchange in the previous month.

The following comparisons were examined. In agencies: agency staff administering both the interview and the self-completion; fieldworkers administering both the interview and the self-completion; agency staff and the fieldworker administering interviews (with the same client) (South West only). Out-of-contact: fieldworker administering both the interview and the self-completion. In each condition, the order of administration of the instrument (interview or self-completion first) at Times 1 and 2 was pre-assigned. Conditions were quota controlled for client characteristics.

Twenty-eight matrices (of 10 subjects each) were constructed to ensure coverage of conditions and subjects, eight each in London and the West Midlands and 12 in the South West, giving a required sample of 280. To have an 80% chance of differentiating between a test-retest correlation of 0.85 (the hypothesized value) and one of 0.5 requires a minimum n of 15 for each comparison. This was met for all subsamples (see Achieved samples).

Recruitment
Out-of-contact samples were recruited through social networks. Interviewers (staff or fieldworker) approached the first respondent who matched a slot in their matrix, and explained the purpose of the study (which was to collect information to assess the effect of HIV prevention services and to help develop a questionnaire to measure the true rate of sharing). If they agreed to participate, subjects were either interviewed or completed the self-completion questionnaire. After a time lapse (of preferably at least 30 minutes) the procedure was repeated using a method different to that at Time 1. Self completion questionnaires were placed by respondents in a sealed envelope and handed to
the interviewer. The interview and the question-
naire were matched by a numerical identifier.
The process was continued, with replacement for
refusals, until quotas were filled. Subjects were
given a facilitation fee to cover expenses. Contact
sheets collected information on subject character-
istics, order of questionnaires, type of inter-
viewer and elapsed time between administration.
Appropriate ethical approvals were sought and
given.

**Achieved samples**
The total sample was 267, giving an overall data
set at Time 1 and Time 2 of 534. The numbers
in each subsample were as follows. (a) Area and
agency: Bristol: 117 (agencies: 31, 27, 30; out-of
contact 29); West Midlands: 67 (agencies: 16, 15,
16; out-of-contact 20); London: 83 (agencies: 20,
20, 23; out-of-contact 20). (b) Test administra-
tion: staff 80, fieldworker 159, jointly by staff
and fieldworker 28. (c) Questionnaire: self-com-
pletion 239, interview 295 (this includes Time 1
and Time 2, \( n = 534 \)). (d) Subject characteris-
tics: male 143, female 124; main drug injected:
opiates 148, stimulants 119; age: \(<26\) 126,
\(>26\) 141; ethnicity: this condition was dropped
due to inability to recruit sufficient non-white
injectors. A response rate was not measured
when agency staff administered the tests. Field-
workers did not experience problems with re-
fusals from eligible subjects (there were five
refusals in the South West, five in the West
Midlands—all in a massage parlour—and none
in London). The mean time lapse between Time
1 and Time 2 was 728 minutes; 248/267 had a
time lapse of 30 minutes or more; 236 were
tested on the same day (for these the mean time
lapse was 56 minutes, SD 40), and 31 had a time
lapse of between 1 and 7 days.

**Results—questions and the questionnaire performance**
The following terminology is used: IRQ = all
questions; SF = short form, Q2 and Q3 (equipment
sharing, and numbers with whom shared); LF = long form, Qs 4 to 18 (itemized equip-
ment-sharing and numbers with whom shared);
HNQ = key question on sharing, Q2.

**How acceptable were the questions?**
All versions of the questionnaires were highly
acceptable, as indicated by the high level of
response to individual questions. For the self-com-
pletion and the interview versions question
response rate was nearly 100% with—for the
former—one missing value on Qs 2, 3, 5, 9 and
15 and four on Q12.

**Did the questionnaires perform equally reliably in all conditions?**
All versions of the questionnaire performed well
under all conditions, and all test-retest correla-
tions were positive and significant at \(<0.0005\).
In presenting results, individual \( n \)-s are not
given, but may be deduced from the Achieved
samples (above). All questions were dichoto-
mized into positive (admission of sharing) and
negative. Scales and subscales were scored by
summing positive admissions.

All versions of the questionnaire (IRQ, SF, LF
and HNQ) were highly reliable. The correlations
for IRQ and LF were higher than for HNQ and
SF.

(a) **Overall test-retest correlations.** The overall
test-retest correlations between Time 1 and
Time 2 exceeded \(+0.78\). For the whole
measure (IRQ) the correlation was \(0.93\); for the
short form (SF) it was \(0.83\), and \(0.92\) for the
long form (LF). For HNQ, the corre-
lation was lower at \(0.78\).

(b) **Area comparisons.** There were no major dif-
fences in the test-retest correlations by area. Correlations for IRQ, SF, LF and
HNQ, respectively, were \(0.98, 0.86, 0.97\)
and \(0.80\) in the West Midlands, \(0.95, 0.81, 0.95\)
and \(0.79\) in the South West, and \(0.81, 0.76, 0.79\)
and \(0.67\) in London.

(c) **Subject comparisons.** There were no differ-
ences in the test-retest correlations by gen-
der, age and main drug injected. Correlations for IRQ, SF, LF and
HNQ, respectively, were \(0.95, 0.86, 0.94\)
and \(0.80\) for males and \(0.90, 0.76, 0.89\) and \(0.76\)
for females; \(0.95, 0.85, 0.94\) and \(0.85\) for
younger subjects and \(0.91, 0.81, 0.90\) and
\(0.71\) for older ones; and \(0.92, 0.87, 0.91\)
and \(0.82\) for opiate injectors and \(0.93, 0.79, 0.92\)
and \(0.73\) for stimulant injectors.

(d) **Order of administration of the questionnaire.**
There were no effects on test-retest correla-
tions by whether the interview was conduc-
ted first and the self-completion second, or
vice versa. Correlations for IRQ, SF, LF and
HMQ, respectively, were 0.92, 0.81, 0.91 and 0.77 when the interview was first, and 0.91, 0.79, 0.89 and 0.77 when the questionnaire was first.

(e) Administration of the questionnaire. There were no differences in test-retest correlations according to who administered the test. Test-retest correlations for IRQ, SF, LF and HMQ, respectively, were 0.98, 0.86, 0.88 and 0.74 when agency staff administered the test at Time 1 and Time 2, and 0.88, 0.60, 0.87 and 0.78 when field workers administered the test at Time 1 and Time 2 in agencies.

Inter-rater correlations were calculated between subjects who were interviewed by both staff and field worker (in SW agencies). When the interview was conducted by the fieldworker, the test-retest for IRQ, SF, LF and HMQ were 0.97, 0.90, 0.96 and 0.72; when the staff interview was first they were 0.99, 0.97, 0.99 and 0.88.

(f) Site. The overall correlations were similar across sites. Test-retest correlations for IRQ, SF, LF and HMQ, respectively, were 0.93, 0.83, 0.92 and 0.78 for all agencies, 0.90, 0.81, 0.88 and 0.77 for low-intensity agencies, 0.98, 0.84, 0.98 and 0.83 for high-intensity agencies, and 0.95, 0.89, 0.94 and 0.78 for subjects out-of-contact.

(g) Time. The test-retest correlations were not affected by the length of elapsed time between tests. There was no effect on the test-retest correlations for time for IRQ, SF and LF and HMQ: test-retest differences in scores were correlated against elapsed time and all were low (between −0.28 and +0.02). Extended time lapse was examined for the South West out-of-contact sample for whom the time lapse was 2–7 days, with a test-retest correlation for SF of 0.89.

Were there differences in the number of positive responses?
The high correlations indicated very good test-retest performance, and inter-rater and inter-instrument reliability. However, as a further check, the mean number of positive responses was compared between Time 1 and Time 2 under different conditions. In this analysis, it is assumed that there is a tendency for subjects to under-report and that a question or scale that elicits a higher level of positive admissions of equipment sharing has greater validity.

(a) Awareness and prompting effects. There was no evidence that completion of the questionnaire at Time 1 raised awareness and prompted more positive responses at Time 2. Overall, for IRQ, SF and LF the mean numbers of positive responses to any question at Time 1 were 6.64, 1.55 and 5.08, and at Time 2 were 6.61, 1.58 and 5.03. Matched pairs for the differences in scores did not show a significant difference between Time 1 and Time 2 responses.

(b) Instrument effects. There was little difference in the responses to the self-completion and the interview version of the questionnaire. In this comparison, the match between responses at Time 1 and Time 2 was examined. Overall, for IRQ, 70% of respondents gave precisely the same answers (i.e. had the same frequency rating or numbers of partners) to the self-completion and the interview, a further 13% gave answers that were only one response category different, and a further 8% differed by two response categories. The results for SF were higher with 94% giving the same response, and 6% giving a response that differed by one response category. For LF the results were 71% and 13%, respectively.

(c) Interviewer effects. There were no differences in the number of positive admissions made to agency staff compared to field workers (South West only). Overall, for IRQ, SF and LF the mean number of positive responses, respectively, for agency staff were 7.50, 1.60 and 5.89, and for the same subjects with the fieldworker were 7.42, 1.57 and 5.86. Matched pairs tests for the differences in scores did not show a significant difference.

What was the internal reliability and construct validity of the questionnaires?
These analyses were conducted on IRQ and LF. (Having only one and two items, it was not appropriate to undertake this analysis on HMQ and SF.)

(a) How do the items relate to each other? There was high split half correlation suggesting that the questions reliably measure the same domain. Data were analysed separately
for Time 1 and Time 2. For IRQ Cronbach's alpha was 0.88 and 0.90 and for LF was 0.86 and 0.88.

(b) Is there a consistent structure to the questions? There was strong single internal structure to the responses. A simple unrotated principal component analysis was carried out and Kaiser's criterion of eigenvalues greater than unity used in order to assess the dimensionality of the structure. Maximum variance was used as the fitting criterion since the main interest lies in scoring from the scale. This was undertaken separately for Time 1 and 2 for IRQ and LF. For IRQ a single factor accounted for much of the variation (Time 1, 41.9%; Time 2, 45.2%). This unrotated factor had, on both occasions, positive loadings on all questions. At Time 1 all questions had loadings > 0.32; 16 of the 17 loading > 0.50. At Time 2 all questions loaded > 0.48. The remaining three factors satisfying Kaiser's criterion each accounted for 9% or less of the variance. For LF at Time 1 (and Time 2) there were also four factors, with the first accounting for 42.9% (45.4%) of the variance. At Time 1 all questions loaded positively on this factor with loadings > 0.38; 10 with loadings at > 0.50. At Time 2 all had loadings > 0.37, 13 with loadings > 0.50. The other three factors each accounted for 10% or less of the variance.

What was the collateral validity of questions? The study allowed comparison of HNQ (Q2) with the more detailed questions on sharing in LF, and SF against LF, thus providing collateral validation of HNQ. (This assumes that LF is more valid.) Comparisons were made within and across time (i.e. between the different measures within Time 1 and Time 2, and for each measure at Time 1 with the others at Time 2 and vice versa).

(a) HNQ correlated with LF. HNQ performed reasonably well in comparison with LF. At Time 1 the correlation between Q2 and LF was 0.58, and at Time 2 it was 0.68. It was also possible to compare HNQ at Time 1 with responses to the other measures at Time 2 (and vice versa), thus providing test-retest collateral validation. The correlation between Q2 at Time 1 and LF at Time 2, and between Q2 at Time 2 and LF at Time 1 were 0.59 and 0.65.

(b) SF correlated with LF. At Time 1 the correlation between SF and LF was 0.64. At Time 2, the correlation was 0.73. The cross-correlation between scores on SF and Time 1 and LF at Time 2 was 0.64; that between SF at Time 2 and LF at Time 1 was 0.70. These could also be considered reasonable.

Were different questions as efficient in eliciting positive responses? Given the similarity between T1 and T2 results, the remaining calculations are reported for T1 only.

(a) The magnitude of difference between HNQ and LF. HNQ correlated reasonably well with LF, but the size of the correlations indicates some disparity between the two measures. HNQ was not as efficient as LF in eliciting positive responses. More positive admissions of sharing were found with LF than with HNQ. Using HNQ alone, 56% of subjects reported sharing, compared with 77% of those who reported sharing on LF. Aggregated, this produces a substantial difference. However, on individual questions the differences were not so marked. For example, of the 118 people who, on Q2 said that they did not share equipment, six said that they had used a syringe already used by a sexual partner (Q7). None said that they had injected with a syringe already used by a stranger (Q9), but 28 said that they had drawn up a drug solution from a shared used container (Q12). On the basis of the present data HNQ underestimates sharing.

What overall results were obtained? (a) Frequency distributions. The percentage admitting to sharing injecting equipment was unexpectedly high, with 56% reporting positively to Q2. The number of sharing partners was small. For the total sample, the mean number of sharing partners was 1.1 (Q3) and 1.9 (Q18). Of those who did share, the mode was 1 and the mean was 2.0 (Q3) and 2.6 (Q 18).
(b) 'Sharing syringes' versus 'sharing equipment'. IRQ covers the sharing of all injecting equipment, and not only the sharing of needles and syringes. In this study, 54% reported any sharing of syringes on Q4-9, but 72% reported other types of sharing (Q10-17). The lowest positive responses (in the range 5-30%) were on Q4-9 which covered direct sharing of syringes, for questions on back- and front-loading (Q10 and 11), and using syringes that had been kept in the same container as others' old syringes (Q17). The highest positive responses were to questions on indirect sharing. These were: Q12 ('Drawn up from a container or spoon into which someone else had put a used syringe')—51%; Q13 ('Put a used needle into a container or spoon that was then used by someone else')—51%; Q14 ('Used a filter into which someone else had put a used syringe')—45%; Q15 ('Let someone else use a filter into which you had put a used syringe')—50%.

Were there variations in reports of equipment sharing?
There were no significant differences in reported sharing (Q2) by gender (male—56% and female—56%). Higher sharing rates were reported by stimulant injectors (60%) than by opiate injectors (52%); by out-of-contact subjects (65%) than by subjects at agencies (52%); and by younger (58%) than by older injectors (54%) (all <0.05).

Implications
This study has developed questions and questionnaires to assess the sharing of injecting equipment. These questions perform well in various conditions. Overall, the study shows that there is good performance of the various measures including using either a single question on equipment sharing (HNQ) or using the whole questionnaire (IRQ). IRQ performed well in all conditions and there were no obvious differences by site, order, interviewer, time or subject characteristics. The multiple questions measured the same domain. We cannot exclude the possibility that demand characteristics of a research exercise produce more positive responses than might obtain in more threatening conditions such as a treatment intake interview or within a criminal justice setting.

The single HNQ correlates reasonably well with the longer set of questions (LF) but underestimates admissions of sharing. The longer set of questions allows identification of different sharing practices and may be useful for planning preventive strategies. Further collateral validation work is now required and is being undertaken to compare IRQ against measures of equipment sharing used in other studies and surveillance systems. Given that the nature of equipment sharing varies across societies, further work should be undertaken to assess the suitability of IRQ in other countries and cultures.

There were unexpectedly higher admissions of equipment sharing than have been reported in published studies, particularly RDMDs, which report last month sharing rates in the range 11-15% in answer to a single question (ISDD, 1994). There are several possible explanations for this. The first relates to measurement. It is possible that the higher level of admissions is due to the precise definition of sharing used in the study, the detailed questions that have been asked, and the inclusion of the 'hardly ever' category. Assuming that those reporting 'hardly ever' would otherwise have said 'no', then the percentage reporting sharing would have been 36% (note that this is illustrative, there is no evidential basis for combining the two categories). The second is that over time there has been greater awareness among injectors of different ways in which equipment may be shared, and hence ability or willingness to report this. The third possibility is that equipment sharing has increased since the earlier studies. The fourth is that subjects felt able to admit to sharing because this was clearly presented as a research study and not related to the help that they would receive. These issues need to be examined further.

There are various systems for obtaining information on equipment sharing, including Regional Drug Misuse Databases, the Public Health Laboratory Service unlinked anonymous surveillance study of drug injectors (PHLS, 1993), routine information on clients collected by services, and ad hoc surveys of injectors both in and out of contact with services. The findings of this study suggest that a single question along the lines of 'have you shared syringes or other
injecting equipment?" produces a lower rate of positive responses than the use of multiple questions. People possibly underestimate sharing in response to a single question because of misunderstanding about the variety of ways on which sharing may occur. Detailed questioning is more sensitive to the various ways in which equipment may be shared. It would appear that recognition of specific situations produces a higher positive response than an answer to a single general question. It is assumed that a method that elicits more positive responses is better at obtaining true answers. Care should therefore be taken to improve the instructions and question wording used to collect data in RDMD and other routine systems for collecting information.

Although we found no differences in the responses to agency staff and fieldwork interviewers, this may be a feature of this study in that it was stressed to subjects that this was a research study and that answers would not affect the treatment that they received. In some settings subjects may feel that their answers may prejudice or advantage their relation with staff. In some agencies staff may feel unable to collect this information if they cannot act on it. In such settings consideration should be given to the collection of information by people independent of the agency.

Given the lack of differences found in this study in the various conditions in which the questions were tested, the main issues for future data collection on equipment sharing including the monitoring of the Health of the Nation target will concern practicality of data collection, speed of collection, simplicity of analysis and cost.

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Infecting risk questionnaire

References


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Appendix

Injecting Risk Questionnaire (IRQ)

Q1 Have you injected a drug in the last 4 weeks? Yes: No. (If you have not injected in the last 4 weeks do not answer the remaining questions)

The next two questions are about sharing injecting equipment in general

Sharing means you using someone else's equipment which has already been used, or someone using yours, regardless of whether you were both present at the time.

Injecting equipment includes needles, syringes, filters, spoons and cookers, and washouts.

Q2 During the last 4 weeks, how often have you shared Frequently: Sometimes: Hardly ever: Never injecting equipment?

Q3 During the last 4 weeks, with how many different people have you shared injecting equipment?

The next questions are about using other people's equipment or them using yours

During the last 4 weeks how often have you done any of the following things?

Q4 Given or lent used needles/syringes to a sexual partner? Frequently: Sometimes: Hardly ever: Never

Q5 Given or lent used needles/syringes to a friend or acquaintance? Frequently: Sometimes: Hardly ever: Never

Q6 Given or lent used needles/syringes to a stranger? Frequently: Sometimes: Hardly ever: Never

Q7 Injected with needles/syringes that had already been used by a sexual partner? Frequently: Sometimes: Hardly ever: Never

Q8 Injected with needles/syringes that had already been used by a friend/acquaintance? Frequently: Sometimes: Hardly ever: Never

Q9 Injected with needles/syringes that had already been used by a stranger? Frequently: Sometimes: Hardly ever: Never

Q10 Filled your syringe from one that had already been used by someone else? Frequently: Sometimes: Hardly ever: Never

Q11 Let someone else fill their syringe with a syringes you had already used? Frequently: Sometimes: Hardly ever: Never

Q12 Drawn up from a container or spoon into which someone else had put a used syringe? Frequently: Sometimes: Hardly ever: Never

Q13 Put a used needle into a container or spoon that was then used by someone else? Frequently: Sometimes: Hardly ever: Never

Q14 Used a filter into which someone else had put a used syringe? Frequently: Sometimes: Hardly ever: Never

Q15 Let someone else use a filter into which you had put a used syringe? Frequently: Sometimes: Hardly ever: Never

Q16 Used the same water or bleach as someone Frequently: Sometimes: Hardly ever: Never

Q17 Used old syringes that had been kept in the Frequently: Sometimes: Hardly ever: Never

Q18 During the last 4 weeks with how many different people have you done any of the things on this page? Number of people___________________________

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